OceanStor V3 Series V300R006C10 REST Interface Reference

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Contents

1 About This Document 1
1.1 Overview 1
1.2 Intended Audience 2
1.3 Symbol Conventions 2
2 Version Change History 4
2.1 V300R006C10 (Released on 2018-10-15) 4
2.2 V300R006C00 (Released on 2017-09-30) 16
2.3 V300R006C00 (Released on 2017-05-30) 18
2.4 V300R003C20 (Released on 2017-04-15) 31
3 Quick Start 38
3.1 Overview 38
3.2 Interface Specifications 41
3.2.1 URI Specifications 41
3.2.2 Message Headers 42
3.2.2.1 Request Headers 42
3.2.2.2 Response Headers 44
3.2.3 Message Body 45
3.2.3.1 Request Body 45
3.2.3.2 Response Body 45
3.2.4 REST Request Methods 46
3.2.4.1 GET 46
3.2.4.2 POST 48
3.2.4.3 PUT 49
3.2.4.4 DELETE 49
3.3 Preparations 50
3.4 Constraint 50
3.5 Example Scenarios of Invoking RESTful Interface 51
3.5.1 Obtaining Basic System Information 51
3.5.2 Basic Storage Service (For Block) 52
3.5.3 Basic Storage Service (File Services Based on NFS Sharing) 57
3.5.4 Remote Replication Feature (For Block) 60
3.5.5 Remote Replication Feature (For File) 65

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3.5.6 HyperMetro Feature (For Block)....69
3.5.7 HyperMetro Feature (For File)....74
4 RESTful APIs....81
4.1 Security management....82
4.1.1 user....82
4.1.1.1 Interface for Access Authentication....82
4.1.1.2 Interface for Batch Querying User Information....85
4.1.1.3 Interface for Querying User Information....89
4.1.1.4 Interface for Modifying User Information....92
4.1.1.5 Interface for Deleting a User....94
4.1.1.6 Interface for Creating a User....95
4.1.1.7 Interface for Forcing a User to Change Its Password Upon Next Login....99
4.1.1.8 Interface for Locking a User....101
4.1.1.9 Interface for Unlocking a User....102
4.1.1.10 Interface for Bring a User Offline....103
4.1.1.11 Interface for Initing the Password of a User....104
4.1.1.12 Interface for Authentication Exit....105
4.1.1.13 Interface for Querying User Login Information....106
4.1.2 security_rule....108
4.1.2.1 Interface for Querying IP Rules....108
4.1.2.2 Interface for Querying the IP Rule Switch....109
4.1.2.3 Interface for Deleting IP Rules....111
4.1.2.4 Interface for Setting the IP Rule Switch....112
4.1.2.5 Interface for Adding IP Rules....113
4.1.3 ldap....115
4.1.3.1 Interface for Querying Domain Authentication Server Settings....115
4.1.3.2 Interface for Creating Domain Authentication Server Settings....118
4.1.3.3 Interface for Modifying Domain Authentication Server Settings....123
4.1.3.4 Interface for Deleting Domain Authentication Server Settings....127
4.1.3.5 Interface for Querying Default Domain Authentication Server Settings....128
4.1.3.6 Interface for Testing Domain Authentication Server Settings....130
4.1.3.7 Interface for Creating Domain Authentication Server Settings (This Interface has been discarded)....132
4.1.4 safe_strategy....137
4.1.4.1 Interface for Querying Security Policies....138
4.1.4.2 Interface for Modifying Security Policies....146
4.1.4.3 Interface for Querying Security Policies of Resource Users....153
4.1.4.4 Interface for Modifying Security Policies of Resource Users....155
4.1.5 sa_server....158
4.1.5.1 Interface for Testing Key Server Connection....158
4.1.5.2 Interface for Deleting a Key Server Address....159
4.1.5.3 Interface for Adding a Key Server Address....160
4.1.5.4 Interface for Batch Querying Key Server Address....162

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4.1.6 certificate 164
4.1.6.1 Interface for Batch Querying Certificate Information 164
4.1.6.2 Interface for Modifying a Certificate 167
4.1.6.3 Interface for Exporting a Certificate 170
4.1.6.4 Interface for Downloading a Certificate 173
4.1.6.5 Interface for Importing a Certificate 175
4.1.6.6 Interface for Activating a Certificate 178
4.1.6.7 Interface for Querying Certificate Revocation List Information 181
4.1.6.8 Interface for Deleting a Certificate Revocation List 184
4.1.6.9 Interface for Activating a Certificate Revocation List 186
4.1.6.10 Interface for Importing a Certificate Revocation List 188
4.1.7 role 189
4.1.7.1 Interface for Batch Querying Role 189
4.1.7.2 Interface for Creating Role 191
4.1.7.3 Interface for Modifying Role 193
4.1.7.4 Interface for Deleting Role 194
4.1.7.5 Interface for Removing Permit List 195
4.1.7.6 Interface for Adding Permit List 196
4.1.7.7 Interface for Querying Role 197
4.2 Storage setting 198
4.2.1 system 198
4.2.1.1 Interface for Modifying Basic System Information 198
4.2.1.2 Interface for Testing NTP Server Address 200
4.2.1.3 Interface for Querying Basic System Information 201
4.2.1.4 Interface for Setting NTP Server 208
4.2.1.5 Interface for Restarting Equipment 210
4.2.1.6 Interface for Powering Off Equipment 211
4.2.1.7 Interface for Querying the Equipment UTC Time 213
4.2.1.8 Interface for Modifying the Equipment UTC Time 214
4.2.1.9 Interface for Querying the Equipment Time Zone 215
4.2.1.10 Interface for Modifying the Equipment Time Zone 216
4.2.1.11 Interface for Querying the Equipment Status 217
4.2.1.12 Interface for Querying DST Configuration of a Specified Time Zone 218
4.2.1.13 Interface for Querying OEM Information 220
4.2.1.14 Interface for Querying Details of an Enumerated Item 221
4.2.1.15 Interface for Querying NTP Server Client Configurations 223
4.2.2 dns_server 225
4.2.2.1 Interface for Querying DNS Services 225
4.2.2.2 Interface for Modifying DNS Services 226
4.2.2.3 Interface for Testing the DNS Server Address 227
4.2.3 base 228
4.2.3.1 Interface for Querying the List of Features that Are Not Supported by the System 228

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4.2.4 mirror_domain....233
4.2.4.1 Interface for Batch Querying MirrorDomain Information....233
4.2.4.2 Interface for Modifying MirrorDomain Information....234
4.2.5 domain....235
4.2.5.1 Interface for Querying NAS DNS Service Settings....235
4.2.5.2 Interface for Modifying NAS DNS Service Settings....237
4.2.5.3 Interface for Testing NAS DNS Service Connection....238
4.2.5.4 Interface for Modifying AD Domain Settings....239
4.2.5.5 Interface for Querying AD Domain Settings....241
4.2.5.6 Interface for testing AD Server Address....243
4.2.5.7 Interface for Initializing LDAP Domain Settings....245
4.2.5.8 Interface for Modifying LDAP Domain Settings....246
4.2.5.9 Interface for Querying LDAP Domain Settings....250
4.2.5.10 Interface for Testing LDAP Server Address....254
4.2.5.11 Interface for Modifying NIS Domain Settings....256
4.2.5.12 Interface for Initializing NIS Domain Settings....257
4.2.5.13 Interface for Querying NIS Domain Settings....258
4.2.5.14 Interface for testing NIS Server Address....260
4.2.5.15 Interface for Querying Advanced Settings of the LDAP Domain....262
4.2.5.16 Interface for Modifying Advanced Settings of the LDAP Domain....264
4.2.5.17 Interface for Initializing Advanced Settings of the LDAP Domain....266
4.2.6 cifs_service....267
4.2.6.1 Interface for Querying CIFS Service Settings....268
4.2.6.2 Interface for Modifying CIFS Service Settings....271
4.2.6.3 Interface for Querying CIFS Homedir(This Interface has been discarded)....274
4.2.6.4 Interface for Modifying CIFS Homedir(This Interface has been discarded)....276
4.2.7 nfs_service....277
4.2.7.1 Interface for Querying NFS Service Settings....277
4.2.7.2 Interface for Modifying NFS Service Settings....280
4.2.8 ftp_service....281
4.2.8.1 Interface for Querying FTP Service Settings....281
4.2.8.2 Interface for Modifing FTP Service Settings....284
4.2.9 http_service....286
4.2.9.1 Interface for Querying HTTP Service Settings....286
4.2.9.2 Interface for Modifying HTTP Service Settings....288
4.2.10 ndmp_service....290
4.2.10.1 Interface for Querying NDMP Service Settings....290
4.2.10.2 Interface for Modifying NDMP Service Settings....292
4.2.11 iscsi....296
4.2.11.1 Interface for Modifying a iSCSI Device Name....296
4.2.11.2 Interface for Querying a iSCSI Device Name....297
4.2.12 isns....298

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4.2.12.1 Interface for Modifying a iSNS Server IP Address....298
4.2.12.2 Interface for Querying a iSNS Server IP Address....299
4.3 Performance management....300
4.3.1 audit_strategy....300
4.3.1.1 Interface for Querying Audit Logs....300
4.3.1.2 Interface for Enabling Audit Logs....303
4.3.1.3 Interface for Suspending Audit Logs....304
4.3.1.4 Interface for Restoring Audit Logs....305
4.3.1.5 Interface for Disabling Audit Logs....306
4.3.1.6 Interface for Deleting Audit Logs....308
4.3.1.7 Interface for Modifying Audit Logs....310
4.3.1.8 Interface for Creating an Audit Log File....312
4.3.1.9 Interface for Querying the Generation Progress of Audit Log Files....313
4.3.2 performance....314
4.3.2.1 Interface for Querying Performance Data of a Managed Object....314
4.3.2.2 Interface for Querying Performance Monitoring Statistics....317
4.3.2.3 Interface for Querying Performance Monitoring Switch....318
4.3.2.4 Interface for Setting Performance Monitoring Switch....320
4.3.2.5 Interface for Configuring Performance Monitoring Statistics....321
4.3.2.6 Interface for Setting Performance Dump....324
4.3.2.7 Interface for Querying Performance Dump Settings....326
4.3.2.8 Interface for Testing Performance Dump Settings....328
4.3.3 power_supply....330
4.3.3.1 Interface for Querying Power Consumption....330
4.4 vStore management....331
4.4.1 vstore....332
4.4.1.1 Interface for Querying the Summary of vStore Resources....332
4.4.1.2 Interface for Deleting a vStore....333
4.4.1.3 Interface for Creating a vStore....334
4.4.1.4 Interface for Modifying vStore Information....336
4.4.1.5 Interface for Querying vStore Information....337
4.4.1.6 Interface for Batch Querying vStore Information....339
4.4.1.7 Interface for Querying the Number of vStore....340
4.4.1.8 Interface for Changing vStore View....341
4.4.2 hyper_metro_vstore_pair....343
4.4.2.1 Interface for Batch Querying Local vStores not Added to the vStore Pair....343
4.4.2.2 Interface for Querying the Number of Local vStores not Added to the vStore Pair....345
4.4.2.3 Interface for Querying the Number of Remote vStores not Added to the vStore Pair....346
4.4.2.4 Interface for Batch Querying Remote vStores not Added to the vStore Pair....347
4.4.2.5 Interface for Querying the Number of HyperMetro vStore Pair Information....349
4.4.2.6 Interface for Performing a Primary_Secondary Switchover on a HyperMetro vStore Pair....351
4.4.2.7 Interface for Associate Querying HyperMetro vStore Pair Information....352

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4.4.2.8 Interface for Batch Querying HyperMetro vStore Pair Information.....355
4.4.2.9 Interface for Forcibly Starting a HyperMetro vStore Pair.....358
4.4.2.10 Interface for Deleting a HyperMetro vStore Pair.....359
4.4.2.11 Interface for Querying a HyperMetro vStore Pair Information.....361
4.4.2.12 Interface for Creating HyperMetro vStore Pairs.....363
4.4.2.13 Interface for Showing HyperMetro vStore Pair Check Session.....366
4.4.2.14 Interface for Modifying the Preferred Site for NAS-based HyperMetro.....371
4.4.3 remote_replication_vstore_pair.....372
4.4.3.1 Interface for Batch Querying Remote Replication vStore Pair Information.....372
4.4.3.2 Interface for Associate Querying Remote Replication vStore Pair Information.....376
4.4.3.3 Interface for Setting Secondary Resource Protection for a Remote Replication vStore Pair.....379
4.4.3.4 Interface for Creating Remote Replication vStore Pair.....380
4.4.3.5 Interface for Deleting a Remote Replication vStore Pair.....384
4.4.3.6 Interface for Querying the Number of Remote Replication vStore Pair Information.....385
4.4.3.7 Interface for Performing a Primary_Secondary Switchover on a Remote Replication vStore Pair.....387
4.4.3.8 Interface for Querying a Remote Replication vStore Pair Information.....388
4.4.3.9 Interface for Synchronizing a Remote Replication vStore Pair.....391
4.4.3.10 Interface for Splitting a Remote Replication vStore Pair.....392
4.4.3.11 Interface for Deactivating All Logical Ports of the Local vStore of the Remote Replication vStore Pair.....393
4.5 Alarm management.....395
4.5.1 snmp.....395
4.5.1.1 Interface for Querying SNMP Trap Settings.....395
4.5.1.2 Interface for Querying USM User Information.....397
4.5.1.3 Interface for Deleting a USM User.....399
4.5.1.4 Interface for Modifying USM User Information.....400
4.5.1.5 Interface for Adding a USM User.....403
4.5.1.6 Interface for Adding an SNMP Trap Server Address.....406
4.5.1.7 Interface for Batch Querying USM User Information.....409
4.5.1.8 Interface for Deleting an SNMP Trap Server Address.....411
4.5.1.9 Interface for Modifying an SNMP Trap Server Address.....412
4.5.1.10 Interface for Testing an SNMP Trap Server Address.....414
4.5.2 alarm.....416
4.5.2.1 Interface for Querying the Address Information About a Storage System Maintenance Terminal.....417
4.5.2.2 Interface for Modifying the Address Information About a Storage System Maintenance Terminal.....418
4.5.2.3 Interface for Querying the Number of Historical Alarms and Events.....419
4.5.2.4 Interface for Clearing an Alarm.....420
4.5.2.5 Interface for Querying the Number of Current Alarms.....421
4.5.2.6 Interface for Querying Current Alarm Information.....422
4.5.2.7 Interface for Querying Historical Alarms and Events Information.....426
4.5.2.8 Interface for Modifying Alarm Masking.....429
4.5.2.9 Interface for Adding Recipient Email Addresses.....430
4.5.2.10 Interface for Deleting Recipient Email Addresses.....432

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4.5.2.11 Interface for Testing Recipient Email Addresses.... 433
4.5.2.12 Interface for Deleting Recipient Phone Numbers....435
4.5.2.13 Interface for Adding Recipient Phone Numbers.... 436
4.5.2.14 Interface for Changing Recipient Phone Numbers....437
4.5.2.15 Interface for Sending Test Short Messages.... 438
4.5.2.16 Interface for Setting Short Message Notification....439
4.5.2.17 Interface for Querying Short Message Notifications....441
4.5.2.18 Interface for Setting Email Notifications....442
4.5.2.19 Interface for Modifying Recipient Email Addresses....446
4.5.2.20 Interface for Querying Syslog Notification....447
4.5.2.21 Interface for Querying Remote Alarm Settings....449
4.5.2.22 Interface for Modifying Remote Alarm Settings....451
4.5.2.23 Interface for Setting Syslog Notification....452
4.5.2.24 Interface for Adding Receiver Server Addresses.... 456
4.5.2.25 Interface for Removing Receiver Server Addresses....457
4.5.2.26 Interface for Exporting System Logs....458
4.5.2.27 Interface for Querying Alarm Maskings....462
4.5.2.28 Interface for Querying Email Notifications....467
4.5.2.29 Interface for Setting Alarm Dump....469
4.5.2.30 Interface for Testing Alarm Dump Settings....471
4.5.2.31 Interface for Setting Alarm Dump Switch....473
4.5.2.32 Interface for Querying Alarm Dump Settings.... 474
4.5.2.33 Interface for Batch Querying Alarm Types.... 476
4.6 License management.... 477
4.6.1 license.... 477
4.6.1.1 Interface for Batch Querying License Utilization.... 477
4.6.1.2 Interface for Batch Querying the Inactive License File....480
4.6.1.3 Interface for Backing Up the Active License File.... 483
4.6.1.4 Interface for Querying the Active License File Import Path.... 484
4.6.1.5 Interface for Importing a License File.... 485
4.6.1.6 Interface for Activating a License File.... 486
4.7 Import and export management....487
4.7.1 running_data 487
4.7.1.1 Interface for Exporting Running Data.... 487
4.7.2 logfile....489
4.7.2.1 Interface for Exporting DHA Run Logs.... 489
4.7.2.2 Interface for Exporting HSSD Logs.... 491
4.7.3 configuration_data 494
4.7.3.1 Interface for Exporting a Configuration File....494
4.8 System information management.... 496
4.8.1 enclosure 496
4.8.1.1 Interface for Querying Enclosure Information.... 496

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4.8.1.2 Interface for Batch Querying Enclosure Information....501
4.8.1.3 Interface for Setting the Status of Enclosure Location....506
4.8.2 controller....507
4.8.2.1 Interface for Querying Controller Information....507
4.8.2.2 Interface for Batch Querying Controller Information....511
4.8.3 expansion_module....514
4.8.3.1 Interface for Batch Querying Expansion Board Information....514
4.8.3.2 Interface for Querying Expansion Board Information....517
4.8.4 interface_module....519
4.8.4.1 Interface for Batch Querying Interface Module Information....519
4.8.4.2 Interface for Querying Interface Module Information....523
4.8.4.3 Interface for Modifying Interface Module Information....527
4.8.4.4 Interface for Powering Off Interface Modules....528
4.8.4.5 Interface for Powering On Interface Modules....529
4.8.5 disk....530
4.8.5.1 Interface for Querying Disk Information....530
4.8.5.2 Interface for Batch Querying Disk Information....537
4.8.5.3 Interface for Turning On or Off the Disk Locating Indicator....544
4.8.5.4 Interface for Querying All Information of Disks....545
4.8.5.5 Interface for Destroying Data of a Single Disk....547
4.8.6 power....548
4.8.6.1 Interface for Querying Power Information....548
4.8.6.2 Interface for Batch Querying Power Information....551
4.8.7 bbu....553
4.8.7.1 Interface for Batch Querying Backup Power Module Information....554
4.8.7.2 Interface for Querying Backup Power Module Information....556
4.8.8 fan....559
4.8.8.1 Interface for Querying Fan Information....559
4.8.8.2 Interface for Batch Querying Fan Information....562
4.8.8.3 Interface for Querying Fan Control Module Information....564
4.8.8.4 Interface for Batch Querying Fan Control Module Information....566
4.8.9 port....568
4.8.9.1 Interface for Batch Querying SVP Ethernet Port Information....568
4.8.9.2 Interface for Implementing Associated Query of Fibre Channel Port Information....571
4.8.9.3 Interface for Batch Querying Fibre Channel Port Information....576
4.8.9.4 Interface for Implementing Associated Query of Ethernet Port Information....581
4.8.9.5 Interface for Batch Querying Ethernet Port Information....589
4.8.9.6 Interface for Querying Bond Port Information....598
4.8.9.7 Interface for Creating a Bond Port....600
4.8.9.8 Interface for Querying SAS Port Information....604
4.8.9.9 Interface for Querying Ethernet Port Information....608
4.8.9.10 Interface for Querying InfiniBand Port Information....616

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4.8.9.11 Interface for Querying the Number of Bond Port....620
4.8.9.12 Interface for Querying FCoE Port Information....621
4.8.9.13 Interface for Adding a Route....624
4.8.9.14 Interface for Removing a Route....628
4.8.9.15 Interface for Modifying a Bond Port....630
4.8.9.16 Interface for Batch Querying Bond Port Information....632
4.8.9.17 Interface for Querying Fibre Channel Port Information....635
4.8.9.18 Interface for Implementing Associated Query of Bond Port Information....640
4.8.9.19 Interface for Implementing Associated Query of FCoE Port Information....644
4.8.9.20 Interface for Deleting a Bond Port....648
4.8.9.21 Interface for Batch Querying InfiniBand Port Information....649
4.8.9.22 Interface for Implementing Associated Query of InfiniBand Port Information....654
4.8.9.23 Interface for Batch Querying SAS Port Information....657
4.8.9.24 Interface for Batch Querying Route Information....661
4.8.9.25 Interface for Batch Querying FCoE Port Information....662
4.8.9.26 Interface for Querying PCIe Port Information....666
4.8.9.27 Interface for Batch Querying PCIe Port Information....669
4.8.9.28 Interface for Querying Serial Port Information....672
4.8.9.29 Interface for Querying Serial Port Information in Batches....674
4.8.9.30 Interface for Modifying SVP Ethernet Port Information....677
4.8.9.31 Interface for Modifying Ethernet Port Information....680
4.8.9.32 Interface for Modifying a Fibre Channel Port....681
4.8.10 support....683
4.8.10.1 Interface for Querying Information about the Bitmap of the Unshared Blocks of LUNs....683
4.8.10.2 Interface for Viewing Batch Configuration Progress....685
4.8.10.3 Interface for Downloading the File Template....687
4.8.10.4 Interface for Uploading the Batch Configuration File....688
4.8.10.5 Interface for Stopping Batch Configuration....689
4.8.10.6 Interface for Querying Information about the Size of a LUN Unit Bitmap....690
4.8.10.7 Interface for Querying Information about the Bitmap of the Physical Space Allocated to LUNs....691
4.8.10.8 Interface for Executing a Batch Configuration....693
4.8.10.9 Interface for Migrating Reserved Information....694
4.8.10.10 Interface for Querying the Equipment Time....696
4.8.10.11 Interface for Clearing Bit Errors on All Ports....697
4.8.10.12 Interface for Modifying DNS Load Balance Information....698
4.8.10.13 Interface for Querying DNS Load Balance Information....700
4.8.11 cabinet....701
4.8.11.1 Interface for Querying Rack Information....701
4.8.11.2 Interface for Batch Querying Rack Information....703
4.8.12 logical_port....704
4.8.12.1 Interface for Querying Logical Port Information....704
4.8.12.2 Interface for Creating a Logical Port....709

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4.8.12.3 Interface for Modifying a Logical Port....719
4.8.12.4 Interface for Querying the Number of Logical Port....724
4.8.12.5 Interface for Deleting a Logical Port....725
4.8.12.6 Interface for Batch Querying Logical Port Information....726
4.8.13 vlan....732
4.8.13.1 Interface for Modifying VLAN Information....732
4.8.13.2 Interface for Implementing Associated Query of VLAN Information....733
4.8.13.3 Interface for Querying VLAN Information....736
4.8.13.4 Interface for Batch Querying VLAN Information....738
4.8.13.5 Interface for Querying the Number of VLAN....740
4.8.13.6 Interface for Creating a VLAN....741
4.8.13.7 Interface for Deleting VLAN Information....743
4.8.14 failover_group....744
4.8.14.1 Interface for Deleting Member association from Failover Group....744
4.8.14.2 Interface for Querying Failover Group Information....746
4.8.14.3 Interface for Creating a Failover Group....747
4.8.14.4 Interface for Modifying Failover Group Information....749
4.8.14.5 Interface for Batch Querying Failover Group Information....752
4.8.14.6 Interface for Querying the Number of Failover Group....754
4.8.14.7 Interface for Deleting Failover Group Information....755
4.8.14.8 Interface for Adding Member association from Failover Group....757
4.8.15 dns_zone....758
4.8.15.1 Interface for Deleting a DNS Zone....758
4.8.15.2 Interface for Creating a DNS Zone....759
4.8.15.3 Interface for Batch Querying DNS Zone Information....761
4.8.15.4 Interface for Modifying a DNS Zone Name....763
4.9 Block storage service management....765
4.9.1 initiator....765
4.9.1.1 Interface for Querying Fibre Channel Initiator Information (Host Port)....766
4.9.1.2 Interface for Querying iSCSI Initiator Information (Host Port)....770
4.9.1.3 Interface for Modifying iSCSI Initiator Information (Host Port)....775
4.9.1.4 Interface for Creating an iSCSI Initiator (Host Port)....780
4.9.1.5 Interface for Modifying Fibre Channel Initiator Information (Host Port)....788
4.9.1.6 Interface for Batch Querying Fibre Channel Initiator Information (Host Port)....791
4.9.1.7 Interface for Querying the Number of iSCSI Initiators(Host Port)....796
4.9.1.8 Interface for Deleting a Fibre Channel Initiator (Host Port)....797
4.9.1.9 Interface for Implementing Associated Query of Fibre Channel Initiator Information (Host Port)....798
4.9.1.10 Interface for Deleting an InfiniBand Initiator from a Host (Host Port)....803
4.9.1.11 Interface for Deleting an FC Initiator from a Host (Host Port)....804
4.9.1.12 Interface for Implementing Associated Query of InfiniBand Initiator Information (Host Port)....806
4.9.1.13 Interface for Associating a Host with an InfiniBand Initiator (Host Port)....811
4.9.1.14 Interface for Creating a Fibre Channel Initiator (Host Port)....812

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4.9.1.15 Interface for Modifying InfiniBand Initiator Information (Host Port)....819
4.9.1.16 Interface for Batch Querying InfiniBand Initiator Information (Host Port)....821
4.9.1.17 Interface for Querying InfiniBand Initiator Information (Host Port)....826
4.9.1.18 Interface for Implementing Associated Query of iSCSI Initiator Information (Host Port)....830
4.9.1.19 Interface for Batch Querying iSCSI Initiator Information (Host Port)....836
4.9.1.20 Interface for Querying the Number of InfiniBand Initiators (Host Port)....841
4.9.1.21 Interface for Creating an InfiniBand Initiator (Host Port)....843
4.9.1.22 Interface for Querying the Number of Fibre Channel Initiators(Host Port)....848
4.9.1.23 Interface for Deleting an iSCSI Initiator (Host Port)....850
4.9.1.24 Interface for Deleting an iSCSI Initiator from a Host (Host Port)....851
4.9.1.25 Interface for Deleting an InfiniBand Initiator (Host Port)....852
4.9.1.26 Interface for Modifying a iSCSI Initiator Name....853
4.9.1.27 Interface for Querying a iSCSI Initiator Name....854
4.9.2 lun....855
4.9.2.1 Interface for Implementing Associated Query of LUN Information....856
4.9.2.2 Interface for Querying LUN Information....870
4.9.2.3 Interface for Batch Querying LUN Information....883
4.9.2.4 Interface for Querying the Number of LUNs....898
4.9.2.5 Interface for Expanding a LUN....902
4.9.2.6 Interface for Deleting a LUN....903
4.9.2.7 Interface for Creating a LUN....904
4.9.2.8 Interface for Modifying LUN Information....925
4.9.3 mapping_view....931
4.9.3.1 Interface for Deleting a Mapping View Association....931
4.9.3.2 Interface for Creating a Mapping View....932
4.9.3.3 Interface for Modifying a Mapping View....934
4.9.3.4 Interface for Creating a Mapping View Association....936
4.9.3.5 Interface for Querying the Number of Mapping Views....937
4.9.3.6 Interface for Deleting a Mapping View....938
4.9.3.7 Interface for Querying a Mapping View....939
4.9.3.8 Interface for Associatively Query Mapping Views....941
4.9.3.9 Interface for Batch Querying Mapping Views....943
4.9.3.10 Interface for Querying the Maximum Range of a Host LUN ID....945
4.9.4 host....946
4.9.4.1 Interface for Batch Querying Host Information....946
4.9.4.2 Interface for Querying the Number of Hosts....949
4.9.4.3 Interface for Implementing Associated Query of Host Information....950
4.9.4.4 Interface for Creating a Host....954
4.9.4.5 Interface for Modifying a Host....957
4.9.4.6 Interface for Deleting a Host....959
4.9.4.7 Interface for Querying Host Information....960
4.9.4.8 Interface for Querying Host Link Information....963

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4.9.4.9 Interface for Batch Querying Host Links Information 965
4.9.5 target 968
4.9.5.1 Interface for Creating Heterogeneous Remote Device 969
4.9.5.2 Interface for Implementing Associated Query of iSCSI_TGT_Port Information 970
4.9.6 lun_group 972
4.9.6.1 Interface for Creating a LUN Group 972
4.9.6.2 Interface for Modifying LUN Group Information 975
4.9.6.3 Interface for Implementing Associated Query of LUN Group Information 976
4.9.6.4 Interface for Deleting a LUN Group Association 979
4.9.6.5 Interface for Batch Querying LUN Group Information 980
4.9.6.6 Interface for Querying the Number of LUN Group 983
4.9.6.7 Interface for Creating a LUN Group Association 984
4.9.6.8 Interface for Querying LUN Group Information 985
4.9.6.9 Interface for Deleting a LUN Group 987
4.9.7 host_group 988
4.9.7.1 Interface for Implementing Associated Query of Host Group Information 988
4.9.7.2 Interface for Creating a Host Group 990
4.9.7.3 Interface for Modifying Host Group Information 992
4.9.7.4 Interface for Querying Host Group Information 993
4.9.7.5 Interface for Creating a Host Group Association 995
4.9.7.6 Interface for Deleting a Host Group Association 996
4.9.7.7 Interface for Batch Querying Host Group Information 997
4.9.7.8 Interface for Querying the Number of Host Group 999
4.9.7.9 Interface for Deleting a Host Group 1000
4.9.8 port_group 1001
4.9.8.1 Interface for Implementing Associated Query of Port Group Information 1001
4.9.8.2 Interface for Deleting a Port Group 1003
4.9.8.3 Interface for Modifying Port Group Information 1004
4.9.8.4 Interface for Deleting a Port Group Association 1005
4.9.8.5 Interface for Querying Port Group Information 1006
4.9.8.6 Interface for Creating a Port Group 1007
4.9.8.7 Interface for Creating a Port Group Association 1009
4.9.8.8 Interface for Batch Querying Port Group Information 1010
4.9.8.9 Interface for Querying the Number of Port Group 1012
4.9.9 lun_destroy_data 1013
4.9.9.1 Interface for Creating a Task for Destroying LUN Data 1014
4.9.9.2 Interface for Deleting a Task for Destroying LUN Data 1017
4.10 Storage pool 1018
4.10.1 storage_pool 1018
4.10.1.1 Interface for Querying Globle Migration Level 1018
4.10.1.2 Interface for Modifying Globle Migration Level 1019
4.10.1.3 Interface for Deleting a Storage Pool 1020

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4.10.1.4 Interface for Modifying Storage Pool Information....1021
4.10.1.5 Interface for Batch Querying Storage Pool Information....1025
4.10.1.6 Interface for Querying Storage Pool Information....1038
4.10.1.7 Interface for Creating a Storage Pool....1051
4.10.1.8 Interface for Querying the Number of Storage Pools....1069
4.10.1.9 Interface for Batch Querying Storage Tier Information....1070
4.10.1.10 Interface for Pausing or Continuing a SmartTier Task....1074
4.10.1.11 Interface for Starting or Stopping a SmartTier Task....1075
4.10.2 smart_tier....1076
4.10.2.1 Interface for Creating a Schedule....1076
4.10.2.2 Interface for Deleting a Schedule....1084
4.10.2.3 Interface for Modifying a Schedule....1085
4.10.2.4 Interface for Querying a Schedule....1088
4.10.2.5 Interface for Batch Querying Schedule Information....1092
4.10.3 disk_domain....1097
4.10.3.1 Interface for Creating a Disk Domain....1097
4.10.3.2 Interface for Batch Querying Disk Domain Information....1110
4.10.3.3 Interface for Deleting a Disk Domain....1120
4.10.3.4 Interface for Querying the Number of Disk Domains....1121
4.10.3.5 Interface for Expanding Disk Domains by Manually Adding Disks....1122
4.10.3.6 Interface for Querying Disk Domain Information....1123
4.10.3.7 Interface for Modifying Disk Domain Information....1132
4.11 Performance optimization....1137
4.11.1 smart_partition....1137
4.11.1.1 Interface for Creating a CachePartition....1137
4.11.1.2 Interface for Batch Querying CachePartition Information....1140
4.11.1.3 Interface for Deleting a CachePartition....1143
4.11.1.4 Interface for Adding a FileSystem to a CachePartition....1144
4.11.1.5 Interface for Adding a LUN to a CachePartition....1145
4.11.1.6 Interface for Removing a LUN from a CachePartition....1147
4.11.1.7 Interface for Removing a FileSystem from a CachePartition....1148
4.11.1.8 Interface for Querying a CachePartition....1149
4.11.1.9 Interface for Modifying a CachePartition....1151
4.11.2 smart_qos....1153
4.11.2.1 Interface for Deleting an I/O Class Template....1153
4.11.2.2 Interface for Querying I/O Class Template Information....1154
4.11.2.3 Interface for Deleting a SmartQoS....1159
4.11.2.4 Interface for Creating a SmartQoS....1159
4.11.2.5 Interface for Batch Querying SmartQoS Information....1169
4.11.2.6 Interface for Querying the Number of SmartQoS....1176
4.11.2.7 Interface for Modifying SmartQoS Information....1177
4.11.2.8 Interface for Modifying an I/O Class Template....1183

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4.11.2.9 Interface for Batch Querying I/O Class Template Information.... 1186
4.11.2.10 Interface for Creating an I/O Class Template.... 1190
4.11.2.11 Interface for Activating a SmartQoS.... 1197
4.11.2.12 Interface for Deactivating a SmartQoS.... 1198
4.11.2.13 Interface for Querying SmartQoS Information.... 1199
4.11.3 smart_migration 1205
4.11.3.1 Interface for Batch Querying SmartMigration Task Information.... 1205
4.11.3.2 Interface for Consistently Splitting a SmartMigration Task.... 1208
4.11.3.3 Interface for Creating a SmartMigration Task.... 1209
4.11.3.4 Interface for Querying SmartMigration Task Information.... 1212
4.11.3.5 Interface for Splitting a SmartMigration Task.... 1214
4.11.3.6 Interface for Deleting a SmartMigration Task.... 1216
4.11.3.7 Interface for Querying the Number of SmartMigration Tasks.... 1216
4.11.3.8 Interface for Modifying SmartMigration Task Information.... 1218
4.11.4 smart_cache.... 1219
4.11.4.1 Interface for Querying a SmartCachePartition.... 1219
4.11.4.2 Interface for Creating a SmartCachePartition.... 1221
4.11.4.3 Interface for Deleting a SmartCachePartition.... 1224
4.11.4.4 Interface for Modifying a SmartCachePartition.... 1225
4.11.4.5 Interface for Querying a SmartCachePool.... 1226
4.11.4.6 Interface for Batch Querying SmartCachePool Information.... 1228
4.11.4.7 Interface for Adding an Associated Object to a SmartCachePartition.... 1230
4.11.4.8 Interface for Removing an Associated Object to a SmartCachePartition.... 1231
4.11.4.9 Interface for Adding an Associated Object to a SmartCachePool.... 1233
4.11.4.10 Interface for Removing an Associated Object to a SmartCachePool.... 1234
4.11.4.11 Interface for Querying the Number of SmartCachePartition.... 1235
4.11.4.12 Interface for Batch Querying SmartCachePartition Information.... 1236
4.12 Data protection management.... 1239
4.12.1 lun_snapshot 1239
4.12.1.1 Interface for Activating Snapshots.... 1239
4.12.1.2 Interface for Querying the Number of Snapshots.... 1241
4.12.1.3 Interface for Creating a Snapshot.... 1243
4.12.1.4 Interface for Deactivating Snapshots.... 1247
4.12.1.5 Interface for Canceling Rollback a Snapshot.... 1248
4.12.1.6 Interface for Modifying a Snapshot.... 1249
4.12.1.7 Interface for Batch Querying Snapshot Information.... 1252
4.12.1.8 Interface for Querying a Snapshot Information.... 1258
4.12.1.9 Interface for Implementing Associated Query of Snapshot Information.... 1261
4.12.1.10 Interface for Deleting a Snapshot.... 1268
4.12.1.11 Interface for Rolling Back a Snapshot.... 1269
4.12.1.12 Interface for Creating Snapshot Copy.... 1271
4.12.2 remote_replication 1275

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4.12.2.1 Interface for Creating a Remote Replication Pair....1275
4.12.2.2 Interface for Performing a Primary_Secondary Switchover on a Remote Replication Pair.... 1287
4.12.2.3 Interface for Splitting a Remote Replication Pair....1289
4.12.2.4 Interface for Synchronizing a Remote Replication Pair.... 1290
4.12.2.5 Interface for Querying Remote Replication Pair Information.... 1291
4.12.2.6 Interface for Disabling Secondary Resource Protection for a File System Remote Replication Pair.... 1302
4.12.2.7 Interface for Disabling Secondary Resource Protection for a Remote Replication Pair.... 1303
4.12.2.8 Interface for Enabling Secondary Resource Protection for a Remote Replication Pair.... 1304
4.12.2.9 Interface for Batch Querying Remote Replication Pair Information....1306
4.12.2.10 Interface for Querying the Number of Remote Replication Pairs.... 1317
4.12.2.11 Interface for Modifying Remote Replication Pair Information.... 1319
4.12.2.12 Interface for Deleting a Remote Replication Pair....1324
4.12.2.13 Interface for Synchronizing Remote Status for a Remote Replication Pair.... 1326
4.12.2.14 Interface for Enabling Secondary Resource Protection for a File System Remote Replication Pair.... 1326
4.12.2.15 Interface for Associate Querying Remote Replication Pair.... 1328
4.12.2.16 Interface for Batch Querying Remote Replication Pair Connection Status Information.... 1336
4.12.2.17 Interface for Querying the Number of Remote Replication Pairs Connection Status....1339
4.12.2.18 Interface for Setting Secondary Resource Protection for a File System Remote Replication Pair to Read-only 1340
4.12.2.19 Interface for Querying the TimeCycle of LUN Remote Replication Pairs.... 1342
4.12.3 consistency_group.... 1343
4.12.3.1 Interface for Creating a Consistency Group of Remote Replication....1343
4.12.3.2 Interface for Removing a Remote Replication Pair from a Consistency Group of Remote Replication.... 1350
4.12.3.3 Interface for Synchronizing a Consistency Group of Remote Replication.... 1351
4.12.3.4 Interface for Querying a Consistency Group of Remote Replication....1353
4.12.3.5 Interface for Performing a Primary_Secondary Switchover on a Consistency Group of Remote Replication1357
4.12.3.6 Interface for Adding a Remote Replication Pair to a Consistency Group of Remote Replication.... 1359
4.12.3.7 Interface for Modifying a Consistency Group of Remote Replication....1360
4.12.3.8 Interface for Disabling Secondary Resource Protection for a Consistency Group of Remote Replication.... 1363
4.12.3.9 Interface for Enabling Secondary Resource Protection for a Consistency Group of Remote Replication.... 1365
4.12.3.10 Interface for Batch Querying a Consistency Group of Remote Replication.... 1366
4.12.3.11 Interface for Querying the Number of Consistency Groups of Remote Replication....1371
4.12.3.12 Interface for Deleting a Consistency Group of Remote Replication....1373
4.12.3.13 Interface for Splitting a Consistency Group of Remote Replication....1374
4.12.3.14 Interface for Querying the TimeCycle of Asynchronous Remote Replication Consistency Groups.... 1375
4.12.4 lun_copy.... 1377
4.12.4.1 Interface for Removing a Target LUN of a LUN Copy....1377
4.12.4.2 Interface for Querying Member LUN Information of a LUN Copy.... 1378
4.12.4.3 Interface for Querying the Number of LUN Copy Information....1381
4.12.4.4 Interface for Adding a Target LUN of a LUN Copy.... 1382
4.12.4.5 Interface for Modifying LUN Copy Information.... 1383
4.12.4.6 Interface for Creating a LUN Copy....1385
4.12.4.7 Interface for Continuing a LUN Copy....1390

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4.12.4.8 Interface for Suspending a LUN Copy.....1391
4.12.4.9 Interface for Deleting a LUN Copy.....1392
4.12.4.10 Interface for Stopping a LUN Copy.....1393
4.12.4.11 Interface for Starting a LUN Copy.....1394
4.12.4.12 Interface for Querying LUN Copy Information.....1395
4.12.4.13 Interface for Batch Querying LUN Copy Information.....1398
4.12.5 lun_clone.....1402
4.12.5.1 Interface for Modifying a Clone Secondary LUN.....1402
4.12.5.2 Interface for Modifying a Clone Information.....1403
4.12.5.3 Interface for Batch Querying Clone Information.....1404
4.12.5.4 Interface for Querying the Number of Clone Information.....1407
4.12.5.5 Interface for Creating a Clone.....1408
4.12.5.6 Interface for Deleting a Clone.....1411
4.12.5.7 Interface for Querying Clone Information.....1412
4.12.5.8 Interface for Removing a Clone Secondary LUN.....1414
4.12.5.9 Interface for Adding a Clone Secondary LUN.....1415
4.12.5.10 Interface for Synchronizing Clone Secondary LUN.....1417
4.12.5.11 Interface for Splitting a Clone Secondary LUN.....1418
4.12.5.12 Interface for Reversely Synchronizing a Clone Secondary LUN.....1419
4.12.5.13 Interface for Batch Querying Clone Secondary LUN Information.....1421
4.12.5.14 Interface for Consistently Splitting Clone.....1425
4.12.6 remote_device.....1426
4.12.6.1 Interface for Batch Querying Remote Device Information.....1426
4.12.6.2 Interface for Modifying Remote Device Information.....1431
4.12.6.3 Interface for Adding FC Links for Remote Devices.....1433
4.12.6.4 Interface for Batch Querying FC Link Information.....1434
4.12.6.5 Interface for Adding iSCSI Links for Remote Devices.....1438
4.12.6.6 Interface for Deleting Remote Device.....1442
4.12.6.7 Interface for Removing a FC Link of Remote Device.....1443
4.12.6.8 Interface for Querying FC Link Information.....1444
4.12.6.9 Interface for Creating Remote Device.....1448
4.12.6.10 Interface for Querying the Number of FC Links.....1451
4.12.6.11 Interface for Modifying FC Link Information.....1453
4.12.6.12 Interface for Removing a iSCSI Link of Remote Device.....1455
4.12.6.13 Interface for Batch Querying iSCSI Link Information.....1456
4.12.6.14 Interface for Querying a Single iSCSI Link Information.....1461
4.12.6.15 Interface for Querying the Number of iSCSI Links.....1466
4.12.6.16 Interface for Modifying a iSCSI Link information.....1467
4.12.6.17 Interface for Querying the Number of Remote Device.....1470
4.12.6.18 Interface for Querying Remote Device Information.....1471
4.12.7 remote_resource.....1476
4.12.7.1 Interface for Scanning for a Remote LUN.....1476

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4.12.7.2 Interface for Querying the Number of Remote Resources Available to the Remote vStore.....1477
4.12.7.3 Interface for Batch Querying Remote Resources Available to the Remote vStore.....1479
4.12.7.4 Interface for Implementing Associated Query of Remote LUN Information.....1482
4.12.7.5 Interface for Querying the Number of Remote LUN.....1486
4.12.7.6 Interface for Batch Querying Remote LUN Information.....1489
4.12.8 fs_snapshot.....1493
4.12.8.1 Interface for Querying FileSystem Snapshot Information.....1493
4.12.8.2 Interface for Creating FileSystem Snapshot Information.....1495
4.12.8.3 Interface for Rolling Back a Filesystem Snapshot.....1498
4.12.8.4 Interface for Deleting FileSystem Snapshot Information.....1499
4.12.8.5 Interface for Batch Querying FileSystem Snapshot Information.....1500
4.12.8.6 Interface for Querying the Number of FileSystem Snapshot Information.....1503
4.12.8.7 Interface for Modifying FileSystem Snapshot Information.....1504
4.12.9 mirror_lun.....1505
4.12.9.1 Interface for Batch Querying HyperMirror Copy Information.....1505
4.12.9.2 Interface for Synchronizing a Mirror Copy.....1509
4.12.9.3 Interface for Splitting a Mirror Copy.....1510
4.12.9.4 Interface for Modifying a Mirror Copy.....1511
4.12.9.5 Interface for Creating a HyperMirror.....1513
4.12.9.6 Interface for Deleting a HyperMirror.....1514
4.12.9.7 Interface for Querying the Number of HyperMirrors.....1515
4.12.9.8 Interface for Querying a HyperMirror Information.....1516
4.12.9.9 Interface for Implementing Associated Query of HyperMirror Information.....1518
4.12.9.10 Interface for Batch Querying HyperMirrors Information.....1520
4.12.9.11 Interface for Deleting a Mirror LUN Association.....1523
4.12.9.12 Interface for Creating a mirror LUN Association.....1524
4.12.9.13 Interface for Querying a HyperMirror Copy Information.....1525
4.12.10 hyper_metro_pair.....1529
4.12.10.1 Interface for Batch Querying HyperMetro Pair Information.....1529
4.12.10.2 Interface for Querying the Number of HyperMetro Pair Information.....1537
4.12.10.3 Interface for Switching the Priorities of the HyperMetro Pair.....1538
4.12.10.4 Interface for Suspending a HyperMetro Pair.....1539
4.12.10.5 Interface for Forcibly Starting a HyperMetro Pair.....1541
4.12.10.6 Interface for Synchronizing a HyperMetro Pair.....1542
4.12.10.7 Interface for Associate Querying HyperMetro Pair Information.....1543
4.12.10.8 Interface for Modifying a HyperMetro Pair.....1550
4.12.10.9 Interface for Deleting a HyperMetro Pair.....1552
4.12.10.10 Interface for Creating HyperMetro Pair Information.....1554
4.12.10.11 Interface for Querying a HyperMetro Pair Information.....1564
4.12.11 quorum_server.....1571
4.12.11.1 Interface for Querying the Number of Quorum Servers.....1571
4.12.11.2 Interface for Batch Querying Quorum Server Information.....1572

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4.12.11.3 Interface for Creating a Quorum Server Link....1574
4.12.11.4 Interface for Batch Querying Quorum Server Link Information....1576
4.12.11.5 Interface for Querying a Quorum Server Link Information....1578
4.12.11.6 Interface for Deleting a Quorum Server Link....1580
4.12.11.7 Interface for Deleting a Quorum Server....1581
4.12.11.8 Interface for Creating a Quorum Server....1582
4.12.11.9 Interface for Modifying a Quorum Server Information....1585
4.12.11.10 Interface for Querying a Quorum Server Information....1587
4.12.11.11 Interface for Querying the Number of Quorum Server Links....1589
4.12.12 hyper_metro_domain....1590
4.12.12.1 Interface for Creating a HyperMetro Domain....1590
4.12.12.2 Interface for Removing a Quorum Server from a HyperMetro Domain....1594
4.12.12.3 Interface for Modifying HyperMetro Domain....1595
4.12.12.4 Interface for Deleting a HyperMetro Domain....1596
4.12.12.5 Interface for Adding a Quorum Server into a HyperMetro Domain....1597
4.12.12.6 Interface for Querying HyperMetro Domain Information....1599
4.12.12.7 Interface for Querying the Number of HyperMetro Domains....1601
4.12.12.8 Interface for Batch Querying HyperMetro Domain Information....1602
4.12.13 hyper_metro_consistency_group....1605
4.12.13.1 Interface for Creating a Consistency Group of HyperMetro....1605
4.12.13.2 Interface for Querying the Number of Consistency Groups of HyperMetro....1610
4.12.13.3 Interface for Deleting a Consistency Group of HyperMetro....1611
4.12.13.4 Interface for Synchronizing a Consistency Group of HyperMetro....1612
4.12.13.5 Interface for Performing a PrimarySecondary_Switchover on a Consistency Group of HyperMetro....1614
4.12.13.6 Interface for Querying a Consistency Group of HyperMetro....1615
4.12.13.7 Interface for Forcibly Starting a Consistency Group of HyperMetro....1619
4.12.13.8 Interface for Modifying a Consistency Group of HyperMetro....1620
4.12.13.9 Interface for Batch Querying a Consistency Group of HyperMetro....1622
4.12.13.10 Interface for Suspending a Consistency Group of HyperMetro....1626
4.12.13.11 Interface for Removing a HyperMetro Pair from a Consistency Group of HyperMetro....1628
4.12.13.12 Interface for Adding a HyperMetro Pair to a Consistency Group of Hypermetro....1629
4.12.14 hyper_vault....1630
4.12.14.1 Interface for Batching Querying HyperVault Policy Information....1630
4.12.14.2 Interface for Modifying a HyperVault Policy....1634
4.12.14.3 Interface for Querying a HyperVault Job Information....1638
4.12.14.4 Interface for Batch Querying HyperVault Information....1641
4.12.14.5 Interface for Suspending a HyperVault Job....1645
4.12.14.6 Interface for Continuing HyperVault Job....1647
4.12.14.7 Interface for Deleting a HyperVault Copy....1648
4.12.14.8 Interface for Enabling a HyperVault Policy....1649
4.12.14.9 Interface for Batch Querying HyperVault Job Information....1650
4.12.14.10 Interface for Querying a HyperVault Information....1654

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4.12.14.11 Interface for Creating a HyperVault Policy.... 1658
4.12.14.12 Interface for Querying a HyperVault Policy Information.... 1662
4.12.14.13 Interface for Recovering a HyperVault Copy.... 1666
4.12.14.14 Interface for Querying a HyperVault Copy Information.... 1668
4.12.14.15 Interface for Batch Querying HyperVault Copy Information.... 1670
4.12.14.16 Interface for Disabling a HyperVault Policy.... 1674
4.12.14.17 Interface for Deleting a HyperVault.... 1675
4.12.14.18 Interface for Deleting a HyperVault Policy.... 1677
4.12.14.19 Interface for Manually Executing a HyperVault.... 1678
4.12.14.20 Interface for Creating a HyperVault.... 1679
4.12.14.21 Interface for Modifying a HyperVault.... 1686
4.12.14.22 Interface for Stopping a HyperVault Job.... 1689
4.12.14.23 Interface for Querying the Number of HyperVault.... 1690
4.12.14.24 Interface for Querying the Number of HyperVault Policy.... 1692
4.12.14.25 Interface for Querying the Number of HyperVault Copy.... 1693
4.12.14.26 Interface for Querying the Number of HyperVault Job.... 1694
4.12.14.27 Interface for Modifying a HyperVault Copy.... 1695
4.12.14.28 Interface for Implementing Associated Query of HyperVault Information.... 1697
4.13 File system storage service.... 1700
4.13.1 file_system.... 1700
4.13.1.1 Interface for Querying File System Information.... 1701
4.13.1.2 Interface for Batch Querying File System Information.... 1718
4.13.1.3 Interface for Querying File Share Type Config Information.... 1735
4.13.1.4 Interface for Querying the Number of File Systems.... 1738
4.13.1.5 Interface for Querying File System Config Ability Information.... 1740
4.13.1.6 Interface for Deleting a File System.... 1743
4.13.1.7 Interface for Modifying File System Information.... 1744
4.13.1.8 Interface for Modifying Periodic Snapshot Status Information.... 1754
4.13.1.9 Interface for Creating a File System.... 1755
4.13.1.10 Interface for Implementing Associated Query of File System Information.... 1783
4.13.1.11 Interface for Querying File System Type Config Information.... 1799
4.13.1.12 Interface for Querying File Share Config Information.... 1804
4.13.1.13 Interface for Creating a Clone File System.... 1805
4.13.1.14 Interface for Starting or Stopping Splitting a File System Clone.... 1822
4.13.2 quota_tree.... 1824
4.13.2.1 Interface for Creating a Quota Tree.... 1824
4.13.2.2 Interface for Deleting a Quota Tree.... 1827
4.13.2.3 Interface for Batch Querying Quota Tree Information.... 1828
4.13.2.4 Interface for Querying Quota Tree Information.... 1830
4.13.2.5 Interface for Modifying Quota Tree Information.... 1832
4.13.2.6 Interface for Querying the Number of Quota Trees.... 1834
4.13.3 quota.... 1835

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4.13.3.1 Interface for Querying Directory Quota Information....1835
4.13.3.2 Interface for Querying the Number of Directory Quotas....1840
4.13.3.3 Interface for Deleting a Directory Quota....1842
4.13.3.4 Interface for Modifying Directory Quota Information....1843
4.13.3.5 Interface for Batch Querying Directory Quota Information....1845
4.13.3.6 Interface for Creating a Directory Quota....1851
4.13.4 share....1858
4.13.4.1 Interface for Adding a CIFS Share User (Group)....1858
4.13.4.2 Interface for Batch Querying CIFS Share User (Group) Information....1861
4.13.4.3 Interface for Batch Querying NFS Share Client Information....1863
4.13.4.4 Interface for Deleting a CIFS Share....1866
4.13.4.5 Interface for Querying the Number of CIFS Shares....1867
4.13.4.6 Interface for Batch Querying CIFS Share Information....1868
4.13.4.7 Interface for Querying the Number of FTP Shares....1873
4.13.4.8 Interface for Deleting an FTP Share....1874
4.13.4.9 Interface for Deleting an NFS Share Client....1875
4.13.4.10 Interface for Querying the Number of NFS Share Clients....1876
4.13.4.11 Interface for Modifying NFS Share Client Information....1877
4.13.4.12 Interface for Querying FTP Share Information....1879
4.13.4.13 Interface for Modifying FTP Share Information....1881
4.13.4.14 Interface for Querying CIFS Share Information....1883
4.13.4.15 Interface for Deleting an NFS Share....1887
4.13.4.16 Interface for Querying CIFS Share User (Group) Information....1888
4.13.4.17 Interface for Modifying CIFS Share User (Group) Information....1890
4.13.4.18 Interface for Querying the Number of NFS Shares....1891
4.13.4.19 Interface for Querying the Number of CIFS Share Users (Groups)....1892
4.13.4.20 Interface for Deleting a CIFS Share User (Group)....1893
4.13.4.21 Interface for Batch Querying the IP Address/Address Segment for a CIFS Share....1894
4.13.4.22 Interface for Modifying the IP Address/Address Segment for a CIFS Share....1897
4.13.4.23 Interface for Creating a CIFS Share....1899
4.13.4.24 Interface for Modifying CIFS Share Information....1906
4.13.4.25 Interface for Querying NFS Share Client Information....1909
4.13.4.26 Interface for Adding an FTP Share....1912
4.13.4.27 Interface for Adding an NFS Share Client....1914
4.13.4.28 Interface for Modifying NFS Share Information....1917
4.13.4.29 Interface for Querying NFS Share Information....1920
4.13.4.30 Interface for Creating an NFS Share....1924
4.13.4.31 Interface for Batch Querying NFS Share Information....1929
4.13.4.32 Interface for Batch Querying FTP Share Information....1933
4.13.4.33 Interface for Adding accessible IP Addresses or IP Address Segments for a CIFS Share....1936
4.13.4.34 Interface for Deleting an IP Address or IP Address Segment for a CIFS Share....1938
4.13.4.35 Interface for Modifying the CIFS Homedir Share Mapping Rule....1939

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4.13.4.36 Interface for Batch Querying the CIFS Homedir Share Mapping Rule.....1941
4.13.4.37 Interface for Adding CIFS Homedir Share Mapping Rule.....1943
4.13.4.38 Interface for Deleting CIFS Homedir Share Mapping Rule.....1945
4.13.4.39 Interface for Querying the Number of CIFS Homedir Share Mapping Rule.....1947
4.13.4.40 Interface for Querying CIFS Homedir Share Mapping Rule.....1948
4.13.5 resource_user.....1950
4.13.5.1 Interface for Testing whether the Target User Exists.....1950
4.13.5.2 Interface for Querying User Mapping Configuration.....1951
4.13.5.3 Interface for Modifying User Mapping Configuration.....1953
4.13.5.4 Interface for Creating a Local User.....1955
4.13.5.5 Interface for Querying Local User Information.....1960
4.13.5.6 Interface for Modifying a Local User.....1962
4.13.5.7 Interface for Querying Local User Group Information.....1964
4.13.5.8 Interface for Creating a Local User Group.....1966
4.13.5.9 Interface for Deleting a Local User Group.....1967
4.13.5.10 Interface for Query the Number of Local User Groups.....1968
4.13.5.11 Interface for Creating an User Mapping.....1970
4.13.5.12 Interface for Deleting an User Mapping.....1972
4.13.5.13 Interface for Modiying an User Mapping.....1973
4.13.5.14 Interface for Query the Count of User Mapping.....1976
4.13.5.15 Interface for Query an User Mapping.....1977
4.13.5.16 Interface for Batch Querying Local User Information.....1979
4.13.5.17 Interface for Modifying Local User Group Information.....1982
4.13.5.18 Interface for Batch Querying Local User Group Information.....1983
4.13.5.19 Interface for Deleting a Local User.....1985
4.13.5.20 Interface for Querying the Number of Local Users.....1986
4.13.5.21 Interface for Deleting an Associated AD Domain User.....1988
4.13.5.22 Interface for Querying an AD Domain User.....1989
4.13.5.23 Interface for Querying the Number of Associated AD Domain Users.....1991
4.13.5.24 Interface for Implementing Associated Query of an AD Domain User.....1992
4.13.5.25 Interface for Creating an Associated AD Domain User.....1994
4.13.5.26 Interface for Batch Querying User Mapping.....1996
4.13.6 antivirus.....1998
4.13.6.1 Interface for Batch Querying Scan Policy.....1998
4.13.6.2 Interface for Creating Scan Policy.....2000
4.13.6.3 Interface for Modifying Scan Policy.....2003
4.13.6.4 Interface for Deleting Scan Policy.....2005
4.13.6.5 Interface for Creating On-Access Scan.....2006
4.13.6.6 Interface for Modifying On-Access Scan.....2009
4.13.6.7 Interface for Deleting On-Access Scan.....2010
4.13.6.8 Interface for Batch Querying Antivirus Server.....2011
4.13.6.9 Interface for Creating Antivirus Server.....2013

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4.13.6.10 Interface for Modifying Antivirus Server....2016
4.13.6.11 Interface for Deleting Antivirus Server....2017
4.13.6.12 Interface for Checking Antivirus Server Connection....2018
4.13.6.13 Interface for Querying Scan Service....2020
4.13.6.14 Interface for Modifying Scan Service....2021
4.13.6.15 Interface for Batch Querying On-Access Scan....2023
4.13.6.16 Interface for Querying Antivirus Server Settings....2025
4.13.6.17 Interface for Querying On-Access Scan Settings....2027
4.13.6.18 Interface for Querying Scan Policies....2029
4.13.6.19 Interface for Querying Antivirus Statistics....2031
4.13.6.20 Interface for Deleting Antivirus Statistics....2032
4.14 SVP management....2033
4.14.1 svp....2033
4.14.1.1 Interface for Restarting the SVP....2033
4.15 Others....2034
4.15.1 Other....2034
4.15.1.1 Interface for Obtaining Performance Data in Batches....2034
5 Appendix....2038
5.1 List of escape characters....2038
5.2 Table of Defining Role Permissions....2038
5.2.1 Table of Defining Role Permissions in the System View....2039
5.2.2 Table of Defining Role Permissions in the vStore View....2047
5.3 Object Performance Indicators....2051
5.3.1 DeviceManager....2051
5.3.2 EAM....2056
5.3.3 IO....2067
5.3.4 POOL....2071
5.3.5 SPACE....2077
5.3.6 复制....2084
5.3.7 协议....2087

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1 About This Document

About This Chapter

1.1 Overview

1.2 Intended Audience

1.3 Symbol Conventions

1.1 Overview

This document describes the concept, architecture, development preparation, and interface reference of Huawei OceanStor DeviceManager RESTful APIs and provides some code examples. Users can follow instructions in this document to develop applications for Huawei unified storage systems based on OceanStor DeviceManager RESTful APIs.

This document is applicable to product models shown in the following table.

Product Series	Product Model
OceanStor 2000 V3 series	OceanStor 2200 V3 (8 GB memory)/2200 V3 (16 GB memory)/ 2600 V3/2800 V3/2600 V3 for Video
OceanStor 5000 V3 series	OceanStor 5300 V3/5500 V3/5600 V3/5800 V3
OceanStor 6000 V3 series	OceanStor 6800 V3
OceanStor 18000 V3 series	OceanStor 18500 V3/18800 V3
OceanStor 2000F V3 series	OceanStor 2600F V3
OceanStor 5000F V3 series	OceanStor 5500F V3/5600F V3/5800F V3

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Product Series	Product Model
OceanStor 6000F V3 series	OceanStor 6800F V3
OceanStor 18000F V3 series	OceanStor 18500F V3/18800F V3

1.2 Intended Audience

This document is intended for:

- Software engineers of independent software vendors (ISVs)
- Huawei technical support engineers
- Technical support engineers of channel partners

1.3 Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Remarks
DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results. This symbol does not indicate human body injuries.

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Symbol	Remarks
NOTE	Calls attention to important information, best practices and tips. This symbol is used to address information not related to personal injury, equipment damage, and environment deterioration.

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2 Version Change History

About This Chapter

This chapter describes REST interface differences between OceanStor storage system V300R006C10 and previous versions.

2.1 V300R006C10 (Released on 2018-10-15)

2.2 V300R006C00 (Released on 2017-09-30)

2.3 V300R006C00 (Released on 2017-05-30)

2.4 V300R003C20 (Released on 2017-04-15)

2.1 V300R006C10 (Released on 2018-10-15)

Compared with V300R006C00 (released on 2017-09-30), this version has differences in REST interfaces, as described in the following table.

API name	Main Difference	Interface Difference Description
Interface for Obtaining Performance Data in Batches	Interface functions and descriptions	Correct the description of the user guide.
Interface for Batch Querying Certificate Information	Interface functions and descriptions	Field certificateFingerPrint is added to the output and is "Mandatory".
Interface for Implementing Associated Query of File System Information	Interface functions and descriptions	The CHILDRENCLONEFSNUM output field is deleted.

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API name	Main Difference	Interface Difference Description
Interface for Batch Querying Key Server Address	Interface functions and descriptions	Delete the interface.
Interface for Deleting a Key Server Address	Interface functions and descriptions	Delete the interface.
Interface for Adding a Key Server Address	Interface functions and descriptions	Delete the interface.
Interface for Testing Key Server Connection	Interface functions and descriptions	Delete the interface.
Interface for Creating a Consistency Group of HyperMetro	Interface functions and descriptions	Enumerations value are added to the output field RUNNINGSTATUS : 0 : unknown , 94 : error.
Interface for Batch Querying a Consistency Group of HyperMetro	Interface functions and descriptions	Enumerations value are added to the output field RUNNINGSTATUS : 0 : unknown , 94 : error.
Interface for Querying a Consistency Group of HyperMetro	Interface functions and descriptions	Enumerations value are added to the output field RUNNINGSTATUS : 0 : unknown , 94 : error.
Interface for Checking Antivirus Server Connection	Interface functions and descriptions	An enumeration value is added to the parameter VENDOR : 6：Rising Antivirus.
Interface for Batch Querying Antivirus Server	Interface functions and descriptions	An enumeration value is added to the output field VENDOR : 6：Rising Antivirus.
Interface for Querying Antivirus Server Settings	Interface functions and descriptions	An enumeration value is added to the output field VENDOR : 6：Rising Antivirus.

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API name	Main Difference	Interface Difference Description
Interface for Creating Antivirus Server	Interface functions and descriptions	An enumeration value is added to the output field VENDOR : 6：Rising Antivirus.
Interface for Batch Querying User Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Querying User Login IP Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Querying Performance Monitoring Switch	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Querying Reported Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Querying Current Alarm Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Querying LUN Copy Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Batch Querying LUN Copy Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Starting a LUN Copy	Interface functions and descriptions	The delivery condition of SUBTYPE is changed from "Conditional" to " Optionals."
Interface for Batch Querying PCIe Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field replayTimerTimeout and rollOver are added to the output and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Querying PCIe Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field replayTimerTimeout and rollOver are added to the output and is "Mandatory".
Interface for Creating a Quorum Server Link	Interface functions and descriptions	The delivery condition of LOCALCONTROLLERID is changed from "Mandatory" to " Optionals."
Interface for Querying Storage Pool Information	Interface functions and descriptions	Field reductionInvolvedCapacity, dedupedCapacity，compressedCapacity，dedupRatio，compressRatio and dedupCompressRatio are added to the output and is "Mandatory".
Interface for Batch Querying Storage Pool Information	Interface functions and descriptions	Field reductionInvolvedCapacity, dedupedCapacity，compressedCapacity，dedupRatio，compressRatio and dedupCompressRatio are added to the output and is "Mandatory".
Interface for Creating a Storage Pool	Interface functions and descriptions	Field reductionInvolvedCapacity, dedupedCapacity，compressedCapacity，dedupRatio，compressRatio and dedupCompressRatio are added to the output and is "Mandatory".
Interface for Querying Certificate Revocation List Information	Interface functions and descriptions	Add the interface.
Interface for Deleting a Certificate Revocation List	Interface functions and descriptions	Add the interface.
Interface for Activating a Certificate Revocation List	Interface functions and descriptions	Add the interface.
Interface for Importing a Certificate Revocation List	Interface functions and descriptions	Add the interface.
Interface for Creating a HyperMetro Domain	Interface functions and descriptions	Field STANDBYCPSID and STANDBYCPSNAME are added to the output and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Querying Remote Replication Pair Information	Interface functions and descriptions	Field VSTOREPAIRID is added to the output and is "Mandatory". Field SYNCLEFTTIME is added to the output and is "Conditional".
Interface for Creating a Remote Replication Pair	Interface functions and descriptions	The VSTOREPAIRID parameter is added and is "Conditional". Field SYNCLEFTTIME is added to the output and is "Conditional". The VSTOREPAIRID parameter is added and is "Mandatory".
Interface for Batch Querying Remote Replication Pair Information	Interface functions and descriptions	The VSTOREPAIRID parameter is added and is "Mandatory". The SYNCLEFTTIME parameter is added and is "Conditional".
Interface for Implementing Associated Query of FCoE Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Implementing Associated Query of Ethernet Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Querying User Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Associate Querying Remote Replication Pair	Interface functions and descriptions	An enumeration value is added to the parameter ASSOCIATEOBJTYPE : 2000：remote replication vstore pair. Field VSTOREPAIRID is added to the output and is "Mandatory". Field SYNCLEFTTIME is added to the output and is "Conditional".
Interface for Querying CIFS Service Settings	Interface functions and descriptions	Field OPLOCKTIMEOUT is added to the output and is "Mandatory".
Interface for Modifying CIFS Service Settings	Interface functions and descriptions	The length of the OPLOCKTIMEOUT parameter is changed from "15 to 60" to "5 to 60".

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API name	Main Difference	Interface Difference Description
Interface for Querying NFS Share Information	Interface functions and descriptions	Field AUDITITEMS is added to the output and is "Mandatory".
Interface for Implementing Associated Query of InfiniBand Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Querying InfiniBand Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Batch Querying InfiniBand Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Querying Power Information	Interface functions and descriptions	Field elabel is added to the output and is "Mandatory".
Interface for Batch Querying Power Information	Interface functions and descriptions	Field elabel is added to the output and is "Mandatory".
Interface for Querying Performance Data of a Managed Object	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for a User Login	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Creating HyperMetro Pair Information	Interface functions and descriptions	Enumerations value are added to the output field RUNNINGSTATUS : 0 : unknown , 94 : error. Field SYNCLEFTTIME is added to the output and is "Mandatory".
Interface for Batch Querying Clone Secondary LUN Information	Interface functions and descriptions	Field SYNCLEFTTIME is added to the output and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Querying Historical Alarms and Events Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Creating a Clone File System	Interface functions and descriptions	The return condition of PARENTFILESYSTEM-NAME , MINPROTECTTIMEUNIT and MAXPROTECTTIMEUNIT are changed from "Conditional" to "Mandatory." Fields PARENTSNAPSHOTNAME and PARENTFILESYSTEMID are added to the output and is "Conditional". Fields AUTOSIZEENABLE, SPACESELFADJUSTINGMODE，AUTOSHRINKTHRESHOLDPERCENT，AUTOGROWTHRESHOLDPERCENT，MINAUTOSIZE，MAXAUTOSIZE，SPACERECYCLEMODE and AUTOSIZEINCREMENT are added to the output and is "Mandatory".
Interface for Modifying File System Information	Interface functions and descriptions	The SPACESELFADJUSTINGMODE, AUTOSIZEENABLE, AUTOSHRINKTHRESHOLDPERCENT, AUTOGROWTHRESHOLDPERCENT, MINAUTOSIZE, MAXAUTOSIZE, AUTOSIZEINCREMENT, SPACERECYCLEMODE and ALLOCTYPE parameters are added and is "Optionals".
Interface for Creating a File System	Interface functions and descriptions	The SPACESELFADJUSTINGMODE, AUTOSIZEENABLE, AUTOSHRINKTHRESHOLDPERCENT, AUTOGROWTHRESHOLDPERCENT, MINAUTOSIZE, MAXAUTOSIZE, AUTOSIZEINCREMENT and SPACERECYCLEMODE parameters are added and is "Optionals". Field SPACESELFADJUSTINGMODE, AUTOSIZEENABLE, AUTOSHRINKTHRESHOLDPERCENT, AUTOGROWTHRESHOLDPERCENT, MINAUTOSIZE, MAXAUTOSIZE, AUTOSIZEINCREMENT, and SPACERECYCLEMODE are added to the output and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Modifying LUN Information	Interface functions and descriptions	The DISGUISESTATUS parameter is added and is "Optionals".
Interface for Creating an NFS Share	Interface functions and descriptions	The AUDITITEMS parameter is added and is "Optionals". Field AUDITITEMS is added to the output.
Interface for Modifying NFS Share Information	Interface functions and descriptions	The AUDITITEMS parameter is added and is "Optionals".
Interface for Batch Querying NFS Share Information	Interface functions and descriptions	Field AUDITITEMS is added to the output.
Interface for Creating a LUN	Interface functions and descriptions	The delivery condition of ALLOCTYPE is changed from "Mandatory" to "Optional." Field takeOverLunWwn is added to the output.
Interface for Associate Querying HyperMetro Pair Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". An enumeration value is added to the output field RUNNINGSTATUS : 0：unknown , 94 : error. An enumeration value is added to the output field SYNCDIRECTION : 0：no data synchronization. Field SYNCLEFTTIME is added to the output.
Interface for Batch Querying HyperMetro Pair Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". An enumeration value is added to the output field RUNNINGSTATUS : 0：unknown , 94 : error. An enumeration value is added to the output field SYNCDIRECTION : 0：no data synchronization. Field SYNCLEFTTIME is added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Querying a HyperMetro Pair Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". An enumeration value is added to the output field RUNNINGSTATUS : 0：unknown , 94 : error. An enumeration value is added to the output field SYNCDIRECTION : 0：no data synchronization. Field SYNCLEFTTIME is added to the output.
Interface for Querying HyperMetro Domain Information	Interface functions and descriptions	Field STANDBYCPSID and STANDBYCPSNAME are added to the output and is "Mandatory".
Interface for Batch Querying HyperMetro Domain Information	Interface functions and descriptions	Field STANDBYCPSID and STANDBYCPSNAME are added to the output and is "Mandatory".
Interface for Modifying CIFS Share Information	Interface functions and descriptions	The ENABLESHOWPREVIOUSVERSIONS parameter is added and is "Optionals". The ENABLESHOWSNAPSHOT parameter is added and is "Optionals".
Interface for Querying FileSystem Snapshot Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Batch Querying FileSystem Snapshot Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals".
Interface for Batch Querying Fibre Channel Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Querying Fibre Channel Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Batch Querying FCoE Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Querying FCoE Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Querying Ethernet Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Batch Querying Ethernet Port Information	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field numberOfInitiators is added to the output and is "Mandatory".
Interface for Access Authentication	Interface functions and descriptions	The timeConversion parameter is added and is "Optionals". Field vstoreId is added to the output and is "Mandatory".
Interface for Batch Querying LUN Information	Interface functions and descriptions	An enumeration value is added to the output field DISGUISESTATUS: 4 : Third-party disguise (supported by eDevLUN). Field takeOverLunWwn is added to the output.
Interface for Implementing Associated Query of LUN Information	Interface functions and descriptions	An enumeration value is added to the output field DISGUISESTATUS: 4 : Third-party disguise (supported by eDevLUN). Field takeOverLunWwn is added to the output and is "Mandatory".
Interface for Creating a HyperVault	Interface functions and descriptions	The ENABLECOMPRESS parameter is added and is "Optionals". Field ENABLECOMPRESS is added to the output and is "Mandatory".
Interface for Modifying a HyperVault	Interface functions and descriptions	The ENABLECOMPRESS parameter is added and is "Optionals".
Interface for Querying a HyperVault Information	Interface functions and descriptions	Field ENABLECOMPRESS is added to the output and is "Mandatory".
Interface for Batch Querying HyperVault Information	Interface functions and descriptions	Field ENABLECOMPRESS is added to the output and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Implementing Associated Query of HyperVault Information	Interface functions and descriptions	Field ENABLECOMPRESS is added to the output and is "Mandatory".
Interface for Querying the Number of Remote Replication vStore Pair Information	Interface functions and descriptions	Add the interface.
Interface for Deactivating All Logical Ports of the Local vStore of the Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.
Interface for Associate Querying Remote Replication vStore Pair Information	Interface functions and descriptions	Add the interface.
Interface for Creating Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.
Interface for Deleting a Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.
Interface for Querying a Remote Replication vStore Pair Information	Interface functions and descriptions	Add the interface.
Interface for Setting Secondary Resource Protection for a Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.
Interface for Splitting a Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.

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API name	Main Difference	Interface Difference Description
Interface for Performing a Primary_Secondary Switchover on a Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.
Interface for Synchronizing a Remote Replication vStore Pair	Interface functions and descriptions	Add the interface.
Interface for Batch Querying Remote Replication vStore Pair Information	Interface functions and descriptions	Add the interface.
Interface for Batch Querying File System Information	Interface functions and descriptions	The showGNSEnable parameter is added and is "Optionals".
Interface for Querying Basic System Information	Interface functions and descriptions	An enumeration value is added to the output field PRODUCTMODE: 92: 2800 V5, 93: 5300 V5, 94: 5300F V5, 95: 5500 V5, 96: 5500F V5, 97: 5600 V5, 98: 5600F V5, 99: 5800 V5, 100: 5800F V5, 101: 6800 V5, 102: 6800F V5, 103: 18500 V5, 104: 18500F V5, 105: 18800 V5, 106: 18800F V5.
Interface for Batch Querying CIFS Share Information	Interface functions and descriptions	Fields subType, ENABLESHOWPREVIOUS-VERSIONSAUTOSIZEINCREMENT, and ENABLESHOWSNAPSHOT are added to the output and is "Mandatory".
Interface for Querying CIFS Share Information	Interface functions and descriptions	Fields subType, ENABLESHOWPREVIOUS-VERSIONSAUTOSIZEINCREMENT, and ENABLESHOWSNAPSHOT are added to the output and is "Mandatory".
Interface for Creating a CIFS Share	Interface functions and descriptions	The subType, ENABLESHOWPREVIOUS-VERSIONS and ENABLESHOWSNAPSHOT parameters are added and is "Optionals". Fields subType, ENABLESHOWPREVIOUS-VERSIONSAUTOSIZEINCREMENT, and ENABLESHOWSNAPSHOT are added to the output and is "Mandatory".
Interface for Modifying CIFS Share Information	Interface functions and descriptions	The subType, ENABLESHOWPREVIOUS-VERSIONS and ENABLESHOWSNAPSHOT parameters are added and is "Optionals".

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API name	Main Difference	Interface Difference Description
Interface for Querying Enclosure Information	Interface functions and descriptions	An enumeration value is added to the output field MODEL: 66: 4 U 24-slot 3.5-inch 12 Gbit/s SAS disk enclosure, 40: 2 U 2-controller 25-slot 2.5-inch 12 Gbit/s SAS controller enclosure.
Interface for Batch Querying Enclosure Information	Interface functions and descriptions	An enumeration value is added to the output field MODEL: 66: 4 U 24-slot 3.5-inch 12 Gbit/s SAS disk enclosure, 40: 2 U 2-controller 25-slot 2.5-inch 12 Gbit/s SAS controller enclosure.
Interface for Creating a Local User Group	Interface functions and descriptions	The length of the NAME parameter is changed from "1 to 32" to "1 to 63".
Interface for Creating a Logical Port	Interface functions and descriptions	Remark information "Parameter values 'management' and 'management and service' can be delivered in vStore scenarios only" is deleted from delivered parameter ROLE. The dnsZoneName and listenDnsQueryEnabled parameters are added and is "Optionals". Fields dnsZoneName and listenDnsQueryEnabled are added to the output and is "Mandatory".
Interface for Modifying a Logical Port	Interface functions and descriptions	The dnsZoneName and listenDnsQueryEnabled parameters are added and is "Optionals".
Interface for Querying Logical Port Information	Interface functions and descriptions	Fields dnsZoneName and listenDnsQueryEnabled are added to the output and is "Mandatory".
Interface for Batch Querying Logical Port Information	Interface functions and descriptions	Fields dnsZoneName and listenDnsQueryEnabled are added to the output and is "Mandatory".

2.2 V300R006C00 (Released on 2017-09-30)

Compared with V300R006C00 (released on 2017-05-30), V300R006C00 (released on 2017-09-30) has differences in REST interfaces, as described in the following table.

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API name	Main Difference	Interface Difference Description
Interface for Querying CPU Information	Interface functions and descriptions	This interface is discarded.
Interface for Batch Querying CPU Information	Interface functions and descriptions	This interface is discarded.
Interface for Querying Memory Information	Interface functions and descriptions	This interface is discarded.
Interface for Batch Querying Memory Information	Interface functions and descriptions	This interface is discarded.
Interface for Querying the Maximum Range of a Host LUN ID	Interface functions and descriptions	Add the interface.
Interface for Implementing Associated Query of LUN Information	Interface functions and descriptions	The MIRRORPOLICY and ISCHECKZEROPAGE output fields are deleted.
Interface for Batch Querying LUN Information	Interface functions and descriptions	The MIRRORPOLICY and ISCHECKZEROPAGE output fields are deleted.
Interface for Querying LUN Information	Interface functions and descriptions	The MIRRORPOLICY and ISCHECKZEROPAGE output fields are deleted.
Interface for Creating a LUN	Interface functions and descriptions	The MIRRORPOLICY and ISCHECKZEROPAGE output fields are deleted.
Interface for Testing Key Server Connection	Descriptions	The original 0 to 65535 value range of the delivered port parameter is changed to 1 to 65535.
Interface for Adding a Key Server Address	Descriptions	The original 0 to 65535 value range of the delivered port parameter is changed to 1 to 65535.
Interface for Querying Ethernet Port Information	Interface functions and descriptions	An enumeration value is added to the output field LOGICTYPE: 11: IP Scale-out interconnect port.

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API name	Main Difference	Interface Difference Description
Interface for Implementing Associated Query of Ethernet Port Information	Interface functions and descriptions	An enumeration value is added to the output field LOGICTYPE: 11: IP Scale-out interconnect port.
Interface for Batch Querying Ethernet Port Information	Interface functions and descriptions	An enumeration value is added to the output field LOGICTYPE: 11: IP Scale-out interconnect port.

2.3 V300R006C00 (Released on 2017-05-30)

Compared with V300R003C20 (released on 2017-04-15), V300R006C00 (released on 2017-05-30) has differences in REST interfaces, as described in the following table.

API name	Main Difference	Interface Difference Description
Interface for Creating a Bond Port	Interface functions and descriptions	The MSGRETURNTYPE parameter is added and is "Optionals".
Interface for Modifying a Bond Port	Interface functions and descriptions	The MSGRETURNTYPE parameter is added and is "Optionals".
Interface for Deleting a Bond Port	Interface functions and descriptions	The MSGRETURNTYPE parameter is added and is "Optionals".
Interface for Removing a Bonding	Interface functions and descriptions	The MSGRETURNTYPE parameter is added and is "Optionals".
Interface for Creating Bonding Information for vVol LUNs	Interface functions and descriptions	The MSGRETURNTYPE parameter is added and is "Optionals".
Interface for Querying Storage Pool Information	Interface functions and descriptions	Field ENABLESSDBUFFER is added to the output.
Interface for Modifying Storage Pool Information	Interface functions and descriptions	The ENABLESSDBUFFER parameter is added and is "Optionals".

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API name	Main Difference	Interface Difference Description
Interface for Creating an iSCSI Initiator (Host Port)	Interface functions and descriptions	The FAILOVERMODE parameter is added and is "Optionals". The SPECIALMODETYPE parameter is added and is "Optionals". The PATHTYPE parameter is added and is "Optionals". The MULTIPATHTYPE parameter is added and is "Optionals". Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Querying iSCSI Initiator Information (Host Port)	Interface functions and descriptions	Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Batch Querying iSCSI Initiator Information (Host Port)	Interface functions and descriptions	Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Implementing Associated Query of iSCSI Initiator Information (Host Port)	Interface functions and descriptions	Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Modifying iSCSI Initiator Information (Host Port)	Interface functions and descriptions	The FAILOVERMODE parameter is added and is "Optionals". The SPECIALMODETYPE parameter is added and is "Optionals". The PATHTYPE parameter is added and is "Optionals".

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API name	Main Difference	Interface Difference Description
Interface for Creating a Fibre Channel Initiator (Host Port)	Interface functions and descriptions	The FAILOVERMODE parameter is added and is "Optionals". The SPECIALMODETYPE parameter is added and is "Optionals". The PATHTYPE parameter is added and is "Optionals". The MULTIPATHTYPE parameter is added and is "Optionals". Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Querying Fibre Channel Initiator Information (Host Port)	Interface functions and descriptions	Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Batch Querying Fibre Channel Initiator Information (Host Port)	Interface functions and descriptions	Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Implementing Associated Query of Fibre Channel Initiator Information (Host Port)	Interface functions and descriptions	Field FAILOVERMODE is added to the output. Field SPECIALMODETYPEis added to the output. Field PATHTYPEis added to the output.
Interface for Modifying Fibre Channel Initiator Information (Host Port)	Interface functions and descriptions	The FAILOVERMODE parameter is added and is "Optionals". The SPECIALMODETYPE parameter is added and is "Optionals". The PATHTYPE parameter is added and is "Optionals".
Interface for Consistently Splitting Clone	Interface functions and descriptions	The PAIRID2LIST parameter is added and is "Optionals".
Interface for Setting Email Notifications	Interface functions and descriptions	The condition to deliver the CMO_EMAIL_SMTP_USER_NAME parameter is changed from "Mandatory" to "Conditional".

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API name	Main Difference	Interface Difference Description
Interface for Creating Domain Authentication Server Settings	Interface functions and descriptions	The length of the USERSEARCHPATH parameter is changed from "1 to 63" to "1 to 255". The length of the GROUPSEARCHPATH parameter is changed from "1 to 63" to "0 to 255". The length of the GROUPNAMEATTR parameter is changed from "1 to 63" to "0 to 63". The length of the GROUPMEMBERATTR parameter is changed from "1 to 63" to "0 to 63". The length of the GROUPOBJECTCLASS parameter is changed from "1 to 63" to "0 to 63". The length of the PASSWORDHASH parameter is changed from "1 to 64" to "0 to 63".
Interface for Modifying Domain Authentication Server Settings	Interface functions and descriptions	Optional parameter PASSWORDHASH is added to delivery parameters. The length of the USERSEARCHPATH parameter is changed from "1 to 63" to "1 to 255". The length of the GROUPSEARCHPATH parameter is changed from "1 to 63" to "0 to 255". The length of the GROUPNAMEATTR parameter is changed from "1 to 63" to "0 to 63". The length of the GROUPMEMBERATTR parameter is changed from "1 to 63" to "0 to 63". The length of the GROUPOBJECTCLASS parameter is changed from "1 to 63" to "0 to 63".
Interface for Modifying Remote Device Information	Interface functions and descriptions	The delivery condition of NAME is changed from "Optionals" to "Conditional."
Interface for Modifying a Consistency Group of HyperMetro	Interface functions and descriptions	The ISISOLATION parameter is added and is "Optionals". The ISISOLATIONTHRESHOLDTIME parameter is added and is "Optionals".
Interface for Modifying a HyperMetro Pair	Interface functions and descriptions	The ISISOLATION parameter is added and is "Optionals". The ISISOLATIONTHRESHOLDTIME parameter is added and is "Optionals".
Interface for Creating a Consistency Group of HyperMetro	Interface functions and descriptions	Fields ISISOLATIONTHRESHOLD-TIME,ISISOLATION and ACTIVEORPASSIVE are added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Querying a Consistency Group of HyperMetro	Interface functions and descriptions	Fields ISISOLATIONTHRESHOLD-TIME,ISISOLATION and ACTIVEORPASSIVE are added to the output.
Interface for Batch Querying a Consistency Group of HyperMetro	Interface functions and descriptions	Fields ISISOLATIONTHRESHOLD-TIME,ISISOLATION and ACTIVEORPASSIVE are added to the output.
Interface for Exporting a Configuration File	Interface functions and descriptions	The delivery condition of CMO_EXPORT_DB_TYPE is changed from "Mandatory" to " Optionals." Conditional parameter CMO_EXPORT_DRIVE_ID is deleted from delivery parameters.
Interface for Setting NTP Server	Interface functions and descriptions	The CMO_SYS_NTP_CLNT_CONF_AUTH_SWITCH parameter is added and is "Mandatory".
Interface for Querying NTP Server Client Configurations	Interface functions and descriptions	Output field CMO_SYS_NTP_SYNC_PERIOD is not used. Field CMO_SYS_NTP_CLNT_CONF_AUTH_SWITCH is added to the output.
Interface for Implementing Associated Query of Remote LUN Information	Interface functions and descriptions	The filter parameter is added and is "Optionals"; The return condition of field LUNID in the output is changed from "Conditional" to "Mandatory"; The return condition of field DEVICESN in the output is changed from "Conditional" to "Mandatory".
Interface for Exporting a Configuration File	Interface functions and descriptions	The delivery condition of CMO_EXPORT_DB_TYPE is changed from "Mandatory" to " Optionals." Conditional parameter CMO_EXPORT_DRIVE_ID is deleted from delivery parameters.
Interface for Activating VVol LUN Snapshots	Interface functions and descriptions	Thedelivery condition of SUBTYPE is changed from "Mandatory" to"Optionals."
Interface for Creating Snapshot Copy	Interface functions and descriptions	The DESCRIPTION parameter is added and is "Optionals".

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API name	Main Difference	Interface Difference Description
Interface for Querying the Number of Remote LUN	Interface functions and descriptions	The following values are added to delivery parameters: 5: remote LUN of a LUN copy. 24: remote file system of remote replication. 26: remote LUN of SAN-based HyperMetro. 28: remote file system of NAS-based HyperMetro. 30: remote file system of HyperVault.
Interface for Querying Alarm Maskings	Interface functions and descriptions	The language parameter is added and is "Optionals".
Interface for Batch Querying SmartMigration Task Information	Interface functions and descriptions	The delivery condition of filter is changed from "Optional" to "Conditional." The delivery condition of range is changed from "Optional" to "Conditional."
Interface for Modifying a Mapping View	Interface functions and descriptions	The ENABLEINBANDCOMMAND parameter is added and is "Optionals".
Interface for Pausing or Continuing a SmartTier Task	Interface functions and descriptions	The delivery condition of PAUSEMIGRATIONSWITCH is changed from "Mandatory" to "Optionals."
Interface for Starting or Stopping a SmartTier Task	Interface functions and descriptions	The delivery condition of PAUSEMIGRATIONSWITCH is changed from "Mandatory" to "Optionals."
Interface for Querying Current Alarm Information	Interface functions and descriptions	The sortby parameter is added and is "Optionals". Remark information "A maximum of 250 results can be returned" is added to delivered parameter range.
Interface for Querying Historical Alarms and Events Information	Interface functions and descriptions	The sortby parameter is added and is "Optionals". Remark information "A maximum of 250 results can be returned" is added to delivered parameter range.

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API name	Main Difference	Interface Difference Description
Interface for Creating a LUN	Interface functions and descriptions	The MIRRORCHECKLUNID parameter is added and is "Conditional". The MIRRORTYPE parameter is added and is "Conditional". The ENABLECOMPRESSION parameter is added and is "Optionals". The COMPRESSION parameter is added and is "Optionals". The ENABLESMARTDEDUP parameter is added and is "Optionals". Field usedConsumerDataCapacity is added to the output.
Interface for Modifying LUN Information	Interface functions and descriptions	The ENABLECOMPRESSION parameter is added and is "Optionals". The COMPRESSION parameter is added and is "Optionals". The ENABLESMARTDEDUP parameter is added and is "Optionals".
Interface for Implementing Associated Query of LUN Information	Interface functions and descriptions	Output field ASSOCIATEMETADATA is not used. The return condition of ISCHECKZEROPAGE is changed from "Conditional" to "Mandatory." Fields OWNERCONTROLLERLIST and ISSMARTTIERENABLE are added to the output.
Interface for Adding a Route	Interface functions and descriptions	Field TABLETYPE is added to the output.
Interface for Batch Querying Route Information	Interface functions and descriptions	Field TABLETYPE is added to the output.
Interface for Querying Controller Information	Interface functions and descriptions	Output field ISMASTER is not used. Field TEMPERATURE is added to the output.
Interface for Batch Querying Controller Information	Interface functions and descriptions	Output field ISMASTER is not used. Field TEMPERATURE is added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Creating a Disk Domain	Interface functions and descriptions	Field UNSPECIFIEDRAIDDISKNUM is added to the output; The return condition of field FORMATREMAINTIME in the output is changed from "Mandatory" to "Conditional"; The return condition of field FORMATPROGRESS in the output is changed from "Mandatory" to "Conditional".
Interface for Querying Disk Domain Information	Interface functions and descriptions	Field UNSPECIFIEDRAIDDISKNUM is added to the output.
Interface for Batch Querying Disk Domain Information	Interface functions and descriptions	Field UNSPECIFIEDRAIDDISKNUM is added to the output.
Interface for Querying User Login Information	Interface functions and descriptions	Field roleId is added to the output.
Interface for Querying SAS Port Information	Interface functions and descriptions	Field ENCLOSURE_WWN_LIST is added to the output.
Interface for Querying Serial Port Information	Interface functions and descriptions	The following value is added to the PARENTTYPE output field: 209: interface module.
Interface for Querying Serial Port Information in Batches	Interface functions and descriptions	The following value is added to the PARENTTYPE output field: 209: interface module.
Interface for Creating a Mapping View	Interface functions and descriptions	Fields ASSOCITEOBJID and INBANDLUNWWN are added to the output.
Interface for Querying a Mapping View	Interface functions and descriptions	Fields ASSOCITEOBJID and INBANDLUNWWN are added to the output.
Interface for Associatively Query Mapping Views	Interface functions and descriptions	Fields ASSOCITEOBJID and INBANDLUNWWN are added to the output.
Interface for Batch Querying Mapping Views	Interface functions and descriptions	Fields ASSOCITEOBJID and INBANDLUNWWN are added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Querying a HyperMirror Information	Interface functions and descriptions	The value of the HEALTHSTATUS output field is changed from "3: downgrade" to "5: downgrade".
Interface for Implementing Associated Query of HyperMirror Information	Interface functions and descriptions	The value of the HEALTHSTATUS output field is changed from "3: downgrade" to "5: downgrade".
Interface for Batch Querying HyperMirrors Information	Interface functions and descriptions	The value of the HEALTHSTATUS output field is changed from "3: downgrade" to "5: downgrade".
Interface for Querying a Consistency Group of Remote Replication	Interface functions and descriptions	Fields STARTTIME and ENDTIME are added to the output. The return condition of field REMTIMEOUTPERIOD in the output is changed from "Conditional" to "Mandatory".
Interface for Batch Querying a Consistency Group of Remote Replication	Interface functions and descriptions	Fields STARTTIME and ENDTIME are added to the output. The return condition of field REMTIMEOUTPERIOD in the output is changed from "Conditional" to "Mandatory".
Interface for Creating a Remote Replication Pair	Interface functions and descriptions	The return condition of field SYNCHRONIZETYPE in the output is changed from "Mandatory" to "Conditional"; The return condition of field ISROLLBACK in the output is changed from "Mandatory" to "Conditional"; The return condition of field REMTIMEOUTPERIOD in the output is changed from "Conditional" to "Mandatory".
Interface for Querying Remote Replication Pair Information	Interface functions and descriptions	Fields DATACOPED and DATANEEDCOPY are added to the output. The return condition of field SYNCHRONIZETYPE in the output is changed from "Mandatory" to "Conditional"; The return condition of field ISROLLBACK in the output is changed from "Mandatory" to "Conditional"; The return condition of field REMTIMEOUTPERIOD in the output is changed from "Conditional" to "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Batch Querying Remote Replication Pair Information	Interface functions and descriptions	Fields DATACOPED and DATANEEDCOPY are added to the output. The return condition of field SYNCHRONIZETYPE in the output is changed from "Mandatory" to "Conditional"; The return condition of field ISROLLBACK in the output is changed from "Mandatory" to "Conditional"; The return condition of field REMTIMEOUTPERIOD in the output is changed from "Conditional" to "Mandatory".
Interface for Clearing Exported Data	Interface functions and descriptions	The delivery condition of nodeId is changed from "Conditional" to "Optionals."
Interface for Creating a CIFS Share	Interface functions and descriptions	The APPLYDEFAULTACL parameter is added and is "Optionals". The ENABLEFILEEXTENSIONFILTER parameter is added and is "Optionals". Fields APPLYDEFAULTACL and ENABLEFILEEXTENSIONFILTER are added to the output.
Interface for Modifying CIFS Share Information	Interface functions and descriptions	The APPLYDEFAULTACL parameter is added and is "Optionals". The ENABLEFILEEXTENSIONFILTER parameter is added and is "Optionals".
Interface for Querying CIFS Share Information	Interface functions and descriptions	Fields APPLYDEFAULTACL and ENABLEFILEEXTENSIONFILTER are added to the output.
Interface for Batch Querying CIFS Share Information	Interface functions and descriptions	Fields APPLYDEFAULTACL and ENABLEFILEEXTENSIONFILTER are added to the output.
Interface for Creating a Logical Port	Interface functions and descriptions	The ddnsStatus parameter is added and is "Optionals". Fields ISPRIVATE,MANAGEMENTACCESS and ddnsStatus are added to the output.
Interface for Modifying a Logical Port	Interface functions and descriptions	The delivery condition of ADDRESSFAMILY is changed from "Mandatory" to "Conditional." The CURRENTPORTID parameter is added and is "Optionals". The ddnsStatus parameter is added and is "Optionals".

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API name	Main Difference	Interface Difference Description
Interface for Querying Logical Port Information	Interface functions and descriptions	Fields MANAGEMENTACCESS and ddnsStatus are added to the output.
Interface for Batch Querying Logical Port Information	Interface functions and descriptions	Fields FAILBACKMODE,MANAGEMENTACCESS and ddnsStatus are added to the output.
Interface for Querying the Number of HyperMetro Pair Information	Interface functions and descriptions	The HCRESOURCETYPE conditional parameter is changed to be delivered through the filter parameter.
Interface for Querying a HyperMetro Pair Information	Interface functions and descriptions	Fields ACTIVEORPASSIVE is added to the output.
Interface for Batch Querying HyperMetro Pair Information	Interface functions and descriptions	The HCRESOURCETYPE conditional parameter is changed to be delivered through the filter parameter. Fields ACTIVEORPASSIVE is added to the output.
Interface for Associate Querying HyperMetro Pair Information	Interface functions and descriptions	Fields ACTIVEORPASSIVE is added to the output. The return condition of field SYNCPROGRESS in the output is changed from "Conditional" to "Mandatory".
Interface for Creating HyperMetro Pair Information	Interface functions and descriptions	Fields ACTIVEORPASSIVE is added to the output.
Interface for Modifying LDAP Domain Settings	Interface functions and descriptions	The BINDLEVEL parameter is added and is "Optionals". The GROUPSCOPE parameter is added and is "Optionals". The BINDUSINGADCRED parameter is added and is "Optionals". The USERSCOPE parameter is added and is "Optionals". The NETGROUPDN parameter is added and is "Optionals". The NETGROUPSCOPE parameter is added and is "Optionals".
Interface for Querying LDAP Domain Settings	Interface functions and descriptions	Fields USERSCOPE, BINDUSINGADCRED, BINDLEVEL, GROUPSCOPE, NETGROUPDN and NETGROUPSCOPE are added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Querying a Quorum Server Information	Interface functions and descriptions	The return condition of SERVERIPB is changed from "Conditional" to "Mandatory." The return condition of SERVERPORTB is changed from "Conditional" to "Mandatory."
Interface for Batch Querying Quorum Server Information	Interface functions and descriptions	The return condition of SERVERIPB is changed from "Conditional" to "Mandatory." The return condition of SERVERPORTB is changed from "Conditional" to "Mandatory."
Interface for Creating a File System	Interface functions and descriptions	The delivery condition of parameter SECTORSIZE is changed from "Optional" to "Conditional". Fields SNAPSHOTRESERVECAPACITY, CHILDRENCLONEFSNUM, ISDELETEPARENTSNAPSHOT, SPLITENABLE, SPLITPROGRESS, SPLITSPEED and SPLITSTATUS are added to the output.
Interface for Querying File System Information	Interface functions and descriptions	Fields SNAPSHOTRESERVECAPACITY, CHILDRENCLONEFSNUM, ISDELETEPARENTSNAPSHOT, SPLITENABLE, SPLITPROGRESS, SPLITSPEED and SPLITSTATUS are added to the output.
Interface for Batch Querying File System Information	Interface functions and descriptions	Fields SNAPSHOTRESERVECAPACITY, CHILDRENCLONEFSNUM, ISDELETEPARENTSNAPSHOT, SPLITENABLE, SPLITPROGRESS, SPLITSPEED and SPLITSTATUS are added to the output.
Interface for Querying a HyperMetro vStore Pair Information	Interface functions and descriptions	Fields PREFERREDMODE and ACTIVEORPASSIVE are added to the output.
Interface for Batch Querying HyperMetro vStore Pair Information	Interface functions and descriptions	Fields PREFERREDMODE and ACTIVEORPASSIVE are added to the output.
Interface for Associate Querying HyperMetro vStore Pair Information	Interface functions and descriptions	Fields PREFERREDMODE and ACTIVEORPASSIVE are added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Creating HyperMetro vStore Pairs	Interface functions and descriptions	The PREFERREDMODE parameter is added and is "Mandatory". The PREFERREDSITE parameter is added and is "Conditional". Fields PREFERREDMODE and ACTIVEORPASSIVE are added to the output.
Interface for Modifying the Preferred Site for NAS-based HyperMetro	Interface functions and descriptions	Add the interface.
Interface for Creating a Failover Group	Descriptions	The length of the DESCRIPTION parameter is changed from "0 to 255" to "0 to 127".
Interface for Modifying Failover Group Information	Descriptions	The length of the DESCRIPTION parameter is changed from "0 to 255" to "0 to 127".
Interface for Importing a Certificate	Descriptions	In the note of the CERTIFICATE_TYPE parameter, the enumeration value "7: NTP certificate" is deleted from the certificate types supported by 2200 V3 and 2600 V3 for Video.
Interface for Activating a Certificate	Descriptions	In the note of the CERTIFICATE_TYPE parameter, the enumeration value "7: NTP certificate" is deleted from the certificate types supported by 2200 V3 and 2600 V3 for Video.
Interface for Querying SmartMigration Task Information	Interface functions and descriptions	The value of the PROGRESS field in the output is changed from "-1 to 100" to "0 to 100".
Interface for Modifying a Host	Interface functions and descriptions	Enumeration values "10: Oracle VM" and "11: OpenVMS" are deleted from delivered parameter OPERATIONSYSTEM.
Interface for Creating a SmartQoS	Interface functions and descriptions	The default value of delivered parameter IOTYPE is changed from "0: read I/O" to "2: read and write I/Os"; The default value of delivered parameter SCHEDULEPOLICY is deleted; The delivery condition of parameter CYCLESET is changed from "Optional" to "Conditional".

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API name	Main Difference	Interface Difference Description
Interface for Setting Alarm Dump	Interface functions and descriptions	The delivery condition of parameter CMO_ALARM_RESTORE_ADDRESSis changed from "Conditional" to "Mandatory"; The delivery condition of parameter CMO_ALARM_RESTORE_VISUALPATHis changed from "Conditional" to "Mandatory"; The delivery condition of parameter CMO_ALARM_RESTORE_ACCOUNTis changed from "Conditional" to "Mandatory"; The delivery condition of parameter CMO_ALARM_RESTORE_PROTOCOLis changed from "Conditional" to "Mandatory".
Interface for Querying User Information	Interface functions and descriptions	The return condition of field ACCOUNTSTATE in the output is changed from "Mandatory" to "Conditional"; The return condition of field CREATETIME in the output is changed from "Mandatory" to "Conditional".
Interface for Batch Querying User Information	Interface functions and descriptions	The return condition of field ACCOUNTSTATE in the output is changed from "Mandatory" to "Conditional"; The return condition of field CREATETIME in the output is changed from "Mandatory" to "Conditional".
Interface for Batch Querying iSCSI Link Information	Interface functions and descriptions	The return condition of field LINKUSAGE in the output is changed from "Conditional" to "Mandatory".
Interface for Querying a Single iSCSI Link Information	Interface functions and descriptions	The return condition of field LINKUSAGE in the output is changed from "Conditional" to "Mandatory".

2.4 V300R003C20 (Released on 2017-04-15)

Compared with V300R003C10 (released on 2016-07-25), V300R003C20 (released on 2017-04-15) has differences in REST interfaces, as described in the following table.

API name	Main Difference	Interface Difference Description
Interface for Querying Controller Information	Descriptions	Output field ISMASTER is not used.

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API name	Main Difference	Interface Difference Description
Interface for Consistently Splitting Clone	Descriptions	Optional parameter PAIRID2LIST is added to delivery parameters.
Interface for Batch Querying User Information	Descriptions	The ACCOUNTSTATE field is added to the output.
Interface for Querying User Information	Descriptions	The ACCOUNTSTATE field is added to the output.
Interface for Modifying iSCSI Initiator Information (Host Port)	Descriptions	The delivery condition of parameter CHAPNAME is changed from "Optional" to "Conditional". The delivery condition of parameter CHAPPASSWORD is changed from "Optional" to "Conditional". The delivery condition of parameter CHAPNAMEINITATORVERTARGET is changed from "Optional" to "Conditional". The delivery condition of parameter CHAPPASSWORDINITATORVERTARGET is changed from "Optional" to "Conditional". The delivery condition of parameter CHAPOLDPASSWORDINITATORVERTARGET is changed from "Optional" to "Conditional".
Interface for Switching the Priorities of the HyperMetro Pair	Descriptions	Enumeration value "2: File System" is deleted from delivered parameter OPERATIONSYSTEM.
Interface for Deleting a SmartMigration Task	Descriptions	Mandatory parameter ID is added to delivery parameters.
Interface for Querying Ethernet Port Information	Descriptions	Fields maxSpeed and portFilter are added to the output.
Interface for Querying iSCSI Initiator Information (Host Port)	Descriptions	The ISFREE parameter is added and is "Optional".
Interface for Creating a Consistency Group of Remote Replication	Descriptions	Fields TIMEDIFFERENCE and REMTIMEOUTPERIOD are added to the output.

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API name	Main Difference	Interface Difference Description
Interface for Querying Historical Alarms and Events Information	Descriptions	The sortby parameter is added and is "Optional". The confirmTime and location fields are added to the output.
Interface for Querying Current Alarm Information	Descriptions	The sortby parameter is added and is "Optional". The confirmTime and location fields are added to the output.
Interface for Querying the Number of File Systems	Descriptions	The RSSTYPE parameter is added and is "Optional".
Interface for Querying File System Information	Descriptions	Output field ENABLEROLLBACKMODE is not used.
Interface for Querying the Number of LUNs	Descriptions	The RSSTYPE parameter is added and is "Optional".
Interface for Creating a SmartQoS	Descriptions	The delivery condition of parameter IOTYPE is changed from "Conditional" to "Optional".
Interface for Creating Snapshot Copy	Descriptions	The MSGRETURNTYPE parameter is added and is "Optional".
Interface for Creating a Remote Replication Pair	Descriptions	The TIMEDIFFERENCE field is added and is "Conditional". The return condition of field SYNCHRONIZETYPE in the output is changed from "Mandatory" to "Conditional". The return condition of field ISROLLBACK in the output is changed from "Mandatory" to "Conditional".
Interface for Querying Remote Replication Pair Information	Descriptions	The TIMEDIFFERENCE field is added and is "Conditional". The return condition of field SYNCHRONIZETYPE in the output is changed from "Mandatory" to "Conditional". The return condition of field ISROLLBACK in the output is changed from "Mandatory" to "Conditional".

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API name	Main Difference	Interface Difference Description
Interface for Implementing Associated Query of File System Information	Descriptions	Output field ENABLEROLLBACKMODE is not used.
Interface for Implementing Associated Query of Snapshot Information	Descriptions	The filter parameter is added and is "Optional".
Interface for Implementing Associated Query of Bond Port Information	Descriptions	The range parameter is added and is "Optional".
Interface for Associate Querying HyperMetro Pair Information	Descriptions	Enumeration value "2: File System" is deleted from delivered parameter HCRESOURCETYPE.
Interface for Batch Querying User Information	Descriptions	The return condition of field ACCOUNTSTATE in the output is changed from "Mandatory" to "Conditional".
Interface for Batch Querying Controller Information	Descriptions	Output field ISMASTER is not used.
Interface for Batch Querying Ethernet Port Information	Descriptions	The maxSpeed field is added and is "Mandatory". The portFilter field is added and is "Mandatory". The LIGHTSTATUS field in the output is changed to lightStatus.
Interface for Batch Querying File System Information	Descriptions	The RSSTYPE field is added and is "Mandatory". Output field ENABLEROLLBACKMODE is not used.
Interface for Batch Querying LUN Information	Descriptions	The RSSTYPE parameter is added and is "Optional". Fields OWNERCONTROLLERLIST and HASRSSOBJECT are added to the output.
Interface for Modifying LUN Information	Descriptions	The WRITEPOLICY parameter is added and can be delivered. This parameter is optional.

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API name	Main Difference	Interface Difference Description
Interface for Deleting a LUN	Descriptions	The SUBTYPE parameter is added and can be delivered. This parameter is optional.
Interface for Implementing Associated Query of LUN Information	Interface functions and descriptions	The value of the PROGRESS field in the output is changed from "1 to 100" to "-1 to 100." The LUNMigrationOrigin and HASRSSOBJECT fields are added to the output.
Interface for Batch Querying Remote Replication Pair Information	Descriptions	The TIMEDIFFERENCE field is added and is "Conditional". The return condition of field SYNCHRONIZETYPE in the output is changed from "Mandatory" to "Conditional". The return condition of field ISROLLBACK in the output is changed from "Mandatory" to "Conditional".
Interface for Access Authentication	Descriptions	The userid field is added and is "Mandatory". The description of the accountstate field in the output is changed to Password status. Enumerations 0 and 2 are deleted, and enumeration 6 is added.
Interface for Creating a LUN	Descriptions	The MIRRORCHECKLUNID parameter is added and is "Conditional". The MIRRORTYPE parameter is added and is "Conditional". Fields MIRRORTYPE and ISCHECKZEROPAGE are added to the output.
Interface for Batch Querying HyperMetro Pair Information	Interface functions and descriptions	The ISISOLATION field is added and is "Mandatory". The ISISOLATIONTHRESHOLDTIME field is added and is "Mandatory". Enumeration value "2: File System" is deleted from field HCRESOURCETYPE.
Interface for Batch Querying a Consistency Group of HyperMetro	Interface functions and descriptions	The ISISOLATION field is added and is "Mandatory". The ISISOLATIONTHRESHOLDTIME field is added and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Creating HyperMetro Pair Information	Interface functions and descriptions	The ISISOLATION field is added and is "Mandatory". The ISISOLATIONTHRESHOLDTIME field is added and is "Mandatory". numeration value "2: File System" is deleted from field HCRESOURCETYPE.
Interface for Querying a HyperMetro Pair Information	Interface functions and descriptions	The ISISOLATION field is added and is "Mandatory". The ISISOLATIONTHRESHOLDTIME field is added and is "Mandatory". numeration value "2: File System" is deleted from field HCRESOURCETYPE.
Interface for Querying a Consistency Group of HyperMetro	Interface functions and descriptions	The ISISOLATION field is added and is "Mandatory". The ISISOLATIONTHRESHOLDTIME field is added and is "Mandatory".
Interface for Creating a Consistency Group of HyperMetro	Interface functions and descriptions	The ISISOLATION field is added and is "Mandatory". The ISISOLATIONTHRESHOLDTIME field is added and is "Mandatory".
Interface for Modifying a HyperMetro Pair	Interface functions and descriptions	The ISISOLATION parameter is added and is "Optional". The ISISOLATIONTHRESHOLDTIME parameter is added and is "Optional".
Interface for Modifying a Consistency Group of HyperMetro	Interface functions and descriptions	The ISISOLATION parameter is added and is "Optional". The ISISOLATIONTHRESHOLDTIME parameter is added and is "Optional".
Interface for Batch Querying a Consistency Group of Remote Replication	Interface functions and descriptions	The STARTTIME field is added and is "Mandatory". The ENDTIME field is added and is "Mandatory".
Interface for Querying a Consistency Group of Remote Replication	Interface functions and descriptions	The STARTTIME field is added and is "Mandatory". The ENDTIME field is added and is "Mandatory".
Interface for Batch Querying CIFS Share Information	Interface functions and descriptions	The APPLYDEFAULTACL field is added and is "Mandatory".

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API name	Main Difference	Interface Difference Description
Interface for Creating a CIFS Share	Interface functions and descriptions	The APPLYDEFAULTACL parameter is added and is "Optional.
Interface for Querying CIFS Share Information	Interface functions and descriptions	The APPLYDEFAULTACL field is added and is "Mandatory".
Interface for Modifying CIFS Share Information	Interface functions and descriptions	The APPLYDEFAULTACL parameter is added and is "Optional.
Interface for Batch Querying Disk Domain Information	Interface functions and descriptions	The UNSPECIFIEDRAIDDISKNUM field is added and is "Mandatory".
Interface for Querying Disk Domain Information	Interface functions and descriptions	The UNSPECIFIEDRAIDDISKNUM field is added and is "Mandatory".
Interface for Modifing FTP Service Settings	Descriptions	Add the interface.
Interface for Querying FTP Service Settings	Descriptions	Add the interface.
Interface for Removing a Route	Interface functions and descriptions	Changed the delivery condition of parameter MASK from mandatory to mandatory under certain conditions. Changed the delivery condition of parameter GATEWAY from mandatory to mandatory under certain conditions.
Interface for Querying Basic System Information	Descriptions	The PatchVersion field is modified to patchVersion.

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3 Quick Start

About This Chapter

This chapter describes basic knowledge of OceanStor DeviceManager RESTful APIs to help you quickly familiarize yourself with API usage.

3.1 Overview

3.2 Interface Specifications

3.3 Preparations

3.4 Constraint

3.5 Example Scenarios of Invoking RESTful Interface

3.1 Overview

Introduction to REST APIs

Representational State Transfer (REST) APIs are APIs provided by Huawei OceanStor DeviceManager based on REST. Third-party developers can use the APIs to access OceanStor DeviceManager resources, such as alarms, performance data, and resource allocation information.

Characteristics of REST APIs

- As standard integration solutions, REST APIs facilitate the rapid integration of third-party systems.
- Only authorized users can use the APIs. The APIs support only Hypertext Transfer Protocol over Secure Socket Layer (HTTPS)-based access to ensure security.
- The APIs use the JavaScript object notation (JSON) data format for data interaction. The data format is simple and easy to read and write, generating less network traffic than extensible markup language (XML).

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Introduction to REST

REST is a coordinated set of constraints applied to network application design and development. It reduces development complexity and improves system scalability.

Resources are a core of REST. The resources are uniquely identified by uniform resource identifier (URI), for example, **/rest/${deviceId}/disk/${id}**.

REST employs the following standard operations to access resources:

- POST: creates resources.
- GET: queries resources.
- PUT: modify resources.
- DELETE: deletes resources.

OceanStor DeviceManager RESTful APIs provide resources using URIs. Users obtain storage device resources and storage services using the URIs accordingly.

Introduction to JSON

JSON is a lightweight data-interchange format.

The structures of the JSON are as follows:

- Object: Objects are delimited with curly brackets, for example, **{key1: value1, key2: value2, ...}**. You can access data using **Object.key**.
- Array: Arrays are delimited with brackets, for example, **[element1, element2, ...]**. You can access data using **Object[index]**. The index starts from 0.

JSON strings are more concise compared with XML, which decreases network traffic.

The following code shows how to access JSON string data:

```
<script type="text/javascript">
 var resultInfo = {"data":{"total":7,"key_2":2,"key_1":5},
                    "code":0,
                    "description":"Success to get alarmcount." };
 //Access the value of key_1.
 var key_1 = resultInfo.data.key_1;
</script>
```

Introduction to HTTP

Hypertext Transfer Protocol (HTTP) is the most widely applied Internet protocol.

It is a protocol for releasing and receiving Hypertext Markup Language (HTML) pages.

Resources requested using HTTP or HTTPS are identified by URI.

HTTPS is a secure version of HTTP. It encrypts data using Secure Sockets Layer (SSL) to ensure data security.

HTTP Request Message

An HTTP request message contains:

- Request line, for example, **GET /images/logo.gif**, which requests the **logo.gif** file from the **/images** directory.

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- Request header, for example, **Accept-Language: en**.
- Empty line.
- Optional request body.

HTTP Request Methods

HTTP 1.1 defines eight methods (also called verbs) to indicate the desired action to be performed on the identified resource:

- OPTIONS: returns the HTTP methods that the server supports. This method can be used to check the functionality of a web server by requesting **'*'** instead of a specific resource.
- HEAD: asks for the response identical to the one that corresponds to a GET request but without the response body. This method is useful for retrieving meta-information written in response headers, without having to transport the entire content.
- GET: requests a representation of the specified resource. Requests using GET should only retrieve data and should have no other effect, for example, web applications.
- POST: requests that the server accept the data enclosed in the request message. It is often used when you submit a form or upload a file. The request may create a resource or modify an existing resource, or both.
- PUT: requests that the enclosed entity be stored under the supplied URI.
- DELETE: requests that the server delete the resource identified by **Request-URI**.
- TRACE: echoes back the request received by the server. This method is used for tests or diagnosis.
- CONNECT: converts the request connection to a transparent tunnel. This method is used to facilitate SSL-encrypted communication through an unencrypted HTTP proxy.

The method names are case insensitive. When the resource to be requested does not support the request method, the server returns status code 405 (Method Not Allowed). When the server cannot recognize or support the request method, the server returns status code 501 (Not Implemented).

HTTP Status Codes

The first line of all HTTP responses is called the status line. It includes the HTTP version, a 3-digit status code, and text description for the status code. The three parts are separated by space.

The first digit of a status code indicates the response type:

- 1*XX* Informational: The request was received by the server, and the processing continues.
- 2*XX* Success: The request was received, understood, and accepted successfully by the server.
- 3*XX* Redirection: The server must take additional actions to complete the request.
- 4*XX* Client Error: The request had syntax errors or could not be processed.
- 5*XX* Server Error: The server failed to fulfill an apparently valid request.

HTTP Request Example

A session between an HTTP client and the server is running at **www.google.com**. Port 80 is used.

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Client request:

```
GET / HTTP/1.1
Host:www.google.com
```

(The first line specifies the method, resource path, and protocol version. The second line contains a header mandatory for HTTP 1.1 and specifies the host.)

Server response:

```
HTTP/1.1 200 OK
Content-Length: 3059
Server: GWS/2.0
Date: Sat, 11 Jan 2003 02:44:04 GMT
Content-Type: text/html
Cache-control: private
Set-Cookie: PREF=ID=73d4aef52e57bae9:TM=1042253044:LM=1042253044:S=SMCc_HRPCQiqy
X9j; expires=Sun, 17-Jan-2038 19:14:07 GMT; path=/; domain=.google.com
Connection: keep-alive
```

3.2 Interface Specifications

3.2.1 URI Specifications

Resources are a core of REST. The resources are uniquely identified by URI, for example, **https://{ip}:${port}/deviceManager/rest/resourceName/${id}**.

Huawei OceanStor DeviceManager RESTful APIs have the following URI requirements:

The following shows a complete resource URI:

https://${ip}:${port}/deviceManager/rest/${deviceId}/resourceName[/${id}][?(parameterName=value)+]

NOTE

$ indicates that the following parameter is changeable.

- All path and parameter information except domain names and resource names of request URIs are case sensitive.
- **https://${ip}:${port}/deviceManager/rest/** is a fixed prefix of all REST URIs defined in this document.
- **${ip}** indicates the IP address of the storage array to be accessed.
- **${port}** indicates the DeviceManager port that provides services. The port number is 8088.
- **${deviceId}** indicates an ID that uniquely identifies a device. After a user successfully logs in to the client and is authenticated, the system returns this value. This value will be a part of URI paths in all subsequent requests.

NOTE

Huawei OceanStor DeviceManager RESTful APIs extend the resource concept. A resource name (**resourceName**) can consist of the resource and operation commands for the resource or be a combination of multiple resource names. For example, in **https://{ip}:${port}/deviceManager/rest/${deviceId}/alarm/currentalarm**, the resource name is **alarm/currentalarm**.

- **{id}** indicates the ID of an instance of a managed object type. This parameter is optional and used to query the instances of a managed object type. For example, in **GET https://{ip}:${port}/deviceManager/rest/${deviceId}/disk/12345**, disk **12345** is queried.

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If you want to batch query managed objects of a specified type, use the object name instead of the object ID, for example, **GET https://{ip}:${port}/deviceManager/rest/${deviceId}/disk**.

- **[?(parameterName=value)+]** is an additional parameter for querying resource URIs. This parameter is optional. Clients can specify the parameter (supported by the interface) behind the resource URI to filter and query resource objects.

For example, **https://{ip}:${port}/deviceManager/rest/1016964156/disk?filter=name:DISK001&range=[0-100]** indicates that first 100 disks whose names fuzzily match **DISK001** on a storage device are queried.

OceanStor DeviceManager RESTful APIs support the following resource URI parameters:

- **filter** specifies search criteria for a specified resource object. The parameter value consists of the property name and property value of the resource object. The property name is separated from the property value by one (**:** indicates fuzzy query) or two colons (**::** indicates exact match). If multiple properties are queried, use and/or to separate each pair of the property name and property value and leave one space before and after and/or:

value = [propertyName(:|::) propertyValue and propertyName1(:|::)propertyValue and …]

Notes:A batch query request may time out if a large volume of data is returned. You are advised to specify the search criteria or scope.

- **range** specifies the search scope of a specified resource object. Client users can specify the start index and end index of the resource object list to define the search scope. The queried result does not contain the end index. The parameter value is as follows:

  value = [startNumber-endNumber]

  Note: if the query scope is too broad, request timeout will occur. Querying a maximum of 150 data at a time is recommended.

  NOTE

  Not all OceanStor DeviceManager RESTful APIs support these parameters. For details, see the API description.

  If this parameter is not specified, the number of queried messages ranges from 0 to 10,000 by default.

  If you want to query all messages, you need to confirm the number of messages first and then set this parameter.

3.2.2 Message Headers

3.2.2.1 Request Headers

The following table describes API request headers.

Header	Description	Example
Accept	Specifies the content type that can be accepted by a client.	Accept: text/plain, text/html
Accept-Encoding	Specifies the data encoding type.	Accept-Encoding: gzip, deflate, sdch

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Header	Description	Example
Accept-Language	Specifies the list of acceptable human languages for response.	Accept-Language: zh_CN,en
Cache-Control	Specifies directives that must be obeyed by all caching mechanisms along the request-response chain.	Cache-Control: no-cache
Connection	Specifies whether a permalink is required (HTTP 1.1 employs a permalink by default).	Connection: keep-alive
Host	Specifies the domain name of the server and the port ID for requested service.	Host: 10.169.66.112:8088
User-Agent	Specifies the user agent that sends a request.	User-Agent: Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/38.0.2125.111 Safari/537.36
Date	Specifies the date and time that a message is sent.	Date: Tue, 15 Nov 2010 08:12:31 GMT
Content-Type	Specifies Multipurpose Internet Mail Extension (MIME) type of the body of a request.	Content-Type: application/ json; charset=utf-8
Content-Length	Specifies the length of the request body.	Content-Length: 348
Cookie	Specifies an HTTP cookie that is sent to the web server.	Clients must use cookies to report session IDs. **NOTE** The session timeout period of servers is 20 minutes.
X-Requested-With	Identifies whether a request is a form submission or Ajax request.	X-Requested-With: XMLHttpRequest
iBaseToken	Specifies a random code for preventing cross-site request forgery (CSRF). A random code is generated after each successful authentication. All REST requests except the authentication request must carry this parameter.	

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3.2.2.2 Response Headers

The following table describes HTTP response headers supported by the APIs.

Header	Description	Example
Cache-Control	Tells all caching mechanisms from the server to the client whether they may cache an object and the type.	Cache-Control: no-cache
Content-Language	Specifies the content language.	Content-Language: en,zh
Allow	Specifies valid actions for a network resource. If an action is not allowed, **405** is returned.	Allow: GET, HEAD
Content-Encoding	Specifies the data encoding type.	Content-Encoding: gzip
Content-Length	Specifies the length of a response body.	Content-Length: 348
Content-Type	Specifies the MIME type of returned content.	Content-Type: application/ json; charset=utf-8
Date	Specifies the date and time that a message is sent.	Date: Tue, 15 Nov 2010 08:12:31 GMT
Expires	Specifies the date and time after which the response is considered expired.	Expires: Thu, 01 Dec 2010 16:00:00 GMT
ETag	Specifies an identifier for a specific version of a resource.	ETag: "xxx"
Server	Specifies the name of a web server.	Server: Apache/1.3.27 (Unix) (Red-Hat/Linux)
Set-Cookie	Specifies an HTTP cookie.	session=ismsession=xxx;path=/;httponly;secure;
Transfer-Encoding	Specifies file transfer encoding.	Transfer-Encoding:chunked
Location	Redirects the location or identifies a new resource.	Location: http:// www.huawei.com

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3.2.3 Message Body

3.2.3.1 Request Body

A request body is a standard JSON object. All properties of the object map to the properties of the managed object in a storage device. All the property names are case sensitive(If the case sensitivity of the property name is inconsistent, discard this property), and property values are of specified data types. Request bodies are used to create and modify managed objects.

NOTE

For details about data types supported by the APIs, see the appendix.

A standard request body must be a standard JSON object. The structure is as follows:

```
{
propertyName0: propertyValue,
propertyName1: propertyValue,
propertyName2: propertyValue,
…
}
```

3.2.3.2 Response Body

A response body is a predefined JSON object. The property names of objects in the response body are case sensitive and used to query managed objects. The structure of a response body is as follows:

- A request is correctly responded:

```
{
"data":{
"propertyName" : value1,
"propertyName": value2,
…..
},
"error":{
"code": 0,
"description":"……"
}
}
```

- A request is incorrectly responded:

```
{
```

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```
"error":{
"code": xxx,
"description":"xxx"
}
}
```

NOTE

error: response status of the service operation

1. **code**: status code (0 indicates that the request is correctly processed. Any other value indicates that the request is incorrectly processed. For details about the error code, see the error code document of the related version).
2. **description**: error description. The parameter is left empty if the request is correctly responded. The error information is returned if the request is incorrectly responded.
3. **Suggestion**: The parameter is left empty if the request is correctly responded. The suggestion for handling service is returned if the request is incorrectly responded.

data: returned data. It maps to the status response body of the managed object to be queried. The parameter value is returned only when the request is correctly responded. To prevent cross-site scripting attacks, all returned values of **String** have been escaped. Therefore, escape returned values back before using them. For details, see "List of escape characters" in Appendix.

In some cases, returned JSON objects contain the fields that are not described in the returned results. Do not use these fields.

3.2.4 REST Request Methods

OceanStor DeviceManager APIs support the following methods:

1. GET: queries managed objects.
2. POST: creates managed objects.
3. PUT: modifies the properties of or performs special operations on managed objects.
4. DELETE: deletes managed objects.

3.2.4.1 GET

The GET method is used to query managed objects, including single query and batch query. The parameters to be delivered are defined in the URI.

- Querying a managed object using the ID:

  Example: Use IP address **192.168.1.10** to query user **0** on device **abcd**:

URI: https://192.168.1.10:8088/deviceManager/rest/abcd/user/0

METHOD : GET

Normal response:

```
{
"data": {
"TYPE":202,
"ID":"0",
```

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"NAME":"testAdmin",

"DESCRIPTION": "A test user",

"LEVEL":"1",

"SCOPE":"0",

"ACCOUNTSTATE":"1024",

...

},

"error": {

"code": 0,

"description":""

}

}

- Batch querying managed objects:
  Example: Use IP address **192.168.1.10** to query users on device **abcd**:

URI: https://192.168.1.10:${port}/deviceManager/rest/abcd/user

METHOD:GET

Normal response:

{

"data": [{

"TYPE":202,

"ID":"0",

"NAME":"testAdmin",

"DESCRIPTION": "A test user",

"LEVEL":"1",

"SCOPE":"0",

"ACCOUNTSTATE":"1024",

"CREATETIME": "1324633232",

...

}, {

"TYPE":202,

"ID":"0",

"NAME":"testAdmin2",

"DESCRIPTION": "A test user2",

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"LEVEL":"1",

"SCOPE":"0",

"ACCOUNTSTATE":"1024",

"CREATETIME": "1324735231"

}, ...

],

"error": {

"code": 0,

"description":""

}

}

3.2.4.2 POST

The POST method is used to create managed objects. The parameters to be delivered are defined in the request body.

Creating a managed object:

Example: Use IP address **192.168.1.10** to create user **test** on device **abcd**:

URI: https://192.168.1.10:8088/deviceManager/rest/abcd/user

METHOD:POST

Request body:

{

"TYPE":202,

"NAME":"test",

"SCOPE":0,

"LEVEL":2,

"PASSWORD":"Admin@storage1",

"DESCRIPTION":""

}

Normal response:

{

"error":{"code":0,"description":"0"}

}

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3.2.4.3 PUT

The PUT method is used to modify the properties of managed objects. The parameters to be delivered are defined in the request body.

Example: Use IP address **192.168.1.10** to change the description and password of user **test** (ID = 1) on device **abcd**:

URI: https://192.168.1.10:8088/deviceManager/rest/abcd/user/1

METHOD:PUT

Request body:

```
{
"DESCRIPTION":"yyyyyyyyyyy",
"PASSWORD":"Admin@storage1",
"OLDPASSWORD":"Admin@storage2"
}
```

Normal response:

```
{
"error":{"code":0,"description":"0"}
}
```

3.2.4.4 DELETE

The DELETE method is used to delete managed objects. The parameters to be delivered are defined in the URI.

Example: Use IP address **192.168.1.10** to delete user **test** (ID = 1) from device **abcd**:

URI: https://192.168.1.10:8088/deviceManager/rest/abcd/user/1

METHOD: DELETE

Request body:

None

Normal response:

```
{
"error":{"code":0,"description":"0"}
}
```

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3.3 Preparations

Configuring a Server Security Certificate

Since OceanStor DeviceManager RESTful APIs are invoked in HTTPS mode, client application programs must access RESTful APIs using HTTPS.

CAUTION

By default, OceanStor DeviceManager RESTful APIs provide a temporary self-signed certificate. Enterprise users can use their own certificates for replacement. For details, see the related management guide of storage devices.

Cipher Suite

CipherSuite is an important parameter that needs to be negotiated during the SSL handshake.

Currently, cipher suite algorithms supported by REST interface servers of Huawei storage systems are upgraded from AES128-SHA, AES128-SHA256, AES256-SHA256, AES256-SHA, DHE-RSA-AES128-SHA, and DHE-DSS-AES128-SHA to ECDHE-RSA-AES128-SHA256 and ECDHE-RSA-AES128-SHA.

Performing Authentication and Authorization

Each web service that invokes the REST interface must be authenticated using a valid user name and password. If the authentication is successful, a session ID (such as **session=ismsession=1739381842828198283617570500274228607787766653210409200187 9**) is generated and stored in the cookie of the browser (the system determines whether the session is valid based on the session ID). In addition, a random token code is generated and used to authenticate the session validity (this code is delivered through the **iBaseToken** parameter in the request header).

NOTE

*If the session ID stored in the cookie of the browser is invalid, or the code delivered through the **iBaseToken** parameter in the request header is invalid, the systems returns error code **-401** or **1077949069**.*

3.4 Constraint

NOTICE

You must follow instructions in this interface document for development. Fields not mentioned in this document are invalid. Do not use these fields.

For interfaces used for batch queries, if configurations and queries are performed concurrently, the query results may be incorrect.

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3.5 Example Scenarios of Invoking RESTful Interface

Introduction

This section describes how to invoke the RESTful interfaces in the following seven scenarios: obtaining basic system information, basic storage service (for block), basic storage service (file services based on NFS sharing), remote replication feature (for block), remote replication feature (for file), HyperMetro feature (for block), and HyperMetro feature (for file), which helps customers to configure services by invoking RESTful interfaces.

Note: You can refer to section 3.2 "**Interface SpecificationsInterface Specifications**" to deliver RESTful requests

3.5.1 Obtaining Basic System Information

To ensure successful invocation, prepare information about the process of invoking the RESTful interfaces to obtain basic system information.

Figure 1-1 Process of invoking the RESTful interface to obtain basic system information

Table 1-1 describes the procedure of invoking the RESTful interface to obtain basic system information.

Table 1-1 Steps of invoking the RESTful interface to obtain basic system information

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Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Obtaining basic array information	Querying basic system information	Basic operation: Enable users to invoke the RESTful interface to obtain basic system information. The invoked interface: **Querying basic system information**.	
	Querying disk global information	Basic operation: Enable users to invoke the RESTful interface to obtain basic disk information. The invoked interface: **Interface for Batch Querying Disk Information**.	

3.5.2 Basic Storage Service (For Block)

To ensure successful invocation, prepare information about the process of invoking the RESTful interfaces of basic storage services (for block).

Figure 1-2 Process of invoking the RESTful interfaces of basic storage services (for block)

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Table 1-2 describes the procedure of invoking the RESTful interfaces of basic storage services (for block).

Table 1-2 Steps of invoking the RESTful interfaces of basic storage services (for block)

Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	

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Step	Operation	Description	RESTful Interface
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Creating storage space	Creating a disk domain	The types of disks in a disk domain decide the storage tiers that can be created. The first step for creating a storage pool is to build a disk domain and specify the types and quantity of disks comprising the disk domain. The invoked interface: **Interface for Creating a Disk Domain**. **NOTE** You need to obtain the disk information.	1.**Interface for Batch Querying Disk Information**
	Creating a storage pool	Application servers only use storage space from storage pools of a storage system. Therefore, you need to create storage pools to ensure sufficient storage space for application servers. The invoked interface: **Interface for Creating a Storage Pool**. **NOTE** You need to obtain the disk domain information.	1.**Interface for Batch Querying Disk Domain Information**
	Creating a LUN	The storage space of a newly created storage pool cannot be identified by a host. The host can use the storage space only after the storage space is divided into multiple LUNs and mapped to the host. The invoked interface: **Interface for Creating a LUN**. **NOTE** You need to obtain the storage pool information.	1.**Interface for Batch Querying Storage Pool Information**

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Step	Operation	Description	RESTful Interface
	Creating a LUN group	To enable a host to use a LUN, you need to add the LUN to the LUN group. Based on the mapping between the LUN group and the host group, hosts in the host group use LUNs in the LUN group. A LUN group can contain one or multiple LUNs. A LUN group can be added with a maximum of 4096 LUNs. A LUN can be added to a maximum of 8 LUN groups. The invoked interface: **Interface for Creating a LUN Group**. Note: You need to obtain the LUN information.	1. **Interface for Batch Querying LUN Information**
Configuring host connectivity		iSCSI, Fibre Channel, or FCoE connection can be used.	
Connecting an application server and a storage device	Creating a host	Create a virtual host to establish a connection between a storage system and an application server, and add an initiator for the host to establish a mapping relationship between the virtual host and application server. The invoked interface: **Interface for Creating a Host**.	
	Creating a host group	To enable a host to use a LUN, you need to add the host to the host group. Based on the mapping between the LUN group and the host group, hosts in the host group use LUNs in the LUN group. A host group can contain one or multiple hosts. The invoked interface: **Interface for Creating a Host Group**. **NOTE** You need to obtain the host information.	1. **Interface for Batch Querying Host Information**

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Step	Operation	Description	RESTful Interface
	Creating a port group	A port group is a logical combination of multiple physical ports. It is also a mode in which the storage system uses designated ports to establish a mapping relationship between LUNs and servers. This operation enables you to create a port group and add it to a mapping view. In doing so, LUNs of a specified LUN group use the ports of the port group to communicate with the corresponding hosts of the host group. If no port group is added to the mapping view, available ports are randomly used. A port group can be added to a maximum of 64 mapping views. A port can be added to a maximum of 64 port groups. The invoked interface: **Interface for Creating a Port Group**. **NOTE** You need to obtain information about InfiniBand ports, FCoE ports, Fibre Channel ports, Ethernet ports, and SAS ports.	1. **Interface for Batch Querying InfiniBand Port Information** 2. **Interface for Batch Querying FCoE Port Information** 3. **Interface for Batch Querying Fibre Channel Port Information** 4. **Interface for Batch Querying Ethernet Port Information** 5. **Interface for Batch Querying SAS Port Information**
	Creating a mapping view	After adding host groups and LUN groups to a mapping view, you can use the mapping view to manage the mapping between the LUN groups and host groups. The invoked interface: **Interface for Creating a Mapping View**. **NOTE** You need to obtain information about LUN groups, host groups, and port groups.	1. **Interface for Batch Querying LUN Group Information** 2. **Interface for Batch Querying Host Group Information** 3. **Interface for Batch Querying Port Group Information**（optional）
Enabling the application server to use storage space		After a connection is established between a storage system and an application server, the application server must discover the newly-added logical disk. You can use LUNs as ordinary disks for data reads and writes.	

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3.5.3 Basic Storage Service (File Services Based on NFS Sharing)

To ensure successful invocation, prepare information about invoking the RESTful interfaces of basic storage services (file services based on NFS sharing).

Figure 1-3 Process of invoking the RESTful interfaces of basic storage services (file services based on NFS sharing)

Table 1-3 describes the procedure of invoking the RESTful interfaces of basic storage services (file services based on NFS sharing).

Table 1-3 Steps of invoking the RESTful interfaces of basic storage services (file services based on NFS sharing)

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Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Checking the license information	Querying license usage in batches	A license file grants the permission to use a specific value-added feature. Before configuring a value-added feature, ensure that its license is valid. The invoked interface: **Interface for Batch Querying License Utilization**.	
Creating storage space	Creating a disk domain	The types of disks in a disk domain decide the storage tiers that can be created. The first step for creating a storage pool is to build a disk domain and specify the types and quantity of disks comprising the disk domain. The invoked interface: **Interface for Creating a Disk Domain**. **NOTE** You need to obtain the disk information.	1.**Interface for Batch Querying Disk Information**

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Step	Operation	Description	RESTful Interface
	Creating a storage pool	Application servers only use storage space from storage pools of a storage system. Therefore, you need to create storage pools to ensure sufficient storage space for application servers. The invoked interface: **Interface for Creating a Storage Pool**. **NOTE** You need to obtain the disk domain information.	1. **Interface for Batch Querying Disk Domain Information**
	Creating a file system	This operation allows you to create a file system. By creating file systems, you can enable file systems to share storage resources using file directories. The invoked interface: **Interface for Creating a File System**. **NOTE** You need to obtain the storage pool information.	1. **Interface for Batch Querying Storage Pool Information**
	Creating a quota tree (Optional)	A quota tree is a level-one directory of a file system. It allows you to configure directory, user, and user group quotas to manage the space used by all files under the directory. The invoked interface: **Interface for Creating a Quota Tree**.	
	Creating a quota (Optional)	By creating a quota, you can limit the space or file quantity of all files or a single user or user group in the level-one directory of the file system. The invoked interface: **Interface for Creating a Directory Quota**. **NOTE** You need to obtain the information about file systems.	1. **Interface for Batch Querying File System Information**

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Step	Operation	Description	RESTful Interface
Configuring an NFS share	Enabling the NFS service	Before configuring an NFS share, enable the NFS service for clients to access the NFS share. The invoked interface: **Interface for Modifying NFS Service Settings**.	
	Creating an NFS share	After an NFS share is created, the shared file system is accessible to clients that run SUSE, Red Hat, HP-UX, Sun Solaris, IBM AIX, and Mac OS. The invoked interface: **Interface for Creating an NFS Share**. **NOTE** You need to obtain the information about file systems.	1. **Interface for Batch Querying File System Information**
	Adding an NFS share client	An NFS share client enables client users to access shared file systems using a network. The invoked interface: **Interface for Adding an NFS Share Client**.	
Using an application server to access a shared file system		Clients that run SUSE, Red Hat, HP-UX, Sun Solaris, IBM AIX, and Mac OS can be used to access NFS shares. You can perform the same operation to access an NFS share through the client in LDAP domain environments, NIS domain environments, and non-domain environments.	

3.5.4 Remote Replication Feature (For Block)

To ensure successful invocation, prepare information about invoking the RESTful interfaces of the remote replication feature (for block).

Figure 1-4 Process of invoking the RESTful interfaces of the remote replication feature (for block)

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Table 1-4 describes the procedure of invoking the RESTful interfaces of the remote replication feature (for block).

Table 1-4 Steps of invoking the RESTful interfaces of the remote replication feature (for block)

Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	

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Step	Operation	Description	RESTful Interface
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Checking the license information	Querying license usage in batches	A license file grants the permission to use a specific value-added feature. Before configuring a value-added feature, ensure that its license is valid. The invoked interface: **Interface for Batch Querying License Utilization**.	
Configuring basic storage services	Creating a disk domain	The types of disks in a disk domain decide the storage tiers that can be created. The first step for creating a storage pool is to build a disk domain and specify the types and quantity of disks comprising the disk domain. The invoked interface: **Interface for Creating a Disk Domain**. **NOTE** You need to obtain the disk information.	1.**Interface for Batch Querying Disk Information**

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Step	Operation	Description	RESTful Interface
	Creating a storage pool	Application servers only use storage space from storage pools of a storage system. Therefore, you need to create storage pools to ensure sufficient storage space for application servers. The invoked interface: **Interface for Creating a Storage Pool**. **NOTE** You need to obtain the disk domain information.	1. **Interface for Batch Querying Disk Domain Information**
	Creating a LUN	The storage space of a newly created storage pool cannot be identified by a host. The host can use the storage space only after the storage space is divided into multiple LUNs and mapped to the host. The invoked interface: **Interface for Creating a LUN**. **NOTE** You need to obtain the storage pool information.	1. **Interface for Batch Querying Storage Pool Information**
Configuring SAN remote replication	Adding a remote device	You can establish a logical connection between a local device and a remote device by adding either device as a remote device. After the remote device is added, data can be transferred between the local and remote devices. The invoked interface: **Interface for Creating Remote Device**. **NOTE** You need to obtain information about Fibre Channel or iSCSI links, Ethernet ports, and controllers.	1. **Interface for Batch Querying FC Link Information** 2. **Interface for Batch Querying iSCSI Link Information** 3. **Interface for Batch Querying Ethernet Port Information** 4. **Interface for Batch Querying Controller Information**

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Step	Operation	Description	RESTful Interface
	Creating a remote replication pair	The remote replication function replicates data from local storage devices to remote storage devices for remote data disaster recovery (DR). The invoked interface: **Interface for Creating a Remote Replication Pair**. **NOTE** You need to obtain information about the local LUN and remote LUN.	1. **Interface for Batch Querying LUN Information** 2. **Interface for Batch Querying Remote LUN Information**
	Creating a consistency group for a remote replication pair	Remote replication enables data to be backed up after a host writes data to one or more independent primary LUNs. However, data cannot be backed up after the host writes data to multiple non-independent primary LUNs during disaster recovery. A consistency group ensures the data consistency of the secondary LUNs of all remote replication pairs in a group. For example, all secondary LUN data is the data copy of the primary LUN at 3 p.m. today, ensuring data availability of the primary LUN during disaster recovery. The invoked interface: **Interface for Creating a Consistency Group of Remote Replication**. **NOTE** You need to obtain the information about the remote replication pair and add the remote replication pair to the remote replication consistency group.	1. **Interface for Batch Querying Remote Replication Pair Information** 2.**Interface for Adding a Remote Replication Pair to a Consistency Group of Remote Replication**

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Step	Operation	Description	RESTful Interface
Verifying configurations		After remote replication/ consistency group is configured, you can view the status of the data on the primary and secondary storage systems to check whether data replication between the primary and secondary LUNs is successful.	

3.5.5 Remote Replication Feature (For File)

To ensure successful invocation, prepare information about invoking the RESTful interfaces of the remote replication feature (for file).

Figure 1-5 Process of invoking the RESTful interfaces of the remote replication feature (for file)

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Table 1-5 describes the procedure of invoking the RESTful interfaces of the remote replication feature (for file).

Table 1-5 Steps of invoking the RESTful interfaces of the remote replication feature (for file)

Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	

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Step	Operation	Description	RESTful Interface
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Checking the license information	Querying license usage in batches	A license file grants the permission to use a specific value-added feature. Before configuring a value-added feature, ensure that its license is valid. The invoked interface: **Interface for Batch Querying License Utilization**.	
Configuring basic storage services	Creating a disk domain	The types of disks in a disk domain decide the storage tiers that can be created. The first step for creating a storage pool is to build a disk domain and specify the types and quantity of disks comprising the disk domain. The invoked interface: **Interface for Creating a Disk Domain**. **NOTE** You need to obtain the disk information.	1.**Interface for Batch Querying Disk Information**
	Creating a storage pool	Application servers only use storage space from storage pools of a storage system. Therefore, you need to create storage pools to ensure sufficient storage space for application servers. The invoked interface: **Interface for Creating a Storage Pool**. **NOTE** You need to obtain the disk domain information.	1. **Interface for Batch Querying Disk Domain Information**

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Step	Operation	Description	RESTful Interface
	Creating a file system	This operation allows you to create a file system. By creating file systems, you can enable file systems to share storage resources using file directories. The invoked interface: **Interface for Creating a File System**. **NOTE** You need to obtain the storage pool information.	1. **Interface for Batch Querying LUN Information**
Configuring NAS remote replication	Adding a remote device	You can establish a logical connection between a local device and a remote device by adding either device as a remote device. After the remote device is added, data can be transferred between the local and remote devices. The invoked interface: **Interface for Creating Remote Device**. **NOTE** You need to obtain information about Fibre Channel or iSCSI links, Ethernet ports, and controllers.	1. **Interface for Batch Querying FC Link Information** 2. **Interface for Batch Querying iSCSI Link Information** 3. **Interface for Batch Querying Ethernet Port Information** 4. **Interface for Batch Querying Controller Information**
	Creating a remote replication vStore pair	This operation creates a remote replication vStore pair on the primary and secondary storage arrays. This ensures the consistency of the vStore environments on the primary and secondary storage arrays for file systems. The invoked interface: **Interface for Creating Remote Replication vStore Pair**. **NOTE** You need to obtain information about the local and remote replication vStore pair.	1. **Interface for Batch Querying Local vStores not Added to the vStore Pair** 2. **Interface for Batch Querying Remote vStores not Added to the vStore Pair**

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Step	Operation	Description	RESTful Interface
	Creating a remote replication pair	The remote replication function replicates data from local storage devices to remote storage devices for remote data disaster recovery (DR). The invoked interface: **Interface for Creating a Remote Replication Pair**. **NOTE** You need to obtain information about the local and remote file system.	1. **Interface for Batch Querying File System Information** 2. **Interface for Batch Querying Remote LUN Information**
Verifying configurations		After configuring the remote replication feature, view the data status of the secondary file system of the remote replication to check whether data replication from the primary file system to the secondary file system succeeded.	

3.5.6 HyperMetro Feature (For Block)

To ensure successful invocation, prepare information about invoking the RESTful interfaces of the HyperMetro feature (for block).

Figure 1-6 Process of invoking the RESTful interfaces of SAN HyperMetro

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Table 1-6 describes the procedure of invoking the RESTful interfaces of SAN HyperMetro.

Table 1-6 Steps of invoking the RESTful interfaces of SAN HyperMetro

Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	

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Step	Operation	Description	RESTful Interface
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Checking the license information	Querying license usage in batches	A license file grants the permission to use the HyperMetro feature. Before configuring the HyperMetro feature, ensure that its license is valid. The invoked interface: **Interface for Batch Querying License Utilization**.	
Configuring basic storage services	Creating a disk domain	The types of disks in a disk domain decide the storage tiers that can be created. The first step for creating a storage pool is to build a disk domain and specify the types and quantity of disks comprising the disk domain. The invoked interface: **Interface for Creating a Disk Domain**. **NOTE** You need to obtain the disk information.	1.**Interface for Batch Querying Disk Information**
	Creating a storage pool	Application servers only use storage space from storage pools of a storage system. Therefore, you need to create storage pools to ensure sufficient storage space for application servers. The invoked interface: **Interface for Creating a Storage Pool**. **NOTE** You need to obtain the disk domain information.	1. **Interface for Batch Querying Disk Domain Information**

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Step	Operation	Description	RESTful Interface
	Creating a LUN	The storage space of a newly created storage pool cannot be identified by a host. The host can use the storage space only after the storage space is divided into multiple LUNs and mapped to the host. The invoked interface: **Interface for Creating a LUN**. **NOTE** You need to obtain the storage pool information.	1. **Interface for Batch Querying Storage Pool Information**
Configuring SAN HyperMetro	Adding a remote device	You can establish a logical connection between a local device and a remote device by adding either device as a remote device. After the remote device is added, data can be transferred between the local and remote devices. The invoked interface: **Interface for Creating Remote Device**. **NOTE** You need to obtain information about Fibre Channel or iSCSI links, Ethernet ports, and controllers.	1. **Interface for Batch Querying FC Link Information** 2. **Interface for Batch Querying iSCSI Link Information** 3. **Interface for Batch Querying Ethernet Port Information** 4. **Interface for Batch Querying Controller Information**
	Creating a quorum server	You can add a third-place quorum server for HyperMetro domains. When the communication between storage arrays in a HyperMetro pair becomes abnormal, the quorum server decides which site continues to provide services, thereby greatly improving service continuity. The invoked interface: **Interface for Creating a Quorum Server**. **Interface for Creating a Quorum Server Link**.	

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Step	Operation	Description	RESTful Interface
	Creating a HyperMetro domain	After adding a remote device and a quorum server, you need to create a HyperMetro domain for the remote and local devices, and the quorum server. When creating a HyperMetro domain, you can determine the relationships among the local device, remote device, and quorum server in the domain. The invoked interface: **Interface for Creating a HyperMetro Domain**. **NOTE** You need to obtain information about the remote device and quorum server.	1. **Interface for Batch Querying Remote Device Information** 2. **Interface for Batch Querying Quorum Server Information**（Optional）
	Creating a SAN HyperMetro pair	After specifying a HyperMetro domain (including local and remote devices and a quorum server), device resources at two storage arrays, and data synchronization properties, you can create HyperMetro relationships for devices at the two storage arrays. After the HyperMetro relationship is established, the arbitration and preferred site mechanism provided by the HyperMetro solution can determine the sites that continue to provide services when a disaster occurs. The invoked interface: **Interface for Creating HyperMetro Pair Information**. **NOTE** You need to obtain information about local and remote LUN.	1.**Interface for Batch Querying LUN Information** 2.**Interface for Batch Querying Remote LUN Information**

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Step	Operation	Description	RESTful Interface
	Creating a HyperMetro consistency group	If an application or one type of services requires multiple active-active LUNs and a preferred service site needs to be determined by the system or quorum server upon faults, you need to add owning active-active LUNs of the application and services to a same active-active consistency group for unified maintenance. The invoked interface: **Interface for Querying a Consistency Group of HyperMetro**. **NOTE** You need to obtain the HyperMetro pair information and add the HyperMetro pair to the HyperMetro consistency group.	1. **Interface for Batch Querying HyperMetro Pair Information** 2. **Interface for Adding a HyperMetro Pair to a Consistency Group of Hypermetro**
Verifying configurations		After the configuration is complete, check the data status at both ends to verify that the HyperMetro relationship between the two storage systems is successfully configured. After the HyperMetro pair is configured, synchronize the HyperMetro pair. After data synchronization is complete, if Pair Running Status is Normal, the HyperMetro pair is configured successfully.	

3.5.7 HyperMetro Feature (For File)

To ensure successful invocation, prepare information about invoking the RESTful interfaces of the HyperMetro feature (for file).

Figure 1-7 Process of invoking the RESTful interfaces of NAS HyperMetro

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Table 1-7 describes the procedure of invoking the RESTful interfaces of NAS HyperMetro.

Table 1-7 Steps of invoking the RESTful interfaces of NAS HyperMetro

Step	Operation	Description	RESTful Interface
Preparations		Before beginning system configuration, check that the software installation and initial configuration meet the intended storage space configuration requirements.	

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Step	Operation	Description	RESTful Interface
Login authentication	Access authentication	A storage system uses management plane access authentication and service plane access authentication to restrict maintenance terminals and applications that access it. A user can perform management, read, and write operations on the storage system only after the user is authenticated. The invoked interface: **Interface for Access Authentication**.	
Checking the license information	Querying license usage in batches	A license file grants the permission to use the HyperMetro feature. Before configuring the HyperMetro feature, ensure that its license is valid. The invoked interface: **Interface for Batch Querying License Utilization**.	
Configuring basic storage services	Creating a disk domain	The types of disks in a disk domain decide the storage tiers that can be created. The first step for creating a storage pool is to build a disk domain and specify the types and quantity of disks comprising the disk domain. The invoked interface: **Interface for Creating a Disk Domain**. **NOTE** You need to obtain the disk information.	1.**Interface for Batch Querying Disk Information**
	Creating a storage pool	Application servers only use storage space from storage pools of a storage system. Therefore, you need to create storage pools to ensure sufficient storage space for application servers. The invoked interface: **Interface for Creating a Storage Pool**. **NOTE** You need to obtain the disk domain information.	1. **Interface for Batch Querying Disk Domain Information**

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Step	Operation	Description	RESTful Interface
	Creating a vStore	After a vStore is created, the storage system allocates independent private space for it, including LUNs, file systems, and ports. vStores get complete storage services, but also remain resource and network isolation with other vStores. Creating a vStore is the prerequisite for allocating and managing vStore services. The invoked interface: **Interface for Creating a vStore**.	
	Creating a file system	This operation allows you to create a file system. By creating file systems, you can enable file systems to share storage resources using file directories. The invoked interface: **Interface for Creating a File System**. **NOTE** You need to obtain the storage pool information.	1. **Interface for Batch Querying Storage Pool Information**
	Creating a logical port	You can create a logical port for vStore administrators to log in to vStores for management and service access. The logical port is created based on Ethernet ports, bond ports, or VLANs. The invoked interface: **Interface for Creating a Logical Port**. **NOTE** You need to obtain information about the Ethernet ports, bound ports, or VLANs of the device.	1. **Interface for Batch Querying Ethernet Port Information** 2. **Interface for Batch Querying Bond Port Information** 3. **Interface for Batch Querying VLAN Information**

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Step	Operation	Description	RESTful Interface
	Sharing a file system	The file system can be shared in the following modes: The NFS share and CIFS share. The NFS share and CIFS share are created under the vStore and need to be created only on the primary end of the HyperMetro. When the HyperMetro local file system is shared to the host, the storage system synchronizes the local file system configurations to the secondary file system. For details about how to share a file system, see section 1.1.3 "Basic Storage Service (File Services Based on NFS Sharing)".	
Configuring NAS HyperMetro	Adding a remote device	You can establish a logical connection between a local device and a remote device by adding either device as a remote device. After the remote device is added, data can be transferred between the local and remote devices. The invoked interface: **Interface for Creating Remote Device**. **NOTE** You need to obtain information about Fibre Channel or iSCSI links, Ethernet ports, and controllers.	1. **Interface for Batch Querying FC Link Information** 2. **Interface for Batch Querying iSCSI Link Information** 3. **Interface for Batch Querying Ethernet Port Information** 4. **Interface for Batch Querying Controller Information**
	Creating a quorum server	You can add a third-place quorum server for HyperMetro domains. When the communication between storage arrays in a HyperMetro pair becomes abnormal, the quorum server decides which site continues to provide services, thereby greatly improving service continuity. The invoked interface: **Interface for Creating a Quorum Server**. **Interface for Creating a Quorum Server Link**.	

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Step	Operation	Description	RESTful Interface
	Creating a HyperMetro domain	After adding a remote device and a quorum server, you need to create a HyperMetro domain for the remote and local devices, and the quorum server. When creating a HyperMetro domain, you determine the relationships among the local device, remote device, and quorum server in the domain. The invoked interface: **Interface for Creating a HyperMetro Domain**. **NOTE** You need to obtain information about the remote device and quorum server.	1. **Interface for Batch Querying Remote Device Information** 2. **Interface for Batch Querying Quorum Server Information**（optional）
	Creating a HyperMetro vStore pair	This operation creates a HyperMetro pair for vStores on the primary and secondary storage arrays. This ensures the consistency of the vStore environment on the primary and secondary storage arrays for file systems. The invoked interface:**Interface for Creating HyperMetro vStore Pairs**. **NOTE** You need to obtain information about the local vStore and remote vStore.	1. **Interface for Batch Querying Local vStores not Added to the vStore Pair** 2. **Interface for Batch Querying Remote vStores not Added to the vStore Pair**

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Step	Operation	Description	RESTful Interface
	Creating a NAS HyperMetro pair	After specifying a HyperMetro domain (including local and remote devices and a quorum server), device resources at two storage arrays, and data synchronization properties, you can create HyperMetro relationships for devices at the two storage arrays. After the HyperMetro relationship is established, the arbitration and preferred site mechanism provided by the HyperMetro solution can determine the sites that continue to provide services when a disaster occurs. The invoked interface: **Interface for Creating HyperMetro Pair Information**. **NOTE** You need to obtain information about the HyperMetro vStore pair and local and remote file system.	1. **Interface for Batch Querying HyperMetro vStore Pair Information** 2. **Interface for Batch Querying File System Information** 3. **Interface for Batch Querying Remote Resources Available to the Remote vStore**
Verifying configurations		After the configuration is complete, check the data status at both ends to verify that the HyperMetro relationship between the two storage systems is successfully configured. After the HyperMetro pair is configured, synchronize the HyperMetro pair. After data synchronization is complete, if Pair Running Status is Normal, the HyperMetro pair is configured successfully.	

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4 RESTful APIs

About This Chapter

This chapter describes DeviceManager RESTful APIs.

NOTE

Any user who wants to invoke APIs except the authentication API must obtain the API invoke permission first. Otherwise, an authentication error is returned, and the API fails to be invoked.

V3 all-flash array series indicate the following storage products: OceanStor 2600F V3, 5500F V3, 5600F V3, 5800F V3, 6800F V3, 18500F V3, and 18800F V3 V300R006C00.

4.1 Security management

4.2 Storage setting

4.3 Performance management

4.4 vStore management

4.5 Alarm management

4.6 License management

4.7 Import and export management

4.8 System information management

4.9 Block storage service management

4.10 Storage pool

4.11 Performance optimization

4.12 Data protection management

4.13 File system storage service

4.14 SVP management

4.15 Others

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4.1 Security management

4.1.1 user

4.1.1.1 Interface for Access Authentication

Function

This interface is used to authenticate access based on the user name, password, and user type and return user information including the session ID after the user successfully logs in to the interface.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/xxxxx/sessions

Access Method

POST

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
username	Mandatory	string	User name.
password	Mandatory	string	Password of a user.
scope	Mandatory	enum	User type. **The value is described as follows:** 0: local user 1: LDAP user

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
userid	Mandatory	string	User ID.
deviceid	Mandatory	string	Device ID. The device ID is used in subsequent request URLs. Any valid URI string can be used in initial login. **Note:**If the password status is not normal and the returned deviceId is an empty string, use any characters ("xxx" is recommended) to replace deviceId in the APIs for querying security policies and changing passwords.
username	Mandatory	string	User name.
usergroup	Mandatory	string	User group.
userscope	Mandatory	string(enum)	User type. **The value is described as follows:** 0: local user 1: LDAP user

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Parameter	Mandatory/ Conditional	Type	Description
accountstate	Mandatory	string(enum)	Password status. **The value is described as follows:** 1: normal 3: password expired 4: initial password, which must be reset 5: The password is about to expire. 6: Must change the password upon next login.
pwdchangetime	Mandatory	string(uint64)	Time (UTC) when the password was last changed.
level	Mandatory	string(enum)	User level. **The value is described as follows:** 1: super administrator 2: administrator 3: read-only user
lastlogintime	Mandatory	string(uint64)	Time of the last login.
lastloginip	Mandatory	string	IP address of the client of the last login.
iBaseToken	Mandatory	string	Authentication session ID. This parameter must be configured for all subsequent requests.
roleId	Mandatory	string	Role ID.
vstoreId	Conditional	string	vStore ID. **Note:**If the login user is the vStore administrator, the corresponding vStore ID is returned. Otherwise, this field is not returned.

Usage Guidelines

After login, the session ID is returned with Cookie in the response header to the client. The client must save the Cookie and report the session ID in the request header.

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Example

- Authenticating access.

```
Request:POST /deviceManager/rest/xxxxx/sessions
{
    "username": "admin",
    "password": "Admin@123",
    "scope": "0"
}

Response:
{
    "data": {
        "accountstate": 1,
        "deviceid": "210235843910E6000009",
        "iBaseToken":
"62FAE587BB86D7D0E62C89364032B91679907F10640ED56B5DF3A9772B179FA",
        "lastloginip": "100.136.1.88",
        "lastlogintime": 1444510218,
        "level": 1,
        "pwdchangetime": 1444508776,
        "usergroup": "",
        "roleId":"1",
        "userid":"admin",
        "username": "admin",
        "userscope": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.2 Interface for Batch Querying User Information

Function

This interface is used to batch query information about users.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/user

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is queried.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 202: user
ACCOUNTSTATE	Conditional	string(enum)	Password status. **The value is described as follows:** 1: normal 3: password expired 4: initial password, which must be reset 5: the password is about to expire 6: must change the password upon next login **Note:**This parameter is returned only when the super administrator queries user information.
CREATETIME	Conditional	string(uint64)	Time when the user was created. **Note:**The value is not returned for users in the LDAP group.

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Parameter	Mandatory/ Conditional	Type	Description
USERGROUPNAME	Conditional	string	Owning LDAP group. **Note:**The value is returned for users in the LDAP group only.
DESCRIPTION	Mandatory	string	Description.
ID	Mandatory	string	ID.
ISONLINE	Mandatory	string(enum)	Online status. **The value is described as follows:** 0: offline 1: online
LEVEL	Mandatory	string(enum)	Level. **The value is described as follows:** 1: super administrator 2: administrator 3. read-only user
LOCKSTATUS	Mandatory	string(enum)	Lock status. **The value is described as follows:** 0: unlocked 1: locked
NAME	Mandatory	string	Username.
SCOPE	Mandatory	string(enum)	Local user or domain user. **The value is described as follows:** 0: local user 1: LDAP user 2: LDAP user group
LEVELGROUPTYPE	Mandatory	string(enum)	Type of the owning group of the level. **The value is described as follows:** 0: all groups 1: system group 2: vStore group 3: WORM group

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Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	User login times.
ROLEID	Mandatory	string	Role ID.
vstoreId	Conditional	string	vStore ID. **Note:**The value is returned when a vStore user is queried.
vstoreName	Conditional	string	vStore NAME. **Note:**The value is returned when a vStore user is queried.

Usage Guidelines

Only the super administrator can query the rights of other levels of users.

Example

- Batch querying users.

```
Request: GET /deviceManager/rest/210235843710E7000007/user

Response:
{
    "data": [
        {
            "ACCOUNTSTATE": "1",
            "COUNT": "438",
            "CREATETIME": "1451532658",
            "DESCRIPTION": "Default user",
            "LEVELGROUPTYPE":"1",
            "ID": "admin",
            "ISONLINE": "1",
            "LEVEL": "3",
            "LOCKSTATUS": "0",
            "NAME": "admin",
            "ROLEID":"2",
            "SCOPE": "0",
            "TYPE": 202,
        }, {
            "ACCOUNTSTATE": "1",
            "COUNT": "2",
            "CREATETIME": "1451534917",
            "DESCRIPTION": "",
            "LEVELGROUPTYPE":"1",
            "ID": "admin_123",
            "ISONLINE": "0",
            "LEVEL": "3",
            "LOCKSTATUS": "0",
            "NAME": "admin_123",
            "ROLEID":"2",
            "SCOPE": "0",
            "TYPE": 202
        }
    ],
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.3 Interface for Querying User Information

Function

This interface is used to query user information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/user/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User ID.
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is queried.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 202: user
ID	Mandatory	string	User ID.
NAME	Mandatory	string	Username.
DESCRIPTION	Mandatory	string	Description.
LEVEL	Mandatory	string(enum)	Level. **The value is described as follows:** 1: super administrator 2: administrator 3: read-only user
SCOPE	Mandatory	string(enum)	Type. **The value is described as follows:** 0: local user 1: LDAP user 2: LDAP user group
CREATETIME	Conditional	string(uint64)	Time when the user was created. **Note:**The value is not returned for users in the LDAP group.
USERGROUPNAME	Conditional	string	Owning LDAP group. **Note:**The value is returned for users in the LDAP group only.
ISONLINE	Mandatory	string(enum)	Online status. **The value is described as follows:** 0: offline 1: online

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Parameter	Mandatory/ Conditional	Type	Description
LOCKSTATUS	Mandatory	string(enum)	Lock status. **The value is described as follows:** 0: unlocked 1: locked
ACCOUNTSTATE	Conditional	string(enum)	Password status. **The value is described as follows:** 1: normal 3: password expired 4: initial password, which must be reset 5: the password is about to expire 6: must change the password upon next login **Note:**This parameter is returned only when the super administrator queries user information.
LEVELGROUPTYPE	Mandatory	string(enum)	Type of the owning group of the level. **The value is described as follows:** 0: all groups 1: system group 2: vStore group 3: WORM group
COUNT	Mandatory	string(uint32)	User login times.
ROLEID	Mandatory	string	Role ID.
vstoreId	Conditional	string	vStore ID. **Note:**The value is returned when a vStore user is queried.
vstoreName	Conditional	string	vStore NAME. **Note:**The value is returned when a vStore user is queried.

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Usage Guidelines

Super administrators can view information about administrators and read-only users. Administrators and read-only users can only view their own information.

Example

- Querying user admin_123.

```
Request: GET /deviceManager/rest/210235843710E7000007/user/admin_123

Response:
{
    "data": {
        "CREATETIME": "1451534917",
        "DESCRIPTION": "",
        "ID": "admin_123",
        "ISONLINE": "0",
        "LEVEL": "3",
        "LEVELGROUPTYPE": "1",
        "LOCKSTATUS": "0",
        "NAME": "admin_123",
        "ROLEID":"2",
        "SCOPE": "0",
        "TYPE": 202,
        "COUNT": "0",
        "ACCOUNTSTATE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.4 Interface for Modifying User Information

Function

This interface is used to modify the properties of a user based on the user ID.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the user level or role ID.

This operation will change the user's operation permission.

Suggestion:Before performing this operation, ensure that the selected user level or role ID is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/user/${id}

Access Method

PUT

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DESCRIPTION	Optional	string	Description. **Length:**0~255
ROLEID	Optional	string	Role ID.
LEVEL	Optional	enum	User level. **The value is described as follows:** 2: administrator 3: read-only user
PASSWORD	Conditional	string	New password. **Note:**This parameter must be delivered when the password is being changed.For password rules, see the security policy.
OLDPASSWORD	Conditional	string	Old password. **Note:**This parameter must be delivered when the password is being changed.
ID	Mandatory	string	User ID.
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is modified.

Result

N/A

Usage Guidelines

1. The super administrator can change its own password and information about other users, and administrators and read-only users can change their own passwords only.

2. The description and other information cannot be modified at the same time.

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Example

- Changing the description and level of a user.

```
Modify description:
Request: PUT /deviceManager/rest/210235843710E7000007/user/admin_123
{
    "DESCRIPTION": "change level"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}

Modify level.
Request: PUT /deviceManager/rest/210235843710E7000007/user/admin_123
{
    "LEVEL": "2"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.5 Interface for Deleting a User

Function

This interface is used to delete a user based on the ID.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/user/${id}

Access Method

DELETE

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User ID.
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is deleted.

Result

N/A

Example

- Deleting a user.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/user/admin_123

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.6 Interface for Creating a User

Function

This interface is used to create an OceanStor DeviceManager user.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/user

Access Method

POST

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	User name. **The value is described as follows:** Local user contains letters, digits, and underscores (_), and must start with a letter. LDAP domain username cannot be the same. **Note:**Length of local username must be in 5 to 32. Length of LDAP domain username must be in 1 to 64.
DESCRIPTION	Optional	string	Description. **Length:**0~255
LEVEL	Mandatory	enum	User level. **The value is described as follows:** 1: super administrator 2: administrator 3: read-only user
PASSWORD	Conditional	string	User password, which must comply with the password complexity requirements of OceanStor DeviceManager. **Note:**This parameter does not need to be delivered when the user type is LDAP domain user or LDAP domain user group(SCOPE: 1,2).
SCOPE	Mandatory	enum	User type. **The value is described as follows:** 0: local user 1: LDAP user 2: LDAP user group

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Parameter	Mandatory/Optional/Conditional	Type	Description
ROLEID	Optional	string	Role ID. **Default:**For a system user, if the user level is super administrator, the default value is 1 (super administrator); if the user level is administrator or read-only user, the default value is 2 (administrator). For a vStore user, the default value is 1024 (vStore administrator).
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is created.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 202: user
ID	Mandatory	string	ID.
NAME	Mandatory	string	Username.
DESCRIPTION	Mandatory	string	Description.
LEVEL	Mandatory	string(enum)	Level. **The value is described as follows:** 1: super administrator 2: administrator 3: read-only user

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Parameter	Mandatory/ Conditional	Type	Description
SCOPE	Mandatory	string(enum)	Type. **The value is described as follows:** 0: local user 1: LDAP user 2: LDAP user group
CREATETIME	Mandatory	string(uint64)	Time (UTC time) when the user was created.
ISONLINE	Mandatory	string(enum)	Online status. **The value is described as follows:** 0: offline 1: online
LOCKSTATUS	Mandatory	string(enum)	Lock status. **The value is described as follows:** 0: unlocked 1: locked
ACCOUNTSTATE	Mandatory	string(enum)	Password status. **The value is described as follows:** 1: normal 3: password expired 4: initial password, which must be reset 5: The password is about to expire. 6: Must change the password upon next login.
LEVELGROUPTYPE	Mandatory	string(enum)	Type of the owning group of the level. **The value is described as follows:** 0: all groups 1: system group 2: vStore group 3: WORM group
COUNT	Mandatory	string(uint32)	User login times.

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Parameter	Mandatory/ Conditional	Type	Description
ROLEID	Mandatory	string	Role ID.
vstoreId	Conditional	string	vStore ID. **Note:**The value is returned when a vStore user is created.
vstoreName	Conditional	string	vStore NAME. **Note:**The value is returned when a vStore user is created.

Example

- Creating a local user.

```
Request: POST /deviceManager/rest/210235843710E7000007/user
{
    "NAME": "user_readonly",
    "DESCRIPTION": "Read only user",
    "LEVEL": 3,
    "PASSWORD": "Admin@123",
    "ROLEID":"2",
    "SCOPE": 0
}

Response:
{
    "data": {
        "ACCOUNTSTATE": "4",
        "COUNT": "0",
        "CREATETIME": "1452181815",
        "DESCRIPTION": "Read only user",
        "ID": "user_readonly",
        "ISONLINE": "0",
        "LEVEL": "3",
        "LEVELGROUPTYPE": "1",
        "LOCKSTATUS": "0",
        "NAME": "user_readonly",
        "ROLEID":"2",
        "SCOPE": "0",
        "TYPE": 202
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.7 Interface for Forcing a User to Change Its Password Upon Next Login

Function

This interface is used to force a user to change its password upon next login.

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Applicable Model

Applicable to V3 all series.

HighRisk

You are about to set changing the password at the next login. The user must change the password upon the next login.

Suggestion: Before performing this operation, learn about the impact of this operation on the user.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/force_user_change_password

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 202: user
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Forcing a user to change its password upon next login.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
force_user_change_password
{
```

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```
    "ID":"yyhyyhyyh123",
    "TYPE":202
}

Response: {
    "data":  { }
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.8 Interface for Locking a User

Function

This interface is used to lock users by user ID.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lockuser/${id}

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User ID.
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is locked.

Result

N/A

Example

- Locking a user.

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```
Request: PUT /deviceManager/rest/210235843710E7000007/lockuser/admin_123

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.9 Interface for Unlocking a User

Function

This interface is used to unlock users by user ID.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/unlockuser/${id}

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User ID.
IMPORTANTPSW	Mandatory	string	Super administrator password.
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is unlocked.

Result

N/A

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Example

- Unlocking a user.

```
Request: PUT /deviceManager/rest/210235843710E7000007/unlockuser/admin_123
{
    "IMPORTANTPSW": "Admin@storage"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.10 Interface for Bring a User Offline

Function

This interface is used to bring a user offline by user ID.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to log off the selected user.

After this operation, the user can no longer manage the device unless relogs in to the device.

Suggestion: Before performing this operation, learn about the impact of this operation on the user.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/offline_user/${id}

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when a vStore user is brought offline.

Result

N/A

Example

- Bringing a user offline.

```
Request: PUT /deviceManager/rest/210235843710E7000007/offline_user/admin_123

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.11 Interface for Initing the Password of a User

Function

This interface is used to initialize the password of a user based on the user ID.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/initialize_user_pwd/${id}

Access Method

PUT

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PASSWORD	Mandatory	string	New password. **Note:**For password rules, see the security policy.
IMPORTANTPSW	Mandatory	string	Super administrator password.
ID	Mandatory	string	User ID.
vstoreId	Conditional	string	vStore ID. **Note:**This parameter must be configured when the password for a vStore user is initialized.

Result

N/A

Example

- Initializing the password of a user.

```
Request: PUT /deviceManager/rest/210235843710E7000007/initialize_user_pwd/
admin_123
{
    "ID":"admin_123",
    "IMPORTANTPSW": "Admin@storage",
    "PASSWORD": "Admin@123"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.12 Interface for Authentication Exit

Function

This interface is used to exit a session.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/sessions

Access Method

DELETE

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

N/A

Usage Guidelines

Request headers must contain parameter iBaseToken, and session IDs must be reported in cookies.You exit a session if the command is successfully executed.

Example

- Exiting a session.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/sessions

Response:{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.1.13 Interface for Querying User Login Information

Function

This interface is used to query user login information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/server/loginInfo

Access Method

GET

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User Privilege

Super administrator,Administrator

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
deviceid	Mandatory	string	Device ID.
level	Mandatory	enum	User level. **The value is described as follows:** 1: super admin 2: admin 3: readonly
levelgrouptype	Mandatory	enum	Level group type. **The value is described as follows:** 0: level group of all 1: level group of system 2: level group of tenant
usergroup	Mandatory	string	User group.
userid	Mandatory	string	User ID.
username	Mandatory	string	User name.
userscope	Mandatory	enum	User type. **The value is described as follows:** 0: local user 1: LDAP user 2: LDAP user group
roleId	Mandatory	string	Role ID.

Example

- Querying user login information.

```
Request: GET /deviceManager/rest/1016964156/server/loginInfo
Response:
{
    "data": {
        "deviceid": "1016964156",
```

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```
        "level": 1,
        "levelgrouptype": 1,
        "roleId": "1",
        "usergroup": "",
        "userid": "admin",
        "username": "admin",
        "userscope": 0
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.2 security_rule

4.1.2.1 Interface for Querying IP Rules

Function

This interface is used to query IP rules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iprule

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 236: IP Rule

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
SECUREIP	Mandatory	string	IP whitelist. **Note:** IPv4 and IPv6 are supported. Format example: If it is a single IP address, the format is 10.1.1.1. If it is an IP address segment, the format is 10.1.1.1-10.1.2.1.
STRATEGY	Mandatory	string(enum)	Rule strategy. **The value is described as follows:** 1: whitelist

Example

- Querying IP rules.

```
Request: GET /deviceManager/rest/210235843910E6000009/iprule

Response:
{
    "data": [
        {
            "ID": "1",
            "SECUREIP": "10.0.0.1",
            "STRATEGY": "1",
            "TYPE": 236
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.2.2 Interface for Querying the IP Rule Switch

Function

This interface is used to query the IP rule switch.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iprule/switch

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 236: IP Rule
ENABLE	Mandatory	string(bool)	Security rule switch. **The value is described as follows:** true: enabled false: disabled

Example

- Querying the IP rule switch.

```
Request: GET /deviceManager/rest/210235843910E6000009/iprule/switch

Response:
{
    "data": [
        {
            "ENABLE: "false",
            "TYPE": 236
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.1.2.3 Interface for Deleting IP Rules

Function

This interface is used to delete IP rules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iprule/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 236: IP Rule

Example

- Deleting IP rules.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/iprule/7

Response:
{
    "data": {
        "TYPE": 236
    },
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.1.2.4 Interface for Setting the IP Rule Switch

Function

This interface is used to set the IP rule switch.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to enable the IP address security rule.

This operation will make the storage system accessible to only the IP addresses in the IP address white list.

Suggestion: Confirm that you need to enable the IP address security rule and the IP addresses in the white list are correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iprule/switch

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLE	Mandatory	bool	Security rule switch. **The value is described as follows:** true: enabled false: disabled

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 236: IP Rule

Example

- Setting the IP rule switch.

```
Request: PUT /deviceManager/rest/210235843910E6000009/iprule/switch
{
    "ENABLE": "false"
}

Response:
{
    "data": {
        "TYPE": 236
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.2.5 Interface for Adding IP Rules

Function

This interface is used to add IP rules.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add an IP address white list.

This operation will make the IP addresses in this white list able to access the storage system when the IP address security rule is enabled.

Suggestion: Confirm that you need to add this IP address white list and the IP addresses in the white list are correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iprule

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Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SECUREIP	Mandatory	string	IP whitelist. **Note:** IPv4 and IPv6 are supported. Format example: If it is a single IP address, the format is 10.1.1.1. If it is an IP address segment, the format is 10.1.1.1-10.1.2.1.
STRATEGY	Mandatory	enum	Rule strategy. **The value is described as follows:** 1: whitelist

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	ID.
SECUREIP	Mandatory	string	IP whitelist. **Note:** IPv4 and IPv6 are supported. Format example: If it is a single IP address, the format is 10.1.1.1. If it is an IP address segment, the format is 10.1.1.1-10.1.2.1.

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Parameter	Mandatory/ Conditional	Type	Description
STRATEGY	Mandatory	string(enum)	Rule strategy. **The value is described as follows:** 1: whitelist

Example

- Adding IP rules.

```
Request: POST /deviceManager/rest/210235843910E6000009/iprule
{
    "SECUREIP": "10.0.0.1",
    "STRATEGY": "1"
}

Response:
{
    "data": {
        "ID": "7",
        "SECUREIP": "10.0.0.1",
        "STRATEGY": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.3 ldap

4.1.3.1 Interface for Querying Domain Authentication Server Settings

Function

This interface is used to query domain authentication server settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAPConfig

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 238: Management LDAP Configuration
ID	Mandatory	string	Object ID. **The value is described as follows:** The value must be 1. Only one LDAP server can be configured at present.
COUNT	Mandatory	string(uint32)	Number of objects. **The value is described as follows:** The value must be 1. Only one LDAP server can be configured at present.
SERVERIP	Mandatory	string	LDAP server IP address. **The value is described as follows:** LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.
PORT	Mandatory	string(uint32)	LDAP server port. **The value is described as follows:** The value ranges from 1 to 65535.

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Parameter	Mandatory/ Conditional	Type	Description
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
BINDDN	Mandatory	string	Bind DN.
BASEDN	Mandatory	string	Base DN.
USERSEARCHPATH	Mandatory	string	User directory.
GROUPSEARCHPATH	Mandatory	string	Group directory.
USERIDATTR	Mandatory	string	User ID attribute.
USERNAMEATTR	Mandatory	string	User name attribute.
GROUPNAMEATTR	Mandatory	string	Group name attribute.
GROUPMEMBERATTR	Mandatory	string	Group member attribute.
USEROBJECTCLASS	Mandatory	string	User object type.
GROUPOBJECTCLASS	Mandatory	string	Group object type.
GROUPIDATTR	Mandatory	string	Group ID attribute.
PASSWORDHASH	Mandatory	string	password hash. **The value is described as follows:** 1~64

Example

- Querying domain authentication server settings.

```
Request: GET /deviceManager/rest/210235843710E7000007/LDAPConfig

Response:
 {
    "data": [
        {
            "BASEDN": "cn=My Application,ou=applications,dc=com",
            "BINDDN": "cn=My Application,ou=applications,dc=com",
            "COUNT": "1",
```

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```
            "DIRECTORYTYPE": "2",
            "GROUPIDATTR": "uSNCreated",
            "GROUPMEMBERATTR": "member",
            "GROUPNAMEATTR": "sAMAccountName",
            "GROUPOBJECTCLASS": "group",
            "GROUPSEARCHPATH": "",
            "ID": "1",
            "PASSWORDHASH":"",
            "PORT": "636",
            "SERVERIP": "1.2.3.4",
            "TRANSFERTYPE": "2",
            "TYPE": "238",
            "USERIDATTR": "uSNCreated",
            "USERNAMEATTR": "sAMAccountName",
            "USEROBJECTCLASS": "user",
            "USERSEARCHPATH": "ou=applications,dc=com",
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.1.3.2 Interface for Creating Domain Authentication Server Settings

Function

This interface is used to create domain authentication server settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAPConfig

Access Method

POST

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SERVERIP	Optional	string	LDAP server IP address. **The value is described as follows:** LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.
PORT	Conditional	string(uint32)	LDAP server port. **The value is described as follows:** The value ranges from 1 to 65535. **Note:**This parameter must be configured if the server IP address is configured.
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
BINDDN	Mandatory	string	Bind DN. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
BINDPASSWD	Mandatory	string	Bind password. **Length:**1~63

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Parameter	Mandatory/Optional/Conditional	Type	Description
USERSEARCHPATH	Mandatory	string	User directory. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
GROUPSEARCHPATH	Optional	string	Group directory. **Length:**0~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
USERIDATTR	Mandatory	string	User ID attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
USERNAMEATTR	Mandatory	string	User name attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
GROUPNAMEATTR	Optional	string	Group name attribute. **Length:**0~63 **Note:**Cannot contain single quotation marks.
GROUPMEMBERATTR	Optional	string	Group member attribute. **Length:**0~63 **Note:**Cannot contain single quotation marks.
GROUPOBJECTCLASS	Optional	string	Group object type. **Length:**0~63 **Note:**Cannot contain single quotation marks.

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Parameter	Mandatory/Optional/Conditional	Type	Description
USEROBJECTCLASS	Mandatory	string	User object type. **Length:**1~63 **Note:**Cannot contain single quotation marks.
BASEDN	Mandatory	string	Base DN. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
GROUPIDATTR	Mandatory	string	Group ID attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
PASSWORDHASH	Optional	string	Password hash. **Length:**0~63 **Note:**Cannot contain single quotation marks.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 238: Management LDAP Configuration
ID	Mandatory	string	Object ID. **The value is described as follows:** The value must be 1. Only one LDAP server can be configured at present.

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Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of objects. **The value is described as follows:** The value must be 1. Only one LDAP server can be configured at present.
SERVERIP	Mandatory	string	LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.
PORT	Mandatory	string(uint32)	LDAP server port.
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
BINDDN	Mandatory	string	Bind DN.
USERSEARCHPATH	Mandatory	string	User directory.
GROUPSEARCHPATH	Mandatory	string	Group directory.
USERIDATTR	Mandatory	string	User ID attribute.
USERNAMEATTR	Mandatory	string	User name attribute.
GROUPNAMEATTR	Mandatory	string	Group name attribute.
GROUPMEMBERATTR	Mandatory	string	Group member attribute.
USEROBJECTCLASS	Mandatory	string	User object type.
GROUPOBJECTCLASS	Mandatory	string	Group object type.
BASEDN	Mandatory	string	Base DN.
GROUPIDATTR	Mandatory	string	Group ID attribute.

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Parameter	Mandatory/ Conditional	Type	Description
PASSWORDHASH	Mandatory	string	password hash.

Example

- Creating domain authentication server settings.

```
Request: POST /deviceManager/rest/210235843710E7000007/LDAPConfig
{
        "BASEDN": "cn=MyApplication,ou=text,cd=com",
        "BINDDN": "cn=MyApplication,ou=text,cd=com",
        "BINDPASSWD": "admin_123",
        "DIRECTORYTYPE": "2",
        "GROUPIDATTR": "uSNCreated",
        "GROUPMEMBERATTR": "member",
        "GROUPNAMEATTR": "sAMAccountName",
        "GROUPOBJECTCLASS": "group",
        "GROUPSEARCHPATH": "",
        "PORT": "636",
        "SERVERIP": "1.2.3.4",
        "TRANSFERTYPE": "2",
        "USERIDATTR": "uSNCreated",
        "USERNAMEATTR": "sAMAccountName",
        "USEROBJECTCLASS": "user",
        "USERSEARCHPATH": "ou=User",
        "PASSWORDHASH":""
}

Response:
 {
    "data": {
        "BASEDN": "cn=MyApplication,ou=text,cd=com",
        "BINDDN": "cn=MyApplication,ou=text,cd=com",
        "COUNT": "1",
        "DIRECTORYTYPE": "2",
        "GROUPIDATTR": "uSNCreated",
        "GROUPMEMBERATTR": "member",
        "GROUPNAMEATTR": "sAMAccountName",
        "GROUPOBJECTCLASS": "group",
        "GROUPSEARCHPATH": "",
        "ID": "1",
        "PASSWORDHASH":"",
        "PORT": "636",
        "SERVERIP": "1.2.3.4",
        "TRANSFERTYPE": "2",
        "TYPE": "238",
        "USERIDATTR": "uSNCreated",
        "USERNAMEATTR": "sAMAccountName",
        "USEROBJECTCLASS": "user",
        "USERSEARCHPATH": "ou=User"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.3.3 Interface for Modifying Domain Authentication Server Settings

Function

This interface is used to modify domain authentication server settings.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAPConfig

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SERVERIP	Optional	string	LDAP server IP address. **The value is described as follows:** LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.
PORT	Optional	uint32	LDAP server port. **The value is described as follows:** The value ranges from 1 to 65535. **Note:**The default value is 389 for LDAP and 636 for LDAPS.
DIRECTORYTYPE	Optional	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD

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Parameter	Mandatory/Optional/Conditional	Type	Description
TRANSFERTYPE	Optional	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
BINDDN	Optional	string	Bind DN. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
BINDPASSWD	Optional	string	Bind password. **Length:**1~63
USERSEARCHPATH	Optional	string	User directory. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
GROUPSEARCHPATH	Optional	string	Group directory. **Length:**0~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
USERIDATTR	Optional	string	User ID attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.

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Parameter	Mandatory/Optional/Conditional	Type	Description
USERNAMEATTR	Optional	string	User name attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
GROUPNAMEATTR	Optional	string	Group name attribute. **Length:**0~63 **Note:**Cannot contain single quotation marks.
GROUPMEMBERATTR	Optional	string	Group member attribute. **Length:**0~63 **Note:**Cannot contain single quotation marks.
GROUPOBJECTCLASS	Optional	string	Group object type. **Length:**0~63 **Note:**Cannot contain single quotation marks.
USEROBJECTCLASS	Optional	string	User object type. **Length:**1~63 **Note:**Cannot contain single quotation marks.
BASEDN	Optional	string	Base DN. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
GROUPIDATTR	Optional	string	Group ID attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
PASSWORDHASH	Optional	string	Password hash. **Length:**0~63 **Note:**Cannot contain single quotation marks.

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Result

N/A

Example

- Modifying domain authentication server settings.

```
Request: PUT /deviceManager/rest/210235843710E7000007/LDAPConfig
{
        "USERSEARCHPATH": "ou=User1"
}

Response:
 {
    "data": {
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.3.4 Interface for Deleting Domain Authentication Server Settings

Function

This interface is used to delete domain authentication server settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAPConfig

Access Method

DELETE

User Privilege

Super administrator

Parameters

N/A

Result

N/A

Example

- Deleting domain authentication server settings.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/LDAPConfig
```

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```
Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.3.5 Interface for Querying Default Domain Authentication Server Settings

Function

This interface is used to query default domain authentication server settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAPConfig/getdefaultldapconfig

Access Method

GET

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD

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Result

Parameter	Mandatory/ Conditional	Type	Description
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
GROUPNAMEATTR	Mandatory	string	Group name attribute.
GROUPMEMBERATTR	Mandatory	string	Group member attribute.
GROUPOBJECTCLASS	Mandatory	string	Group object type.
GROUPIDATTR	Mandatory	string	Group ID attribute.
PORT	Mandatory	string(uint32)	LDAP server port.
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
USERIDATTR	Mandatory	string	User ID attribute.
USERNAMEATTR	Mandatory	string	User name attribute.
USEROBJECTCLASS	Mandatory	string	User object type.
PASSWORDHASH	Mandatory	string	Password hash. **Unit:**

Example

- Querying the default settings when the LDAP directory type is AD.

```
Request: GET /deviceManager/rest/210235843710E7000007/LDAPConfig/
getdefaultldapconfig?DIRECTORYTYPE=2

Response:
 {
```

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```
    "data": {
        "DIRECTORYTYPE": "2",
        "GROUPIDATTR": "uSNCreated",
        "GROUPMEMBERATTR": "member",
        "GROUPNAMEATTR": "sAMAccountName",
        "GROUPOBJECTCLASS": "group",
        "PASSWORDHASH": "crypt",
        "PORT": "636",
        "TRANSFERTYPE": "2",
        "USERIDATTR": "uSNCreated",
        "USERNAMEATTR": "sAMAccountName",
        "USEROBJECTCLASS": "user"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.3.6 Interface for Testing Domain Authentication Server Settings

Function

This interface is used to test domain authentication server settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/test_manager_ldapconfig

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
BINDDN	Mandatory	string	Bind DN. **Length:**1~255 **Note:**The input format should be like "xxx=yyy",comma separated between multiple values.

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Parameter	Mandatory/Optional/Conditional	Type	Description
BASEDN	Mandatory	string	Base DN. **Length:**1~255 **Note:**The input format should be like "xxx=yyy",comma separated between multiple values.
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
PORT	Optional	uint32	LDAP server port. **The value is described as follows:** 1~65535
SERVERIP	Optional	string	LDAP server IP address. **The value is described as follows:** LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS

Result

N/A

Example

- Testing domain authentication server settings.

```
Request: PUT /deviceManager/rest/210235843710E7000007/test_manager_ldapconfig
{
        "BASEDN": "cn=My Application,ou=applications,dc=com",
        "BINDDN": "cn=My Application,ou=applications,dc=com",
```

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```
        "DIRECTORYTYPE": "2",
        "PORT": "636",
        "SERVERIP": "1.2.3.4",
        "TRANSFERTYPE": "2"
}

Response:
 {
    "data": {
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.3.7 Interface for Creating Domain Authentication Server Settings (This Interface has been discarded)

Function

This interface is used to create domain authentication server settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAPConfig/create

Access Method

POST

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SERVERIP	Optional	string	LDAP server IP address. **The value is described as follows:** LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
PORT	Conditional	string(uint32)	LDAP server port. **The value is described as follows:** 1~65535 **Note:**This parameter must be configured if the server IP address is configured.
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
BINDDN	Mandatory	string	Bind DN. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
BINDPASSWD	Mandatory	string	Bind password. **Length:**1~63
USERSEARCHPATH	Mandatory	string	User directory. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.

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Parameter	Mandatory/Optional/Conditional	Type	Description
GROUPSEARCHPATH	Optional	string	Group directory. **Length:**0~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
USERIDATTR	Mandatory	string	User ID attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
USERNAMEATTR	Mandatory	string	User name attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
GROUPNAMEATTR	Optional	string	Group name attribute. **Length:**0~63 **Note:**Cannot contain single quotation marks.
GROUPMEMBERATTR	Optional	string	Group member attribute. **Length:**0~63 **Note:**Cannot contain single quotation marks.
GROUPOBJECTCLASS	Optional	string	Group object type. **Length:**0~63 **Note:**Cannot contain single quotation marks.
USEROBJECTCLASS	Mandatory	string	User object type. **Length:**1~63 **Note:**Cannot contain single quotation marks.

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Parameter	Mandatory/Optional/Conditional	Type	Description
BASEDN	Mandatory	string	Base DN. **Length:**1~255 **Note:**Cannot contain single quotation marks.The input format should be like "xxx=yyy",comma separated between multiple values.
GROUPIDATTR	Mandatory	string	Group ID attribute. **Length:**1~63 **Note:**Cannot contain single quotation marks.
PASSWORDHASH	Optional	string	Password hash. **Length:**0~63 **Note:**Cannot contain single quotation marks.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 238: Management LDAP Configuration
ID	Mandatory	string	Object ID. **The value is described as follows:** The value must be 1. Only one LDAP server can be configured at present.

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Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of objects. **The value is described as follows:** The value must be 1. Only one LDAP server can be configured at present.
SERVERIP	Mandatory	string	LDAP server IP addresses. Use commas to separate the IP addresses and a maximum of four IP addresses are supported.
PORT	Mandatory	string(uint32)	LDAP server port.
DIRECTORYTYPE	Mandatory	string(enum)	LDAP directory type. **The value is described as follows:** 1: LDAP 2: AD
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS
BINDDN	Mandatory	string	Bind DN.
USERSEARCHPATH	Mandatory	string	User directory.
GROUPSEARCHPATH	Mandatory	string	Group directory.
USERIDATTR	Mandatory	string	User ID attribute.
USERNAMEATTR	Mandatory	string	User name attribute.
GROUPNAMEATTR	Mandatory	string	Group name attribute.
GROUPMEMBERATTR	Mandatory	string	Group member attribute.
USEROBJECTCLASS	Mandatory	string	User object type.
GROUPOBJECTCLASS	Mandatory	string	Group object type.
BASEDN	Mandatory	string	Base DN.
GROUPIDATTR	Mandatory	string	Group ID attribute.

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Parameter	Mandatory/ Conditional	Type	Description
PASSWORDHASH	Mandatory	string	password hash.

Example

- Creating domain authentication server settings.

```
Request: POST /deviceManager/rest/210235843710E7000007/LDAPConfig/create
{
        "BASEDN": "cn=MyApplication,ou=text,cd=com",
        "BINDDN": "cn=MyApplication,ou=text,cd=com",
        "BINDPASSWD": "admin_123",
        "DIRECTORYTYPE": "2",
        "GROUPIDATTR": "uSNCreated",
        "GROUPMEMBERATTR": "member",
        "GROUPNAMEATTR": "sAMAccountName",
        "GROUPOBJECTCLASS": "group",
        "GROUPSEARCHPATH": "",
        "PORT": "636",
        "SERVERIP": "1.2.3.4",
        "TRANSFERTYPE": "2",
        "USERIDATTR": "uSNCreated",
        "USERNAMEATTR": "sAMAccountName",
        "USEROBJECTCLASS": "user",
        "USERSEARCHPATH": "ou=User",
        "PASSWORDHASH":""
}

Response:
 {
    "data": {
        "BASEDN": "cn=MyApplication,ou=text,cd=com",
        "BINDDN": "cn=MyApplication,ou=text,cd=com",
        "COUNT": "1",
        "DIRECTORYTYPE": "2",
        "GROUPIDATTR": "uSNCreated",
        "GROUPMEMBERATTR": "member",
        "GROUPNAMEATTR": "sAMAccountName",
        "GROUPOBJECTCLASS": "group",
        "GROUPSEARCHPATH": "",
        "ID": "1",
        "PASSWORDHASH":"",
        "PORT": "636",
        "SERVERIP": "1.2.3.4",
        "TRANSFERTYPE": "2",
        "TYPE": "238",
        "USERIDATTR": "uSNCreated",
        "USERNAMEATTR": "sAMAccountName",
        "USEROBJECTCLASS": "user",
        "USERSEARCHPATH": "ou=User"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.4 safe_strategy

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4.1.4.1 Interface for Querying Security Policies

Function

This interface is used to query security policies.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/USER_SECURITY_POLICY/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Optional	string	Object ID. **The value is described as follows:** default **Default:**default

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 47: USER_SECURITY_POLICY

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	Object ID. **The value is described as follows:** default
PASSWORDMINLENGTH	Mandatory	string(uint32)	Minimum password length. **The value is described as follows:** 8~32
PASSWORDMAXLENGTH	Mandatory	string(uint32)	Maximum password length. **The value is described as follows:** 8~32
PWDCOMPLEX	Mandatory	string(enum)	Password complexity. **The value is described as follows:** 0: normal password. The value must contain special characters and at least two of the following types: lowercase characters, uppercase characters, and digits. 1: high-level password. The value must contain special characters, lowercase characters, uppercase characters, and digits.
REDUPLICATECHAR-COUNT	Mandatory	string(uint32)	Maximum number of consecutive repeated characters. **The value is described as follows:** 0~9 The value 0 indicates no restriction.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEPWDLOCK	Mandatory	string(bool)	Whether to enable the password lock mechanism. **The value is described as follows:** true: enable false: disabled **Note:** The account is locked if the number of consecutive inputs of incorrect passwords exceeds the threshold. The super administrator will be automatically unlocked after 15 minutes.
PWDLOCKTIME	Mandatory	string(uint32)	Password locked period. **The value is described as follows:** 0, 3~2000 The value 0 indicates that the user account is locked permanently. **Unit:**minutes
PWDINCORRECTTIMES	Mandatory	string(uint32)	Number of password entry attempts. **The value is described as follows:** 1~9
SESSIONEXPIREDTIME	Mandatory	string(uint32)	Session timeout duration. **The value is described as follows:** 1~100 **Unit:**minutes
MINVALIDPERIOD	Mandatory	string(uint32)	Password change interval. **The value is described as follows:** 0~9999 The value 0 indicates no restriction. **Unit:**minutes

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Parameter	Mandatory/ Conditional	Type	Description
MAXVALIDPERIOD	Mandatory	string(uint32)	Password validity period. **The value is described as follows:** 0~999 The value 0 indicates that the password is valid permanently. **Unit:**days
PROMPTAHEAD	Mandatory	string(uint32)	Advance reminder of password expiry. **The value is described as follows:** 1~99 **Unit:**days **Note:**The system notifies the user of password expiry N days in advance. The value of N ranges from 1 to 99.
HISTORYCOUNT	Mandatory	string(uint32)	Number of historical passwords reserved. **The value is described as follows:** 0~30 The value 0 indicates no restriction. **Note:**Number of historical passwords retained for a user. A new password must be different from any of the historical passwords. The value 0 indicates no restriction.

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Parameter	Mandatory/ Conditional	Type	Description
enableUserReview	Mandatory	string(bool)	Whether to enable the user account audit mechanism. **The value is described as follows:** true: enable false: disabled **Note:**The number and rights of user accounts are audited regularly for account security. If the audit interval is set to 0 or 1 day, the system audits the accounts every day.
userReviewInterval	Mandatory	string(uint32)	Interval between user account audits. **The value is described as follows:** 0~999 **Unit:**days **Note:**The number and rights of user accounts are audited regularly for account security. If the audit interval is set to 0 or 1 day, the system audits the accounts every day.
enableInactiveUserLock	Mandatory	string(bool)	Whether to lock the user when it is idle. **The value is described as follows:** true: enable false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
inactiveUserLockTime	Mandatory	string(uint32)	Idle period before the user is locked. **The value is described as follows:** 1~999 **Unit:**days **Note:**After this function is enabled, a user is locked if the user does not log in to the system for consecutive N days. N indicates the specified period for locking a user.
userMinLength	Mandatory	string(uint32)	Minimum length of a user name. **The value is described as follows:** 5~32
enableLoginNotes	Mandatory	string(bool)	Whether to enable login notification. **The value is described as follows:** true: enable false: disabled **Note:**The system notifies the user of the last login information (including the login time and IP address) to enhance network security.
enableUserDefNotes	Mandatory	string(bool)	Whether to enable user-defined notification. **The value is described as follows:** true: enable false: disabled **Note:**The system notifies the user of the last login information (including the login time and IP address) to enhance network security.
userDefNodes	Mandatory	string	User-defined notification.

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Parameter	Mandatory/ Conditional	Type	Description
rejectDefaultPassword	Mandatory	string(bool)	Whether to reject the use of the default password. **The value is described as follows:** true: reject false: allow **Note:**After this function is enabled, the new password of the super administrator admin cannot be the default password.
M2MUSERPWDHISTORYCOUNT	Mandatory	string(uint32)	Number of historical passwords reserved for machine-machine accounts. **The value is described as follows:** 0~30 The value 0 indicates no restriction. **Note:**The field is not used.
M2MUSERPWDMAXVALIDPERIOD	Mandatory	string(uint32)	Password validity period for machine-machine accounts. **The value is described as follows:** 0~999 The value 0 indicates that the password is valid permanently. **Unit:**days **Note:**The field is not used.

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Parameter	Mandatory/ Conditional	Type	Description
M2MUSERPWDMINVALIDPERIOD	Mandatory	string(uint32)	Password change interval for machine-machine accounts. **The value is described as follows:** 0~9999 The value 0 indicates no restriction. **Unit:**minutes **Note:**The field is not used.
M2MUSERPWDPROMPTAHEAD	Mandatory	string(uint32)	Advance reminder of password expiry for machine-machine accounts. **The value is described as follows:** 1~99 **Unit:**days **Note:**The field is not used.

Example

- Querying security policies.

```
Request: GET /deviceManager/rest/210235843710E7000007/USER_SECURITY_POLICY/
default

Response:
{
    "data": {
        "ENABLEPWDLOCK": "false",
        "HISTORYCOUNT": "1",
        "ID": "default",
        "MAXVALIDPERIOD": "90",
        "MINVALIDPERIOD": "5",
        "PASSWORDMAXLENGTH": "32",
        "PASSWORDMINLENGTH": "8",
        "PROMPTAHEAD": "7",
        "PWDCOMPLEX":"0",
        "PWDINCORRECTTIMES": "3",
        "PWDLOCKTIME": "3" ,
        "REDUPLICATECHARCOUNT": "0" ,
        "SESSIONEXPIREDTIME": "100" ,
        "TYPE": 47,
        "enableInactiveUserLock": "false" ,
        "enableLoginNotes": "false" ,
        "enableUserDefNotes": "true" ,
        "enableUserReview": "false" ,
        "inactiveUserLockTime": "60" ,
        "rejectDefaultPassword": "false" ,
        "userDefNodes": "abcdde" ,
```

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```
        "userMinLength": "6" ,
        "userReviewInterval": "120"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.4.2 Interface for Modifying Security Policies

Function

This interface is used to modify security policies.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/USER_SECURITY_POLICY/default

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PASSWORDMINLENGTH	Optional	uint32	Minimum password length. **The value is described as follows:** 8~32
PASSWORDMAXLENGTH	Optional	uint32	Maximum password length. **The value is described as follows:** 8~32

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Parameter	Mandatory/Optional/Conditional	Type	Description
PWDCOMPLEX	Optional	string(enum)	Password complexity. **The value is described as follows:** 0: normal password. The value must contain special characters and at least two of the following types: lowercase characters, uppercase characters, and digits. 1: high-level password. The value must contain special characters, lowercase characters, uppercase characters, and digits.
REDUPLICATECHAR-COUNT	Optional	uint32	Maximum number of consecutive repeated characters. **The value is described as follows:** 0~9 The value 0 indicates no restriction.
ENABLEPWDLOCK	Optional	string(bool)	Whether to enable the password lock mechanism. **The value is described as follows:** true: enable false: disabled **Note:** The account is locked if the number of consecutive inputs of incorrect passwords exceeds the threshold. The super administrator will be automatically unlocked after 15 minutes.

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Parameter	Mandatory/Optional/Conditional	Type	Description
PWDLOCKTIME	Optional	uint32	Password locked period. **The value is described as follows:** 0, 3~2000 The value 0 indicates that the user account is locked permanently. **Unit:**minutes
PWDINCORRECTTIMES	Optional	uint32	Number of password entry attempts. **The value is described as follows:** 1~9
SESSIONEXPIREDTIME	Optional	uint32	Session timeout duration. **The value is described as follows:** 1~100 **Unit:**minutes
MINVALIDPERIOD	Optional	uint32	Password change interval. **The value is described as follows:** 0~9999 The value 0 indicates no restriction. **Unit:**minutes
MAXVALIDPERIOD	Optional	uint32	Password validity period. **The value is described as follows:** 0~999 The value 0 indicates that the password is valid permanently. **Unit:**days

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Parameter	Mandatory/Optional/Conditional	Type	Description
PROMPTAHEAD	Optional	uint32	Advance reminder of password expiry. **The value is described as follows:** 1~99 **Unit:**days **Note:**The system notifies the user of password expiry N days in advance. The value of N ranges from 1 to 99.
HISTORYCOUNT	Optional	uint32	Number of historical passwords reserved. **The value is described as follows:** 0~30 The value 0 indicates no restriction. **Note:**Number of historical passwords retained for a user. A new password must be different from any of the historical passwords. The value 0 indicates no restriction.
enableUserReview	Optional	string(bool)	Whether to enable the user account audit mechanism. **The value is described as follows:** true: enable false: disabled **Note:**The number and rights of user accounts are audited regularly for account security. If the audit interval is set to 0 or 1 day, the system audits the accounts every day.

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Parameter	Mandatory/Optional/Conditional	Type	Description
userReviewInterval	Optional	uint32	Interval between user account audits. **The value is described as follows:** 0~999 **Unit:**days **Note:**The number and rights of user accounts are audited regularly for account security. If the audit interval is set to 0 or 1 day, the system audits the accounts every day.
userMinLength	Optional	uint32	Minimum length of a user name. **The value is described as follows:** 5~32
inactiveUserLockTime	Optional	uint32	Idle period before the user is locked. **The value is described as follows:** 1~999 **Unit:**days **Note:**After this function is enabled, a user is locked if the user does not log in to the system for consecutive N days. N indicates the specified period for locking a user.
enableInactiveUserLock	Optional	string(bool)	Whether to lock the user when it is idle. **The value is described as follows:** true: enable false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
enableLoginNotes	Optional	string(bool)	Whether to enable login notification. **The value is described as follows:** true: enable false: disabled **Note:**The system notifies the user of the last login information (including the login time and IP address) to enhance network security.
enableUserDefNotes	Optional	string(bool)	Whether to enable user-defined notification. **The value is described as follows:** true: enable false: disabled
userDefNodes	Optional	string	User-defined notification. **Length:**1~511
rejectDefaultPassword	Optional	string(bool)	Whether to reject the use of the default password. **The value is described as follows:** true: reject false: allow **Note:**After this function is enabled, the new password of the super administrator admin cannot be the default password.
M2MUSERPWDHISTORYCOUNT	Optional	uint32	Number of historical passwords reserved for machine-machine accounts. **The value is described as follows:** 0~30 The value 0 indicates no restriction. **Note:**The field is not used.

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Parameter	Mandatory/Optional/Conditional	Type	Description
M2MUSERPWDMAXVALIDPERIOD	Optional	uint32	Password validity period for machine-machine accounts. **The value is described as follows:** 0~999 The value 0 indicates that the password is valid permanently. **Unit:**days **Note:**The field is not used.
M2MUSERPWDMINVALIDPERIOD	Optional	uint32	Password change interval for machine-machine accounts. **The value is described as follows:** 0~9999 The value 0 indicates no restriction. **Unit:**minutes **Note:**The field is not used.
M2MUSERPWDPROMPTAHEAD	Optional	uint32	Advance reminder of password expiry for machine-machine accounts. **The value is described as follows:** 1~99 **Unit:**days **Note:**The field is not used.

Result

N/A

Example

- Modifying the minimum length of a user name.

```
Request: PUT /deviceManager/rest/210235843710E7000007/USER_SECURITY_POLICY/
default
{
```

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```
    "userMinLength": "5"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.4.3 Interface for Querying Security Policies of Resource Users

Function

This interface is used to query security policies of resource users.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/RESOURCE_USER_SECURITY_POLICY/default

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/Conditional	Type	Description
userMinLength	Mandatory	uint32	Minimum length of a user name.
passwordMinLength	Mandatory	uint32	Minimum length of a password.
passwordMaxLength	Mandatory	uint32	Maximum length of a password.

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Parameter	Mandatory/ Conditional	Type	Description
pwdComplex	Mandatory	uint32	Password strength. **The value is described as follows:** 0: normal, containing special characters and any two of uppercase letters, lowercase letters, and digits. 1: high, containing special characters, uppercase letters, lowercase letters, and digits.
reduplicateCharCount	Mandatory	uint32	Maximum number of consecutive same characters. **Note:**Maximum number of consecutive same characters in a password (0 indicates no restriction).
pwdIncorrectTimes	Mandatory	uint32	Uint32 Maximum number of incorrect password attempts. **Note:**0 indicates no restriction.
maxValidPeriod	Mandatory	uint32	Password validity period of a man-machine user. **Unit:**days **Note:**Validity periods are required for passwords and 0 indicates that passwords are permanently valid.
inactiveUserLockTime	Mandatory	uint32	Idle lock interval. **The value is described as follows:** 0: disabled **Unit:**days

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Parameter	Mandatory/ Conditional	Type	Description
userPwdMinValidPeriod	Mandatory	uint32	Password Change Interval. **The value is described as follows:** 0: disabled **Unit:**minutes

Example

- Querying security policies of resource users.

```
Request: GET /deviceManager/rest/210235843710E7000007/
RESOURCE_USER_SECURITY_POLICY/default

Response:
{
    "data": {
        "inactiveUserLockTime": "0",
        "maxValidPeriod": "0",
        "passwordMaxLength": "32",
        "passwordMinLength": "8",
        "pwdIncorrectTimes": "7",
        "pwdComplex":"0",
        "reduplicateCharCount": "3",
        "userMinLength": "6" ,
        "userPwdMinValidPeriod": "5"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.4.4 Interface for Modifying Security Policies of Resource Users

Function

This interface is used to modify security policies of resource users.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/RESOURCE_USER_SECURITY_POLICY/default

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
userMinLength	Optional	uint32	Minimum length of a user name. **Length:**1-31
passwordMinLength	Optional	uint32	Minimum length of a password. **Length:**8-32
passwordMaxLength	Optional	uint32	Maximum length of a password. **Length:**8-32
pwdComplex	Optional	uint32	Password strength. **The value is described as follows:** 0: normal, containing special characters and any two of uppercase letters, lowercase letters, and digits. 1: high, containing special characters, uppercase letters, lowercase letters, and digits. **Length:**0-1
reduplicateCharCount	Optional	uint32	Maximum number of consecutive same characters. **Length:**0-9 **Note:**Maximum number of consecutive same characters in a password (0 indicates no restriction).

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Parameter	Mandatory/Optional/Conditional	Type	Description
pwdIncorrectTimes	Optional	uint32	Maximum number of incorrect password attempts. **Length:**0-999 **Note:**0 indicates no restriction.
maxValidPeriod	Optional	uint32	Password validity period of a man-machine user. **Unit:**days **Length:**0-999 **Note:**Validity periods are required for passwords and 0 indicates that passwords are permanently valid.
inactiveUserLockTime	Optional	uint32	Idle lock interval. **The value is described as follows:** 0: disabled **Unit:**days **Length:**0-999
userPwdMinValidPeriod	Optional	uint32	Password Change Interval. **The value is described as follows:** 0: disabled **Unit:**minutes **Length:**0-9999

Result

N/A

Example

- Modifying the minimum length of a user name.

```
Request: PUT /deviceManager/rest/210235843710E7000007/
RESOURCE_USER_SECURITY_POLICY/default
{
    "userMinLength": "5"
}

Response:
{
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.5 sa_server

4.1.5.1 Interface for Testing Key Server Connection

Function

This interface is used to test a key server connection.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/TEST_SA_SERVER

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ip	Mandatory	string	The server IP address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.

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Parameter	Mandatory/Optional/Conditional	Type	Description
serverType	Mandatory	enum	The server type. **The value is described as follows:** Types: 0: Thales kmip server 1: SMx server 2: SafeNet kmip server The default is Thales kmip server, currently supports 0,2
port	Mandatory	uint32	The server port. **The value is described as follows:** The value ranges from 1 to 65535.

Result

N/A

Example

- Testing a Key Server Connection.

```
Request: PUT /deviceManager/rest/210235843710E7000007/TEST_SA_SERVER
{
    "ip" : "100.136.1.1",
    "port" : 5696,
    "serverType" : 0
}
Response:
{
    "data" : {},
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.1.5.2 Interface for Deleting a Key Server Address

Function

This interface is used to delete a key server address.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SA_SERVER/${ID}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16507:Key management server

Example

- Deleting a Key Server Address.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/SA_SERVER/1

Response:
{
    "data" : {
        "TYPE" : 16507
    },
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.1.5.3 Interface for Adding a Key Server Address

Function

This interface is used to add a key server address.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SA_SERVER

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ip	Mandatory	string	The server IP address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
serverType	Mandatory	enum	The server type. **The value is described as follows:** Types: 0: Thales kmip server 1: SMx server 2: SafeNet kmip server The default is Thales kmip server, currently supports 0,2

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Parameter	Mandatory/Optional/Conditional	Type	Description
port	Mandatory	uint32	The server port. **The value is described as follows:** The value ranges from 1 to 65535.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object.

Example

- Adding a Key Server Address.

```
Request: POST /deviceManager/rest/210235843710E7000007/SA_SERVER
{
    "ip" : "6.3.3.3",
    "port" : 5696,
    "serverType" : 0
}
Response:
{
    "data" : {
        "TYPE" : 16507
    },
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.1.5.4 Interface for Batch Querying Key Server Address

Function

This interface is used to batch query key server addresses.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SA_SERVER

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
ip	Mandatory	string	The server IP address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
port	Mandatory	uint32	The server port.
serverType	Mandatory	enum	The server type. **The value is described as follows:** Types: 0: Thales kmip server 1: SMx server 2: SafeNet kmip server The default is Thales kmip server, currently supports 0,2

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Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16507:Key management server

Example

- Batch Querying Key Server Address.

```
Request: GET /deviceManager/rest/210235843710E7000007/SA_SERVER
Response:
{
    "data" : [
        {
            "ID" : "1",
            "TYPE" : 16507,
            "ip" : "1.1.1.1",
            "port" : "5696",
            "serverType" : "2"
        }, {
            "ID" : "2",
            "TYPE" : 16507,
            "ip" : "2.2.2.2",
            "port" : "5696",
            "serverType" : "0"
        }
    ],
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.1.6 certificate

4.1.6.1 Interface for Batch Querying Certificate Information

Function

This interface is used to Batch Querying certificate information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/certificate

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
CERTIFICATE_EXPIRE_PREWARNING_TIME	Mandatory	string(uint32)	Expiration warning days. **Unit:**days
certificateFingerPrint	Mandatory	string	CA certificate fingerprint info.
CERTIFICATE_EXPIRE_TIME	Mandatory	string	Expire time.
CERTIFICATE_STATUS	Mandatory	string(enum)	Certificate status. **The value is described as follows:** 0: not exist 1: valid 2: invalid

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Parameter	Mandatory/ Conditional	Type	Description
CERTIFICATE_TYPE	Mandatory	string(enum)	Certificate type. **The value is described as follows:** 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate In 2600 V3 for Video, only the following values are supported: 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate In 18500 V3 and 18800 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate

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Parameter	Mandatory/ Conditional	Type	Description
			4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch Querying certificate information.

```
Request: GET /deviceManager/rest/210235843910E6000009/certificate

Response:
{
    "data": [
        {
            "CERTIFICATE_EXPIRE_PREWARNING_TIME": "30",
            "CERTIFICATE_EXPIRE_TIME": "--",
            "CERTIFICATE_STATUS": "0",
            "CERTIFICATE_TYPE": "0",
            "certificateFingerPrint":"--"
        }, {
            "CERTIFICATE_EXPIRE_PREWARNING_TIME": "30",
            "CERTIFICATE_EXPIRE_TIME": "2025-06-05",
            "CERTIFICATE_STATUS": "1",
            "CERTIFICATE_TYPE": "1",
             "certificateFingerPrint":"D4:11:F9:90:B3:D6:46:66:6C:18:3A:
0E:B3:E5:9D:A2:2C:F6:84:53"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.6.2 Interface for Modifying a Certificate

Function

This interface is used to modify a certificate.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/certificate

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CERTIFICATE_ENCRYPT_KEY	Optional	string	Private key encryption password. **The value is described as follows:** 1. Contains 8 to 16 characters. 2. Must contain special characters. Special characters include !"#$%&'()*+,-./:;<=>?@[\]^`{_|}~ and spaces. 3. Must contain any two types of uppercase letters, lowercase letters, and digits. 4. The maximum number of consecutive same characters cannot exceed 5. 5. Cannot be the same as the account or mirror writing of the account.
CERTIFICATE_EXPIRE_PREWARNING_TIME	Optional	uint32	Expiration warning days. **The value is described as follows:** The value ranges from 7 to 180.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CERTIFICATE_TYPE	Mandatory	enum	Certificate type. **The value is described as follows:** 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate In 2600 V3 for Video, only the following values are supported: 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate In 18500 V3 and 18800 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate

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Parameter	Mandatory/Optional/Conditional	Type	Description
			4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying a certificate.

```
Request: PUT /deviceManager/rest/210235843910E6000009/certificate
{
    "CERTIFICATE_EXPIRE_PREWARNING_TIME": 31,
    "CERTIFICATE_TYPE": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.6.3 Interface for Exporting a Certificate

Function

This interface is used to export a certificate.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/certificate/exportpath

Access Method

GET

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CERTIFICATE_TYPE	Mandatory	enum	Certificate type. **The value is described as follows:** 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate In 2600 V3 for Video, only the following values are supported: 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate

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Parameter	Mandatory/Optional/Conditional	Type	Description
KEY_ALGORITHM	Optional	enum	Certificate key algorithm. **The value is described as follows:** 0: RSA 2048 1: RSA 4096 2: ECC 256 **Default:**0: RSA 2048
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
CERTIFICATE_EXPORT_PATH	Mandatory	string	Certificate export path.
CERTIFICATE_CSR_NAME	Mandatory	string	Certificate name.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Usage Guidelines

File streams are returned.

Example

- Exporting a certificate.

```
Request: GET /deviceManager/rest/210235843910E6000009/certificate/exportpath?
CERTIFICATE_TYPE=1&KEY_ALGORITHM=0

Response:
{
    "data": {
```

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```
        "CERTIFICATE_CSR_NAME": "DM_CertReq.csr",
        "CERTIFICATE_EXPORT_PATH": "10051303846827350062"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.6.4 Interface for Downloading a Certificate

Function

Downloading a certificate.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/certificate

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
path	Mandatory	string	Certificate path.

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Parameter	Mandatory/Optional/Conditional	Type	Description
certificateType	Mandatory	enum	Certificate type. **The value is described as follows:** 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate In 2600 V3 for Video, only the following values are supported: 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate

Result

N/A

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Usage Guidelines

File streams are returned.

Example

- Downloading a certificate.

```
Request: GET /deviceManager/rest/210235843910E6000009/file/certificate?
path=16451001765739732331&certificateType=1

Response:

None
```

4.1.6.5 Interface for Importing a Certificate

Function

This interface is used to import a certificate.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to replace the SSL certificate. This operation will replace the previous certificate file and may cause the SSL connection to be reconnected. Suggestion: Before you perform this operation, please acknowledge the aforementioned risks and ensure that the certificate file to be imported is correct.
The certificate you are about to import has the following security risks:##00{1: the certificate key length is insecure;2: the certificate signature algorithm is insecure;3: the certificate CN and array SN are inconsistent;4: the CA certificate key length is insecure;5: the CA certificate signature algorithm is insecure}. This certificate cannot provide sufficient security and counterfeit certificates may occur. Besides, the certificate may cause SSL disconnection and reconnection. Suggestion: Before performing this operation, ensure that you accept the aforementioned risks.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/certificate

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
certificateType	Mandatory	enum	Certificate type. **The value is described as follows:** 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate 7: NTP certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate 7: NTP certificate In 2600 V3 for Video, only the following values are supported: 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate 7: NTP certificate

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Parameter	Mandatory/Optional/Conditional	Type	Description
			In 18500 V3 and 18800 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate
fileName	Mandatory	enum	Usage of file. **The value is described as follows:** CERTIFICATE_NAME: certificate file CA_CERTIFICATE_NAME: CA certificate file PRIVATE_KEY_NAME: private key file
fileType	Mandatory	string	File type.
iBaseToken	Mandatory	string	Random code for preventing cross-site request forgery (CSRF). A random code is generated after each successful authentication.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Usage Guidelines

The certificate files and iBaseToken values imported through this interface must be delivered in the binary format so that the device can receive and authenticate the files and values normally.

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Example

- Importing a certificate.

```
Request: POST /deviceManager/rest/210235843910E6000009/file/certificate?
fileType=pem&certificateType=1&fileName=CERTIFICATE_NAME

{
    ------WebKitFormBoundarynDPifoq9cqKz4azh
    Content-Disposition: form-data; name="uploadCertificate_UPLOAD_FILE";
filename="test.crt"
    Content-Type: application/octet-stream

    ------WebKitFormBoundarynDPifoq9cqKz4azh
    Content-Disposition: form-data; name="iBaseToken"

    056282247E2AE1FDDF4D1D3A80F2CE0B7B869854F39198A88428719D9ABE97C7
    ------WebKitFormBoundarynDPifoq9cqKz4azh--
}

Response: None
```

4.1.6.6 Interface for Activating a Certificate

Function

This interface is used to activate a certificate.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/certificate/active

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CA_CERTIFICATE_NAME	Conditional	string	CA certificate file name. **Note:**Certificate and CA certificate are required simultaneously for key management center, certificate is required for device management, CA certificate is required for domain authentication, certificate and CA certificate are required simultaneously for hypermetro arbitration, certificate is required for https protocol, and certificate is required for ftps protocol, and CA certificate is required for SYSLOG server authentication, and CA certificate is required for NTP authentication.
CERTIFICATE_NAME	Conditional	string	Certificate file name. **Note:**Certificate and CA certificate are required simultaneously for key management center, certificate is required for device management, CA certificate is required for domain authentication, certificate and CA certificate are required simultaneously for hypermetro arbitration, certificate is required for https protocol, and certificate is required for ftps protocol, and CA certificate is required for SYSLOG server authentication, and CA certificate is required for NTP authentication.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CERTIFICATE_TYPE	Mandatory	enum	Certificate type. **The value is described as follows:** 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate 7: NTP certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate 7: NTP certificate In 2600 V3 for Video, only the following values are supported: 1: Device management certficate 2: Domain authentication certificate 6: Syslog certificate 7: NTP certificate In 18500 V3 and 18800 V3, only the following values are supported:

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Parameter	Mandatory/Optional/Conditional	Type	Description
			0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate 4: HTTPS certificate 5: FTPS certificate 6: Syslog certificate
PRIVATE_KEY_NAME	Optional	string	Private key file name.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Usage Guidelines

This interface can be normally delivered when the certificate file is successfully imported.

Example

- Activating a certificate.

```
Request: PUT /deviceManager/rest/210235843910E6000009/certificate/active
{
    "CERTIFICATE_TYPE": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.6.7 Interface for Querying Certificate Revocation List Information

Function

This interface is used to obtain information about the CRL.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/om_msg_op_get_crllist

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_CERTIFICATE_TYPE	Optional	enum	certificate type. **The value is described as follows:** 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate

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Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_CERTIFICATE_TYPE	Mandatory	enum	certificate type. **The value is described as follows:** 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate
CMO_CERTIFICATE_CRL_ID	Mandatory	uint32	The ID of CRL list. **The value is described as follows:** 1..2
CMO_CERTIFICATE_CRL_STATUS	Mandatory	enum	The status of CRL. **The value is described as follows:** 0: not exist 1: valid 2: invalid
CMO_CERTIFICATE_CRL_ISSUER_NAME		string	crl issuer name.
CMO_CERTIFICATE_CRL_EXPIRE_TIME	Mandatory	string	The expire time of CRL.

Example

- Querying CRL information.

```
Request: GET /deviceManager/rest/2102350BSE10EA000006/om_msg_op_get_crllist

Response: {
    "data": [
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "1",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "0"
        },
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "2",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "0"
        },
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "2027-05-14",
            "CMO_CERTIFICATE_CRL_ID": "1",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "Storage",
```

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```
            "CMO_CERTIFICATE_CRL_STATUS": "1",
            "CMO_CERTIFICATE_TYPE": "2"
        },
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "2",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "2"
        },
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "1",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "3"
        },
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "2",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "3"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Querying CRL information in the domain authentication scenario.

```
Request: GET /deviceManager/rest/2102350BSE10EA000006/om_msg_op_get_crllist?
CMO_CERTIFICATE_TYPE=0

Response: {
    "data": [
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "1",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "0"
        },
        {
            "CMO_CERTIFICATE_CRL_EXPIRE_TIME": "--",
            "CMO_CERTIFICATE_CRL_ID": "2",
            "CMO_CERTIFICATE_CRL_ISSUER_NAME": "--",
            "CMO_CERTIFICATE_CRL_STATUS": "0",
            "CMO_CERTIFICATE_TYPE": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.6.8 Interface for Deleting a Certificate Revocation List

Function

This interface is used to delete the CRL whose ID is specified in a specified scenario.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/om_msg_op_delete_crllist?CMO_CERTIFICATE_TYPE=${CMO_CERTIFICATE_TYPE}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_CERTIFICATE_TYPE	Mandatory	enum	certificate type. **The value is described as follows:** 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate
CMO_CERTIFICATE_CRL_ID	Optional	uint32	The ID of CRL list. **The value is described as follows:** 1..2

Result

N/A

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Example

- Deleting CRL.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
om_msg_op_delete_crllist?CMO_CERTIFICATE_TYPE=1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.6.9 Interface for Activating a Certificate Revocation List

Function

This interface is used to activate the CRL.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to import the certificate revocation list. This operation will revoke the certificate file and may cause the SSL connection failure.

Suggestion: Before performing this operation, ensure that you accept the aforementioned risks and the certificate revocation list to be imported is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/OM_MSG_OP_ACTIVATE_CRLLIST

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_CERTIFICATE_TYPE	Mandatory	enum	certificate type. **The value is described as follows:** 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate

Result

N/A

Usage Guidelines

This interface can be normally delivered when the certificate revocation file is successfully imported.

Example

- Activating a CRL.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
OM_MSG_OP_ACTIVATE_CRLLIST
{
    "CMO_CERTIFICATE_TYPE":"0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.1.6.10 Interface for Importing a Certificate Revocation List

Function

This interface is used to import a CRL.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/revokeCertificate?CMO_CERTIFICATE_TYPE=${CMO_CERTIFICATE_TYPE}

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_CERTIFICATE_TYPE	Mandatory	enum	certificate type. **The value is described as follows:** 0: KMC certificate 2: Domain authentication certificate 3: HyperMetro certificate **Note:** In vStore scenarios, only the following value is supported: 2: Domain authentication certificate In 2200 V3, only the following values are supported: 0: KMC certificate 2: Domain authentication certificate

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Result

N/A

Usage Guidelines

The certificate files and iBaseToken values imported through this interface must be delivered in the binary format so that the device can receive and authenticate the files and values normally.

Example

- Importing a CRL.

```
Request: POST /deviceManager/rest/deviceManager/rest/210235843710E7000007/
file/revokeCertificate?CMO_CERTIFICATE_TYPE=2

{
    Content-Type: multipart/form-data;
boundary=----------------------------16117264629560
    Content-Length: 1087

    -----------------------------16117264629560
    Content-Disposition: form-data;
name="uploadRevokeCertificate_UPLOAD_FILE"; filename="test.crl"
    Content-Type: application/octet-stream

    -----BEGIN X509 CRL-----
    MIIB1TCBvgIBATANBgkqhkiG9w0BAQsFADBSMQswCQYDVQQGEwJjbjELMAkGA1UE
    CAwCc2MxCzAJBgNVBAcMAmNkMQswCQYDVQQKDAJodzELMAkGA1UECwwCZ3cxDzAN
    BgNVBAMMBjEyMzQ1NhcNMTcwNTEyMTMyNDM5WhcNMTcwNjExMTMyNDM5WjAoMBIC
    AQEXDTE3MDQxNTE2NTUwMlowEgIBAhcNMTcwNTEyMTMyMzU0WqAOMAwwCgYDVR0U
    BAMCAQEwDQYJKoZIhvcNAQELBQADggEBAFmMjWYdE0+z8naONKRZykbo/X9ZFeWJ
    DSVzdmRmdNqymOrf7RvdygLV2j11SdaJXoPyiDCl3MtsZp6Jz58il3b39GANNsj6
    jl3APZQS+gkhZLoCPdQJV8aFSKqIQyIgJeMHJuQhYQhSvyucIsrYjg7IsNqZp29S
    aON3bjAGUeYNueNdnD/e19ac78dDsd+I984a6ADa+Rmk4kwGTH1SU0H+jEiQkKLr
    OceOpbkBpuAa104tlNzITUhFwVcMHLniMbm6DS3R4bcdtvaCi41tIAOToCF0/fIW
    /PmjBMmdVgQg6130w6NUbbJx6uQ6q9ZRwXIqDO5nWNpBgULs1agSyJk=
    -----END X509 CRL-----

    -----------------------------16117264629560
    Content-Disposition: form-data; name="iBaseToken"

    EB314F2F946D56AD8A762E0E1D9BA7E20E6D6F0B6A44F1117B52E398FE581A18
    -----------------------------16117264629560--
}


Response: None
```

4.1.7 role

4.1.7.1 Interface for Batch Querying Role

Function

This interface is used to batch query roles.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/role

Access Method

GET

User Privilege

Super administrator

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
id	Mandatory	string(int)	Role ID.
description	Mandatory	string	Description.
name	Mandatory	string	Role name.
permitList	Mandatory	string	Permission list.
roleOwnerGroup	Mandatory	string(enum)	Owning group. **The value is described as follows:** 1: System group. 2: vStore group.
roleSource	Mandatory	string(enum)	Role source. **The value is described as follows:** 0: Built-in 1: Custom

Example

- Batch querying roles.

```
Request: GET /deviceManager/rest/210235843910E6000009/role

Response:
{
    "data": [
        {
            "id": "1060",
            "description": "hello1",
            "name": "user1",
            "permitList": "share:share;",
```

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```
            "roleOwnerGroup": "1",
            "roleSource": "0"
        },
        {
            "id": "4106",
            "description": "hello2",
            "name": "user1",
            "permitList": "share:share;",
            "roleOwnerGroup": "1",
            "roleSource": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.7.2 Interface for Creating Role

Function

This interface is used to create a role.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/role

Access Method

POST

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
name	Mandatory	string	Role name. **Length:**1~63
description	Optional	string	Description. **Length:**0~255
permitList	Optional	string	Permission list. **Length:**0~2047

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Parameter	Mandatory/Optional/Conditional	Type	Description
roleOwnerGroup	Mandatory	enum	Owning group. **The value is described as follows:** 1: System group. 2: vStore group.

Result

Parameter	Mandatory/Conditional	Type	Description
id	Mandatory	string(int)	Role ID.
description	Mandatory	string	Description.
name	Mandatory	string	Role name.
permitList	Mandatory	string	Permission list.
roleOwnerGroup	Mandatory	string(enum)	Owning group. **The value is described as follows:** 1: System group. 2: vStore group.
roleSource	Mandatory	string(enum)	Role source. **The value is described as follows:** 0:Built-in 1:Custom

Example

- Creating a role.

```
Request: POST /deviceManager/rest/210235843910E6000009/role

{
    "description": "hello my role",
    "name": "myrole",
    "permitList": "share:share,share_readonly;",
    "roleOwnerGroup": "1"
}

Response:
{
    "data": {
        "id": "20",
        "description": "hello my role",
        "name": "myrole",
        "permitList": "share:share,share_readonly;",
```

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```
        "roleOwnerGroup": "1",
        "roleSource": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.7.3 Interface for Modifying Role

Function

This interface is used to modify role.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/role/${id}

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
id	Mandatory	uint32	Role ID.
description	Optional	string	Description. **Length:**0~255 **Note:**This field cannot be changed concurrently with the name field.
name	Optional	string	Role name. **Length:**1~63 **Note:**This field cannot be changed concurrently with the description field.

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Result

N/A

Example

- Modifying role.

```
Request: PUT /deviceManager/rest/210235843910E6000009/role/20

{
    "description": "hello test role"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.7.4 Interface for Deleting Role

Function

This interface is used to delete role.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/role/${id}

Access Method

DELETE

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
id	Mandatory	uint32	Role ID.

Result

N/A

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Example

- Deleting role.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/role/20


Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.7.5 Interface for Removing Permit List

Function

This interface is used to remove permit list

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remove_permit_list/

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
permitList	Mandatory	string	Permission list.
id	Mandatory	uint32	Role ID.

Result

N/A

Example

- Removing permit list

```
Request: PUT /deviceManager/rest/210235843910E6000009/remove_permit_list/
```

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```
{
    "permitList": "share:share;",
    "id":"20"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.7.6 Interface for Adding Permit List

Function

This interface is used to add permit list.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/add_permit_list

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
permitList	Mandatory	string	
id	Mandatory	uint32	

Result

N/A

Example

- Adding permit list.

```
Request: PUT /deviceManager/rest/210235843910E6000009/add_permit_list

{
```

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```
    "permitList": "share:share;",
    "id": "20;"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.1.7.7 Interface for Querying Role

Function

This interface is used to query roles.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/role/${id}

Access Method

GET

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
id	Mandatory	uint32	Role ID.

Result

Parameter	Mandatory/Conditional	Type	Description
id	Mandatory	string(int)	Role ID.
description	Mandatory	string	Description.
name	Mandatory	string	Role name.
permitList	Mandatory	string	Permission list.

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Parameter	Mandatory/ Conditional	Type	Description
roleOwnerGroup	Mandatory	string(enum)	Owning group. **The value is described as follows:** 1: System group. 2: vStore group.
roleSource	Mandatory	string(enum)	Role source. **The value is described as follows:** 0: Built-in 1: Custom

Example

- Querying roles.

```
Request: GET/deviceManager/rest/210235843910E6000009/role/202

Response: {
    "data": {
        "id": "202",
        "description": "hello1",
        "name": "user1",
        "permitList": "share:share;",
        "roleOwnerGroup": "1",
        "roleSource": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2 Storage setting

4.2.1 system

4.2.1.1 Interface for Modifying Basic System Information

Function

This interface is used to modify basic system information.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system/

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	System name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~127
LOCATION	Optional	string	Location. **Length:**1~511
DESCRIPTION	Optional	string	System description. **Length:**0~255
WRITETHROUGHSW	Optional	bool	Write through switch. **The value is described as follows:** true:write through when single controller false:wiite cache when single controller
WRITETHROUGHTIME	Optional	uint32	Write through timeout period. **The value is described as follows:** The value ranges from 0 to 2160. 0 indicates that write through never times out. **Unit:**hours

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Result

N/A

Usage Guidelines

Do not miss the last slash (/) at the end of the URL.

Example

- Modifying the name and location of a system.

```
Request: PUT /deviceManager/rest/210235843910E6000009/system/
{
    "NAME": "RESTful_test",
    "LOCATION": "chengdu"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.2 Interface for Testing NTP Server Address

Function

This interface is used to Testing NTP server address.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/check_ntp_server_address_connective

Access Method

PUT

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYS_NTP_CLNT_CONF_SERVER_IP	Mandatory	string	NTP Server Address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~255

Result

N/A

Example

- Testing NTP server address.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
check_ntp_server_address_connective
{
    "CMO_SYS_NTP_CLNT_CONF_SERVER_IP": "10.169.2.1"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.3 Interface for Querying Basic System Information

Function

This interface is used to query basic information about a system.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system/

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 201: System
ID	Mandatory	string	System ID.
NAME	Mandatory	string	System name.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	System health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	System Operating status. **The value is described as follows:** 1: normal 3: not running 12: powering on 47: powering off 51: upgrading
DESCRIPTION	Mandatory	string	System description.

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Parameter	Mandatory/ Conditional	Type	Description
PRODUCTMODE	Mandatory	string(enum)	Product model. **The value is described as follows:** 61: 6800 V3 62: 6900 V3 63: 5600 V3 64: 5800 V3 68: 5500 V3 69: 2600 V3 70: 5300 V3 71: 2800 V3 72: 18500 V3 73: 18800 V3 74: 2200 V3 84: 2600F V3 85: 5500F V3 86: 5600F V3 87: 5800F V3 88: 6800F V3 89: 18500F V3 90: 18800F V3 92: 2800 V5 93: 5300 V5 94: 5300F V5 95: 5500 V5 96: 5500F V5 97: 5600 V5 98: 5600F V5 99: 5800 V5 100: 5800F V5 101: 6800 V5 102: 6800F V5 103: 18500 V5 104: 18500F V5 105: 18800 V5 106: 18800F V5 107: 5500 V5 Elite
PRODUCTVERSION	Mandatory	string	Product version.

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Parameter	Mandatory/ Conditional	Type	Description
DOMAINNAME	Mandatory	string	Domain name.
CACHEWRITEQUOTA	Mandatory	string(uint64)	Cache write quota.
MEMBERDISKSCAPACITY	Mandatory	string(uint64)	Total raw capacity of all member disks in a storage pool (disk pool for OceanStor 18000 series). **Unit:**sectors
HOTSPAREDISKSCA-PACITY	Mandatory	string(uint64)	Total raw capacity of all hot spare disks, expressed in sectors (If no hot spare disks exist in the system, the value is 0. The value is fixed to 0 for systems built based on the XVE architecture.). **Unit:**sectors
FREEDISKSCAPACITY	Mandatory	string(uint64)	Total raw capacity of all free disks(If no free disks exist in the system, the value is 0.). **Unit:**sectors
UNAVAILABLEDISKS-CAPACITY	Mandatory	string(uint64)	Total raw capacity of all unavailable disks(If no unavailable disks exist in the system, the value is 0. An unavailable disk is a malfunctioning member disk or free disk.). **Unit:**sectors
STORAGEPOOLRAWCAPACITY	Mandatory	string(uint64)	Total raw capacity of disks in all storage pools, expressed in sectors. **Unit:**sectors
STORAGEPOOLCAPACITY	Mandatory	string(uint64)	Available capacity after RAID groups are created in all storage pools. **Unit:**sectors
STORAGEPOOLUSED-CAPACITY	Mandatory	string(uint64)	Total used capacity of all storage pools (after RAID groups are created). **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
STORAGEPOOLFREE-CAPACITY	Mandatory	string(uint64)	Total free capacity of all storage pools (after RAID groups are created). **Unit:**sectors
STORAGEPOOLHOST-SPARECAPACITY	Mandatory	string(uint64)	Total hot spare capacity reserved of all storage pools (after RAID groups are created). **Unit:**sectors
THICKLUNSALLOCA-TECAPACITY	Mandatory	string(uint64)	Total capacity allocated to all thick LUNs. **Unit:**sectors
THICKLUNSUSEDCA-PACITY	Mandatory	string(uint64)	Total used capacity of all thick LUNs. **Unit:**sectors
THINLUNSMAXCAPA CITY	Mandatory	string(uint64)	Total thin LUN capacity visible to the host. **Unit:**sectors
THINLUNSALLOCATE CAPACITY	Mandatory	string(uint64)	Total capacity allocated to all thin LUNs. **Unit:**sectors
THINLUNSUSEDCAPA CITY	Mandatory	string(uint64)	Total used capacity of all thin LUNs. **Unit:**sectors
SECTORSIZE	Mandatory	string(uint64)	Sector size. **Unit:**bytes
VASA_SUPPORT_BLO CK	Mandatory	string	Type of the block-based access interface. If multiple types exist, separate them from each other using a comma (,). **The value is described as follows:** FC FCOE ISCSI Others
VASA_SUPPORT_FILE SYSTEM	Mandatory	string	Type of the supported file system interface.

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Parameter	Mandatory/ Conditional	Type	Description
VASA_ALTERNATE_NAME	Mandatory	string	Disk array alias.
VASA_SUPPORT_PROFILE	Mandatory	string	Type of the supported configuration file.
wwn	Mandatory	string	WWN.
WRITETHROUGHSW	Mandatory	string(bool)	Write through switch (The default value is true.). **The value is described as follows:** true:write through when single controller false:wiite cache when single controller
WRITETHROUGHTIME	Mandatory	string(uint64)	Write through timeout period. **The value is described as follows:** The value ranges from 0 to 2160. 0 indicates that write through never times out. The default value for mid-range storage systems is 72. **Unit:**hours
TOTALCAPACITY	Mandatory	string(uint64)	Total system capacity. **Unit:**sectors
USEDCAPACITY	Mandatory	string(uint64)	Used system capacity. **Unit:**sectors
CONFIGMODEL	Mandatory	string(enum)	Single controller or multiple controllers. **The value is described as follows:** 0: single controller 1: multiple controllers
mappedLunsCountCapacity	Mandatory	string(uint64)	Total capacity of mapped LUNs. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
unMappedLunsCountCapacity	Mandatory	string(uint64)	Total capacity of unmapped LUNs. **Unit:**sectors
userFreeCapacity	Mandatory	string(uint64)	Available system capacity. **Unit:**sectors
patchVersion	Conditional	string	Patch version. **Note:**This field is returned when it is patch version.

Usage Guidelines

Do not miss the last slash (/) at the end of the URL.

Example

- Querying basic information about a system.

```
Request: GET /deviceManager/rest/210235843910E6000009/system/

Response:
{
    "data": {
        "CACHEWRITEQUOTA": "333",
        "CONFIGMODEL": "1",
        "DESCRIPTION": "",
        "DOMAINNAME": "",
        "FREEDISKSCAPACITY": "40920093408",
        "HEALTHSTATUS": "1",
        "HOTSPAREDISKSCAPACITY": "0",
        "ID": "210235843910E6000009",
        "LOCATION": "",
        "MEMBERDISKSCAPACITY": "28500963638",
        "NAME": "Huawei.Storage",
        "PRODUCTMODE": "68",
        "PRODUCTVERSION": "V300R005C00",
        "RUNNINGSTATUS": "1",
        "SECTORSIZE": "512",
        "STORAGEPOOLCAPACITY": "6694109184",
        "STORAGEPOOLFREECAPACITY": "6344409088",
        "STORAGEPOOLHOSTSPARECAPACITY": "2607546367",
        "STORAGEPOOLRAWCAPACITY": "17127200853",
        "STORAGEPOOLUSEDCAPACITY": "349700096",
        "THICKLUNSALLOCATECAPACITY": "320339968",
        "THICKLUNSUSEDCAPACITY": "-1",
        "THINLUNSALLOCATECAPACITY": "0",
        "THINLUNSMAXCAPACITY": "0",
        "THINLUNSUSEDCAPACITY": "-1",
        "TOTALCAPACITY": "69421057046",
        "TYPE": 201,
        "UNAVAILABLEDISKSCAPACITY": "1559321616",
        "USEDCAPACITY": "349700096",
        "VASA_ALTERNATE_NAME": "Huawei.Storage",
        "VASA_SUPPORT_BLOCK": "FC,FCOE,ISCSI,Others",
        "VASA_SUPPORT_FILESYSTEM": "NFS",
```

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```
        "VASA_SUPPORT_PROFILE":
"FileSystemProfile,BlockDeviceProfile,CapabilityProfile,VirtualVolumeProfile",
        "WRITETHROUGHSW": "true",
        "WRITETHROUGHTIME": "72",
        "mappedLunsCountCapacity": "0",
        "patchVersion": "",
        "unMappedLunsCountCapacity": "306184192",
        "userFreeCapacity": "52991726636",
        "wwn": "210030d17eb4f761"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.2.1.4 Interface for Setting NTP Server

Function

This interface is used to set automatic NTP synchronization.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the system network time protocol (NTP) configuration.

1. This operation may affect system licenses, alarms, and SystemReporter.

2. Modifying the configuration will restart the NTP service. The restart process takes about 5 minutes.

Suggestion: Make sure that you want to change the system NTP configuration before performing the operation. If you need to change, set the array time to be the same as that of the NTP server before the operation.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ntp_client_config

Access Method

PUT

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYS_NTP_CLNT_CONF_SWITCH	Mandatory	uint32	NTP service status. **The value is described as follows:** 0: Disabled 1: Enabled
CMO_SYS_NTP_CLNT_CONF_SERVER_IP	Conditional	string	NTP server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~511 **Note:**A maximum of two addresses can be configured for an NTP server. The addresses are separated by commas (,). Each address contains a maximum of 255 characters.When the NTP service is set as enabled, this parameter must be delivered.
CMO_SYS_NTP_SYNC_PERIOD	Optional	uint32	Synchronization period. **The value is described as follows:** 60~864000 **Default:**60 **Unit:**seconds **Note:**This parameter has been deprecated, NTP synchronizes the time automatically.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYS_NTP_CLNT_CONF_AUTH_SWITCH	Optional	enum	NTP authentication status. **The value is described as follows:** 0: Disabled 1: Enabled **Note:** The NTP version needs to be NTPv4 (included) or later. This parameter is not applicable to 18500 V3, 18800 V3, 18500 V5,18800 V5，18500F V3, 18500F V5, 18800F V3, and 18800F V5.

Result

N/A

Example

- Setting automatic NTP synchronization.

```
Request: PUT /deviceManager/rest/210235843910E6000009/ntp_client_config
{
    "CMO_SYS_NTP_CLNT_CONF_SERVER_IP": "10.169.2.1,10.169.60.22",
    "CMO_SYS_NTP_CLNT_CONF_SWITCH": "1",
    "CMO_SYS_NTP_SYNC_PERIOD": "7200"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.5 Interface for Restarting Equipment

Function

This interface is used to restart equipment.

Applicable Model

Applicable to V3 all series.

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HighRisk

You are about to restart storage system. This may take several minutes.

This operation will interrupt all services on the storage system.

Suggestion: Before performing this operation, stop all services on the system.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SYSTEM/REBOOT

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
IMPORTANTPSW	Mandatory	string	Password of the login user.

Result

N/A

Example

- Restarting equipment.

```
Request: PUT /deviceManager/rest/210235843710E7000007/SYSTEM/REBOOT
{
    "IMPORTANTPSW": "Admin@123"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.6 Interface for Powering Off Equipment

Function

This interface is used to power off equipment.

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Applicable Model

Applicable to V3 all series.

HighRisk

You are about to power off storage system. This operation will interrupt all services on the storage system.

Suggestion: Before performing this operation, stop all services on the system.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SYSTEM/POWEROFF

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
IMPORTANTPSW	Mandatory	string	Super administrator password.

Result

N/A

Example

- Powering off equipment.

```
Request: PUT /deviceManager/rest/210235843710E7000007/SYSTEM/POWEROFF
{
    "IMPORTANTPSW": "Admin@123"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.1.7 Interface for Querying the Equipment UTC Time

Function

This interface is used to query the equipment UTC time.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system_utc_time

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_SYS_UTC_TIME	Mandatory	string	Equipment UTC time. **The value is described as follows:** 946656000~3000000000 **Unit:**seconds

Example

- Querying the equipment UTC time.

```
Request: GET /deviceManager/rest/210235843710E7000007/system_utc_time

Response:
{
    "data": {
        "CMO_SYS_UTC_TIME": "1478179247"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.1.8 Interface for Modifying the Equipment UTC Time

Function

This interface is used to modify the equipment UTC time.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the system time. This operation may affect licenses, alarms, and SystemReporter.

Suggestion: Before performing this operation, ensure that the time needs to be changed.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system_utc_time

Access Method

PUT

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYS_UTC_TIME	Mandatory	uint64	Equipment UTC time. **The value is described as follows:** 946656000~3000000000 **Unit:**seconds

Result

N/A

Example

- Modifying the equipment UTC time.

```
Request: PUT /deviceManager/rest/210235843710E7000007/system_utc_time
{
    "CMO_SYS_UTC_TIME": 1478179247
}
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.9 Interface for Querying the Equipment Time Zone

Function

This interface is used to query the equipment time zone.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system_timezone

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_SYS_TIME_ZONE	Mandatory	string	Time zone.
CMO_SYS_TIME_ZONE_NAME	Mandatory	string	Time zone name.
CMO_SYS_TIME_ZONE_NAME_STYLE	Mandatory	string(uint32)	Display style of the time zone name. **The value is described as follows:** 0: short name (three letters) 1: long name

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Parameter	Mandatory/ Conditional	Type	Description
CMO_SYS_TIME_ZONE_USE_DST	Mandatory	string(uint32)	Whether the time zone uses the DST. **The value is described as follows:** 0: unused 1: used

Example

- Querying the equipment time zone.

```
Request: GET /deviceManager/rest/210235843710E7000007/system_timezone

Response:
{
    "data": {
        "CMO_SYS_TIME_ZONE": "+08:00",
        "CMO_SYS_TIME_ZONE_NAME": "Asia/Shanghai",
        "CMO_SYS_TIME_ZONE_NAME_STYLE": "1",
        "CMO_SYS_TIME_ZONE_USE_DST": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.10 Interface for Modifying the Equipment Time Zone

Function

This interface is used to modify the equipment time zone.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the system network time protocol (NTP) configuration. This operation may affect system licenses, alarms, and SystemReporter.

Suggestion: Make sure that you want to change the system NTP configuration before performing the operation.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system_timezone

Access Method

PUT

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User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYS_TIME_ZONE_NAME	Mandatory	string	Time zone name. **Note:**When an interface is used to modify the device time zone, the delivered parameter is one of the returned values when an interface is used to query device time zone information.

Result

N/A

Example

- Modifying the equipment time zone.

```
Request: PUT /deviceManager/rest/210235843710E7000007/system_timezone
{
    "CMO_SYS_TIME_ZONE_NAME": "Asia/Beijing"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.11 Interface for Querying the Equipment Status

Function

This interface is used to query the equipment status.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/server/status

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
status	Mandatory	enum	Equipment status. **The value is described as follows:** 0: Normal 1: Abnormal 2: Powering on 3: Powering off 4: Security Mode 5: Upgrading 6: Power supply failing 7: Offline
description	Mandatory	string	description.

Example

- Querying the equipment status.

```
Request: GET /deviceManager/rest/210235843710E7000007/server/status

Response:
    "data": {
        "description": "",
        "status": 0
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.12 Interface for Querying DST Configuration of a Specified Time Zone

Function

This interface is used to query the DST config of a specified time zone.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/system_dst_config

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYS_DST_CONF_TIME_ZONE_NAME	Mandatory	string	Time zone name. **Note:** The time zone name is one of the returned time zone names when an interface is used to query the equipment time zone. Format: country/region. (America/Denver)

Result

Parameter	Mandatory/Conditional	Type	Description
CMO_SYS_DST_CONF_ADJUST_TIME	Mandatory	string(uint32)	DST offset. **The value is described as follows:** 0~120 minutes. **Unit:**minutes
CMO_SYS_DST_CONF_DATE_TIME_BEGIN	Mandatory	string	DST start time.
CMO_SYS_DST_CONF_DATE_TIME_END	Mandatory	string	DST end time.

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Parameter	Mandatory/ Conditional	Type	Description
CMO_SYS_DST_CONF_MODE	Mandatory	string(uint32)	DST configuration mode. **The value is described as follows:** 0: Day 1: Week
CMO_SYS_DST_CONF_TIME_ZONE_NAME	Mandatory	string	Time zone name.

Example

- Querying the DST config of a specified time zone.

```
Request: GET /deviceManager/rest/210235843710E7000007/system_dst_config?
CMO_SYS_DST_CONF_TIME_ZONE_NAME=America/Denver

Response:
    "data": {
        "CMO_SYS_DST_CONF_ADJUST_TIME": "60",
        "CMO_SYS_DST_CONF_DATE_TIME_BEGIN": "03-13 02:00:00",
        "CMO_SYS_DST_CONF_DATE_TIME_END": "11-06 02:00:00",
        "CMO_SYS_DST_CONF_MODE": "0",
        "CMO_SYS_DST_CONF_TIME_ZONE_NAME": "America/Denver",
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.13 Interface for Querying OEM Information

Function

This interface is used to query OEM information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/oem_info/manufactory

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_OEM_MANUFACTORY_INFO	Mandatory	string	OEM information.
CMO_OEM_BRAND_INFO	Mandatory	string	Brand.
CMO_OEM_PRODUCT_MODEL	Mandatory	string	Product model.

Example

- Query OEM information.

```
Request: GET /deviceManager/rest/210235843710E7000007/oem_info/manufactory

Response:
{
    "data": {
        "CMO_OEM_MANUFACTORY_INFO": "manufactory_info",
        "CMO_OEM_BRAND_INFO": "brand_info",
        "CMO_OEM_PRODUCT_MODEL": "product_model"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.1.14 Interface for Querying Details of an Enumerated Item

Function

This interface is used to query details of an enumerated item.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/enum_info

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ENUM_NAME	Mandatory	string	Name of an enumerated item. **The value is described as follows:** STORAGE_CAPABILITY **Note:**Currently, this parameter is only used for querying details of an enumerated item at the VASA storage capability level.

Result

Parameter	Mandatory/Conditional	Type	Description
ENUM_INDEX	Mandatory	string	Enumerated value.
ENUM_GLOSSARY_CN	Mandatory	string	Chinese terminology of an enumerated value.
ENUM_GLOSSARY_EN	Mandatory	string	English terminology of an enumerated value.
ENUM_DESCRIPTION_CN	Mandatory	string	Chinese description of an enumerated value.
ENUM_DESCRIPTION_EN	Mandatory	string	English description of an enumerated value.
ENUM_NAME	Mandatory	string	Name of an enumerated value.

Usage Guidelines

This interface is used to query details of all sub-items of an enumerated item.

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Example

- ```
  Request: GET /deviceManager/rest/210235843710E7000007/enum_info?
  ENUM_NAME=STORAGE_CAPABILITY

  Response:
  {
      "data": [
          {
              "ENUM_DESCRIPTION_CN": "",
              "ENUM_DESCRIPTION_EN": "No Raid Protection",
              "ENUM_GLOSSARY_CN": "",
              "ENUM_GLOSSARY_EN": "NoProtected",
              "ENUM_INDEX": "0",
              "ENUM_NAME": "NoProtected"
          }, {
              "ENUM_DESCRIPTION_CN": "",
              "ENUM_DESCRIPTION_EN": "Raid Protected;uses capacity oriented
  drives such as SATA or SAS",
              "ENUM_GLOSSARY_CN": "",
              "ENUM_GLOSSARY_EN": "Capacity",
              "ENUM_INDEX": "1",
              "ENUM_NAME": "Capacity"
          }, {
              "ENUM_DESCRIPTION_CN": "",
              "ENUM_DESCRIPTION_EN": "Raid-Protected;uses Fibres Channel or
  high end SAS drives",
              "ENUM_GLOSSARY_CN": "",
              "ENUM_GLOSSARY_EN": "Performance",
              "ENUM_INDEX": "2",
              "ENUM_NAME": "Performance"
          }, {
              "ENUM_DESCRIPTION_CN": "",
              "ENUM_DESCRIPTION_EN": "Raid-Protected;uses Solid State drives",
              "ENUM_GLOSSARY_CN": "",
              "ENUM_GLOSSARY_EN": "ExtremePerformance",
              "ENUM_INDEX": "3",
              "ENUM_NAME": "ExtremePerformance"
          }, {
              "ENUM_DESCRIPTION_CN": "",
              "ENUM_DESCRIPTION_EN": "Raid-Protected;uses multipe tiers of
  drives",
              "ENUM_GLOSSARY_CN": "",
              "ENUM_GLOSSARY_EN": "Muti-Tiers",
              "ENUM_INDEX": "4",
              "ENUM_NAME": "Muti-Tiers"
          }
      ],
      "error": {
          "code": 0,
          "description": "0"
      }
  }
  ```

4.2.1.15 Interface for Querying NTP Server Client Configurations

Function

This interface is used to query NTP server configurations.

Applicable Model

Applicable to V3 all series.

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  ```

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ntp_client_config

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_SYS_NTP_CLNT_CONF_SWITCH	Mandatory	uint32	NTP switch. **The value is described as follows:** 0: Disabled 1: Enabled
CMO_SYS_NTP_CLNT_CONF_SERVER_IP	Mandatory	string	NTP server address.
CMO_SYS_NTP_SYNC_PERIOD	Mandatory	uint32	NTP synchronization period. **Unit:**seconds **Note:**This parameter has been deprecated, NTP synchronizes the time automatically.
CMO_SYS_NTP_CLNT_CONF_AUTH_SWITCH	Mandatory	enum	NTP authentication status. **The value is described as follows:** 0: Disabled 1: Enabled **Note:**18500 V3,18800 V3,18500 V5,18800 V5,18500F V3,18500F V5,18800F V3 and 18800F V5 do not have this command output field.

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Example

- Querying NTP server configurations.

```
Request: GET /deviceManager/rest/210235843910E6000009/ntp_client_config

Response:
{
    "data": {
        "CMO_SYS_NTP_CLNT_CONF_SERVER_IP": "10.169.2.1,10.169.60.22",
        "CMO_SYS_NTP_CLNT_CONF_SWITCH": "1",
        "CMO_SYS_NTP_SYNC_PERIOD": "7200"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.2 dns_server

4.2.2.1 Interface for Querying DNS Services

Function

This interface is used to query DNS services.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/DNS_Server

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
ADDRESS	Mandatory	string(array)	DNS server address list. **The value is described as follows:** Three IPv4 or IPv6 addresses are supported.
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 260: DNS server

Example

- Querying DNS services.

```
Request: GET /deviceManager/rest/210235843710E7000007/DNS_Server

Response:
{
    "data": {
        "ADDRESS": "["fc00::1234","","""]",
        "TYPE": 260
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.2.2 Interface for Modifying DNS Services

Function

This interface is used to modify DNS services.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/dns_server

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ADDRESS	Mandatory	string(array)	DNS server address list. **The value is described as follows:** Three IPv4 or IPv6 addresses are supported.

Result

N/A

Example

- Modifying DNS services.

```
Request: PUT /deviceManager/rest/210235843710E7000007/dns_server
{
    "ADDRESS":"[\"129.0.0.11\",\"129.0.0.12\"]"
}

Response:
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.2.3 Interface for Testing the DNS Server Address

Function

This interface is used to test the DNS server address.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/check_basicdns_server_address_connective

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ADDRESS	Mandatory	string(array)	DNS server address. **Note:**The DNS server can have only one IP address.

Result

N/A

Example

- Testing the DNS server address.

```
Request: PUT /deviceManager/rest/210235843710E7000007/
check_basicdns_server_address_connective
{
    "ADDRESS":"[\"129.0.0.11\"]"
}

Response:
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.3 base

4.2.3.1 Interface for Querying the List of Features that Are Not Supported by the System

Function

This interface is used to query the list of features that are not supported by the system.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/get_disable_feature_list/0

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
DISABLESUPPORTFEATURELIST	Mandatory	string(array)	List of features that are not supported by the system. **The value is described as follows:** 0:LUN Mapping 1:Member Disks 2:HyperSnap 3:HyperClone 4:HyperCopy 5:SmartMigration 6:Synchronous Remote Mirror 7:Asynchronous Remote Mirror 8:Expanded Copy 9:SmartCache 10:ThinProvisioning 20:SmartTier 21:SmartMotion 22:SmartQoS 23:SmartDedup 24:HyperReplication 25:SmartThin 27:XVE System 28:Management Console 29:SmartVirtualization 30:Hyper software suite 31:SmartCache&SmartTier 32:SmartQuota 33:LoadBanlance 34:Wushan FileSystem 35:HVS Basic,NL-SAS,1TB 36:HVS Basic,SSD&SAS,1TB 37:HVS Advanced,NL-SAS,1TB

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Parameter	Mandatory/ Conditional	Type	Description
			38:HVS Advanced,SSD&SAS, 1TB 39:SmartCompression 40:SmartPartition 41:HyperShredder 42:SystemReporter 43:SmartMulti-Tenant 44:SmartErase 45:HyperLock 46:Safe Video 47:HyperMirror 48:NFS Protocol 49:CIFS Protocol 50:NDMP Protocol 51:SmartDedupe(for FS) 52:SmartCompression(for FS) 53:SmartDedupe & SmartCompression(for LUN) 54:SmartQuota(for FS) 55:InfoEqualizer 56:InfoAllocator 57:InfoTier 58:InfoStamper 59:InfoReplicator 60:InfoLocker 61:SecureVideo 62:CPU 63:HyperMetro 64:HyperVault 65:InfoContainer 66:InfoRevive 67:SmartDedupe(for LUN) 68:SmartCompression(for LUN) 69:InfoDedupe(for S3) 70:AZ Disaster Recovery

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Parameter	Mandatory/ Conditional	Type	Description
			71:Info Data Encryption(for S3) 72:HyperMetroNAS 601:LUN 602:FileSystem 603:FTP Protocol Share 604:HTTP Protocol Share 605:AuthenticationUser 606:SmartContainer 607:Metadata Restore 608:SmartQos For LUN 609:SmartQos For File System 610:SmartCache For LUN 611:SmartCache For File System 612:Snapshot For LUN 613:Snapshot For File System 614:Replication For LUN 615:Replication For File System 616:Antivirus 617:Metadata Repair For SAN 618:Metadata Repair For Dedup LUN 619:Metadata Repair For File System 620:VAAI NAS

Example

- Query the list of features that are not supported by the system.

```
Request: GET/deviceManager/rest/210235843710E7000007/
get_disable_feature_list/0

Response:
 {
    "data": [{
        "DISABLESUPPORTFEATURELIST":
"[40,43,45,48,49,50,51,52,53,54,63,64,602,603,604,606,609,611,613,615,616,618,
619,620]"
```

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```
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.4 mirror_domain

4.2.4.1 Interface for Batch Querying MirrorDomain Information

Function

This interface is used to batch query basic information about mirror domains.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrordomain

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 305: mirror domain
ID	Mandatory	string	ID.
MEMBERSNAME	Mandatory	string(array)	All member names in the mirror domain.

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Parameter	Mandatory/ Conditional	Type	Description
NASENABLE	Mandatory	string(bool)	Whether the NAS function is enabled for all controller enclosures in the mirror domain.
NODESIDLIST	Mandatory	string(array)	All node IDs in the mirror domain.

Example

- Batch querying basic information about mirror domain.

```
Request: GET /deviceManager/rest/1016964156/mirrordomain

Response:
{
    "data": [
       {
        "ID": "0",
        "MEMBERSNAME": "["CTE0"]",
        "NASENABLE": "true",
        "NODESIDLIST": "["0A"]",
        "TYPE": 305
       }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.4.2 Interface for Modifying MirrorDomain Information

Function

This interface is used to modify basic information about mirror domains.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrordomain/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.
NASENABLE	Mandatory	bool	Whether the NAS function is enabled for all controller enclosures in the mirror domain. **The value is described as follows:** true: on false: off

Result

N/A

Example

- Disabling the file system NAS function of the mirror domain whose ID is 0.

```
Request: PUT /deviceManager/rest/1016964156/mirrordomain/0

{
    "ID": "0",
    "NASENABLE": "false"
}
Response:
{
    "data" : {},
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.2.5 domain

4.2.5.1 Interface for Querying NAS DNS Service Settings

Function

This interface is used to query NAS DNS service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/nas_dns_config

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ADDRESS	Mandatory	string(array)	IP address of the DNS service.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying NAS DNS service settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/nas_dns_config?
vstoreId=1

Response:
{
    "data": {
        "ADDRESS": "[\"10.169.99.174\",\"10.10.10.10\",\"10.10.10.11\"]",
        "vstoreId": "1",
```

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```
        "vstoreName": "vStore001"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.2 Interface for Modifying NAS DNS Service Settings

Function

This interface is used to modify NAS DNS service setting.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/nas_dns_config

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ADDRESS	Mandatory	array	IP address of the DNS service. **Note:**A maximum of three IP addresses can be configured.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Modifying NAS DNS service settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/nas_dns_config
{
    "ADDRESS": "[\"10.10.10.4\",\"10.10.10.5\",\"10.10.10.6\"]"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.3 Interface for Testing NAS DNS Service Connection

Function

This interface is used to test NAS DNS service connection.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/check_nas_dns_address_connective

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ADDRESS	Mandatory	array	IP address of the DNS service.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

N/A

Example

- Testing NAS DNS service connection.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
check_nas_dns_address_connective
{
    "ADDRESS": "[\"10.3.6.5\"]",
    "vstoreId": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.4 Interface for Modifying AD Domain Settings

Function

This interface is used to modify AD Domain Settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_CONFIG

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DOMAINSTATUS	Mandatory	enum	Domain status. **The value is described as follows:** 0: exited the domain 1: joined in the domain
ADMINNAME	Mandatory	string	Domain administrator user name. **Length:**1~63 **Note:**When the user joins or exits the domain, fields ADMINNAME, ADMINPWD, and DOMAINSTATUS must be delivered concurrently.
ADMINPWD	Mandatory	string	Domain administrator password. **Length:**1~127
FULLDOMAINNAME	Optional	string	Full domain name. **Length:**1~127
OU	Optional	string	Organization unit. **Length:**1~255
ISENABLEOVERWRITESAMEACCOUNT	Optional	bool	Whether to overwrite the machine-machine account. **The value is described as follows:** true:overwrite false:not to overwrite
SYSTEMNAME	Optional	string	Name of the storage array added to the domain. **The value is described as follows:** The name must contain letters, digits, and hyphens (-), and cannot contain spaces or periods (.). The name cannot be a string of digits. **Length:**1~15

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying AD domain settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/AD_CONFIG
{
    "DOMAINSTATUS": 1,
    "ADMINNAME": "dasdas",
    "ADMINPWD": "123@qq.com",
    "FULLDOMAINNAME": "ADASD",
    "OU": "",
    "SYSTEMNAME": "LINUX",
    "ISENABLEOVERWRITESAMEACCOUNT": false
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.5 Interface for Querying AD Domain Settings

Function

Interface for Querying AD Domain Settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_CONFIG

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID.

Result

Parameter	Mandatory/Conditional	Type	Description
DOMAINSTATUS	Mandatory	string(enum)	Domain status. **The value is described as follows:** 0: exited the domain 1: joined in the domain 2: exiting the domain 3: joining the domain 4: failed to join in the domain
FULLDOMAINNAME	Conditional	string	Full domain name. **Note:**The value is returned in scenarios other than the initialization scenario.
JOINDOMAINERROR-CODE	Mandatory	string(enum)	Causes for join-in success or failure.
SYSTEMNAME	Conditional	string	Name of the storage array added to the domain. **The value is described as follows:** The name must contain 1 to 15 letters, digits, and hyphens (-), and cannot contain spaces or periods (.). The name cannot be a string of digits. **Note:**The value is returned in scenarios other than the initialization scenario.

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Parameter	Mandatory/ Conditional	Type	Description
OU	Mandatory	string	Organization unit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
NTLMLEVEL	Mandatory	string(enum)	Security level of the NTLM verification. **The value is described as follows:** 0: LEVEL_0 1: LEVEL_1 2: LEVEL_2 3: LEVEL_3 4: LEVEL_4 **Note:**The field is not used.

Example

- Querying AD domain settings.

```
Request: GET /deviceManager/rest/210235843710E7000007/AD_CONFIG

Response:
{
    "data": {
        "DOMAINSTATUS": "4",
        "FULLDOMAINNAME": "ADASD",
        "JOINDOMAINERRORCODE": "1",
        "SYSTEMNAME": "LINUX",
        "NTLMLEVEL":"3",
        "OU":"df"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.6 Interface for testing AD Server Address

Function

Interface for Testing AD Server Address.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/testadserver

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
FULLDOMAINNAME	Mandatory	string	Full domain name. **Length:**1~127
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Testing AD server address.

```
Request: PUT /deviceManager/rest/210235843910E6000009/testadserver
{
    "FULLDOMAINNAME": "ADASD"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.5.7 Interface for Initializing LDAP Domain Settings

Function

This interface is used to initialize LDAP domain settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAP_CONFIG

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Initializing LDAP domain settings.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/LDAP_CONFIG

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.5.8 Interface for Modifying LDAP Domain Settings

Function

This interface is used to modify LDAP Domain Settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAP_CONFIG

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LDAPSERVER	Mandatory	string	Server IP addresses. **The value is described as follows:** Use commas to separate the IP addresses and a maximum of three IP addresses are supported. **Length:**1~255
PORTNUM	Mandatory	uint32	LDAP listening port number.
TRANSFERTYPE	Mandatory	enum	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS **Default:**2:LDAPS
BASEDN	Mandatory	string	Base DN. **Length:**1~1024

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Parameter	Mandatory/Optional/Conditional	Type	Description
USERNAME	Optional	string	Select the login user that you want to bind. **Length:**1~1024 **Note:**If no user is selected, the anonymous user is bound by default.
GROUPSUFFIX	Optional	string	Search criteria of group. **Length:**0~1024 **Note:**If the search criteria are not configured, the search starts from the root directory.
PASSWORD	Conditional	string	Password of the user that you want to bind. **Length:**1~63 **Note:**If the user name has been configured, the password must be configured.
USERSUFFIX	Optional	string	Search criteria of users. **Length:**0~1024 **Note:**If the search criteria are not configured, the search starts from the root directory.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
IDLETIMELIMIT	Optional	uint32	Timeout length that the client is disconnected when the LDAP connection is free. **Unit:**seconds **Length:**0~2147483647 **Note:**If the timeout length is not configured, the length is 30 seconds by default. If the value is set to 0, there is no limit on the timeout length.

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Parameter	Mandatory/Optional/Conditional	Type	Description
BINDTIMELIMIT	Optional	uint32	Timeout length that the client establishes a connection with a service end. **Unit:**seconds **Length:**1~2147483647 **Note:**If the timeout length is not configured, the length is three seconds by default.
TIMELIMIT	Optional	uint32	Timeout length that the client waits for the service end to return the query result. **Unit:**seconds **Length:**0~2147483647 **Note:**If the timeout length is not configured, the length is three seconds by default.
BINDLEVEL	Optional	enum	The minimum level of binding between the client and the server. **The value is described as follows:** 1:SIMPLE 2:SASL **Default:**1:SIMPLE
GROUPSCOPE	Optional	enum	The range of group query. **The value is described as follows:** 1:BASE 2:ONELEVEL 3:SUBTREE **Default:**3:SUBTREE

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Parameter	Mandatory/Optional/Conditional	Type	Description
BINDUSINGADCRED	Optional	bool	Whether to use the AD domain account binding server. **The value is described as follows:** true: enabled false: disabled **Default:**false: disabled
USERSCOPE	Optional	enum	The range of user query. **The value is described as follows:** 1:BASE 2:ONELEVEL 3:SUBTREE **Default:**3:SUBTREE
NETGROUPDN	Optional	string	Netgroup DN. **Length:**0~1024 **Note:**If the search criteria are not configured, the search starts from the root directory.
NETGROUPSCOPE	Optional	enum	The range of netgroup query. **The value is described as follows:** 1:BASE 2:ONELEVEL 3;SUBTREE **Default:**3:SUBTREE

Result

N/A

Example

- Modifying LDAP domain settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LDAP_CONFIG
{
 "LDAPSERVER": "1.2.3.3,2.2.2.2,3.3.3.3",
 "PORTNUM": 636,
 "TRANSFERTYPE": "2",
 "USERNAME": "as=as",
 "PASSWORD": "Admin@123",
```

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```
 "USERSUFFIX": "a",
 "GROUPSUFFIX": "b",
 "BASEDN": "ad=ad"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.9 Interface for Querying LDAP Domain Settings

Function

This interface is used to query LDAP domain settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LDAP_CONFIG

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
BASEDN	Mandatory	string	Base DN.

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Parameter	Mandatory/ Conditional	Type	Description
BINDTIMELIMIT	Mandatory	string(uint32)	Timeout length that the client establishes a connection with a service end. **Unit:**seconds **Note:**If the timeout length is not configured, the length is three seconds by default.
USERSCOPE	Mandatory	string(enum)	The range of user query. **The value is described as follows:** 1:BASE 2:ONELEVEL 3:SUBTREE
BINDUSINGADCRED	Mandatory	string(bool)	Whether to use the AD domain account binding server. **The value is described as follows:** true: enabled false: disabled
BINDLEVEL	Mandatory	string(enum)	The minimum level of binding between the client and the server. **The value is described as follows:** 1:SIMPLE 2:SASL
GROUPSUFFIX	Mandatory	string	Search criteria of group. **Note:**If the search criteria are not configured, the search starts from the root directory.

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Parameter	Mandatory/ Conditional	Type	Description
IDLETIMELIMIT	Mandatory	string(uint32)	Timeout length that the client is disconnected when the LDAP connection is free. **Unit:**seconds **Note:**If the timeout length is not configured, the length is 30 seconds by default. If the value is set to 0, there is no limit on the timeout length.
LDAPSERVER	Mandatory	string	Server IP addresses. **The value is described as follows:** Use commas to separate the IP addresses and a maximum of three IP addresses are supported.
PORTNUM	Mandatory	string(uint32)	LDAP listening port number.
SHADOWSUFFIX	Mandatory	string	Search criteria of passwords. **Note:**If the search criteria are not configured, the search starts from the root directory.
TIMELIMIT	Mandatory	string(uint32)	Timeout length that the client waits for the service end to return the query result. **Unit:**seconds **Note:**If the timeout length is not configured, the length is three seconds by default.
TRANSFERTYPE	Mandatory	string(enum)	Underlying communication protocol type. **The value is described as follows:** 1: LDAP 2: LDAPS

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Parameter	Mandatory/ Conditional	Type	Description
USERNAME	Mandatory	string	Username used to log in to the domain.
USERSUFFIX	Mandatory	string	Search criteria of users. **Note:**If the search criteria are not configured, the search starts from the root directory.
PASSWORDHASH	Mandatory	string(enum)	Password encryption mode. **The value is described as follows:** 1: clear 2: md5 3: crypt
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
GROUPSCOPE	Mandatory		The range of group query. **The value is described as follows:** 1:BASE 2:ONELEVEL 3:SUBTREE
NETGROUPDN	Mandatory	string	Netgroup DN. **Note:**If the search criteria are not configured, the search starts from the root directory.
NETGROUPSCOPE	Mandatory	string(enum)	The range of netgroup query. **The value is described as follows:** 1:BASE 2:ONELEVEL 3:SUBTREE

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Example

- Querying LDAP domain settings.

```
Request: GET /deviceManager/rest/210235843710E7000007/LDAP_CONFIG

Response:
 {
    "data": {
        "BASEDN": "",
        "BINDLEVEL": "1",
        "BINDTIMELIMIT": "3",
        "BINDUSINGADCRED": "false",
        "GROUPSCOPE": "1",
        "GROUPSUFFIX": "",
        "IDLETIMELIMIT": "30",
        "LDAPSERVER": "",
        "NETGROUPDN": "",
        "NETGROUPSCOPE": "1",
        "PASSWORDHASH": "",
        "PORTNUM": "",
        "SHADOWSUFFIX": "",
        "TIMELIMIT": "3",
        "TRANSFERTYPE": "",
        "USERNAME": "",
        "USERSCOPE": "1",
        "USERSUFFIX": ""
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.10 Interface for Testing LDAP Server Address

Function

This interface is used to test the LDAP server address.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/testldapserver

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LDAPSERVER	Mandatory	string	Host name, client IP address. **The value is described as follows:** The host name must meet the following requirements: 1. contains 1 to 255 letters, digits, hyphens (-), periods (.) and underscores (_). 2. The value can begin with only a letter or digit and cannot end with a hyphen(-) or an underscore(_). 3. The valud cannot contain consecutive periods (.), pure digits, or a period before or after an underscore, for example, '_.' or '._'. The IP address must meet the following requirements: 1. You cant enter a single client IP address. 2. You can enter IPv4, IPv6, or their mixed IP addresses. For example, 192.168.0.10. **Length:**1~255
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Testing LDAP server address.

```
Request: PUT /deviceManager/rest/210235843910E6000009/testldapserver
{
    "LDAPSERVER": "10.169.20.12"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.11 Interface for Modifying NIS Domain Settings

Function

Interface for Modifying NIS Domain Settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NIS_CONFIG

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NISDOMAIN	Mandatory	string	Full domain name. **Length:**1~63
NISSERVERADDR	Mandatory	array	Server IP addresses. **The value is described as follows:** Use commas to separate the IP addresses and a maximum of three IP addresses are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore name. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying NIS domain settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/NIS_CONFIG
{
    "NISDOMAIN": "testNIS",
    "NISSERVERADDR": "[\"1.2.3.3\",\"\",\"\"]"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.12 Interface for Initializing NIS Domain Settings

Function

Interface for Initializing NIS Domain Settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NIS_CONFIG

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Initializing NIS domain settings.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/NIS_CONFIG

Response:
{
    "data": { },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.13 Interface for Querying NIS Domain Settings

Function

Interface for Querying NIS Domain Settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NIS_CONFIG

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
NISDOMAIN	Mandatory	string	Full domain name.
NISSERVERADDR	Mandatory	string(array)	Server IP addresses. **The value is described as follows:** Use commas to separate the IP addresses and a maximum of three IP addresses are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying NIS domain settings.

```
Request: GET /deviceManager/rest/210235843710E7000007/NIS_CONFIG

Response:
{
    "data": {
        "NISDOMAIN": "testNIS",
        "NISSERVERADDR": "[\"1.2.3.3\",\"\",\"\"]"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.5.14 Interface for testing NIS Server Address

Function

Interface for Testing NIS Server Address.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/testnisserver

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NISSERVERADDR	Mandatory	array	Host name, client IP address. **The value is described as follows:** The host name must meet the following requirements: 1. contains 1 to 255 letters, digits, hyphens (-), periods (.) and underscores (_). 2. The value can begin with only a letter or digit and cannot end with a hyphen(-) or an underscore(_). 3. The valud cannot contain consecutive periods (.), pure digits, or a period before or after an underscore, for example, '_.' or '._'. The IP address must meet the following requirements: 1. You cant enter a single client IP address. 2. You can enter IPv4 addresses. For example, 192.168.0.10. **Length:**1~255
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Testing NIS Server Address.

```
Request: PUT /deviceManager/rest/210235843910E6000009/testnisserver
{
    "NISSERVERADDR": "[\"10.169.20.12\"]"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.15 Interface for Querying Advanced Settings of the LDAP Domain

Function

This interface is used to query advanced settings of the LDAP domain.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SNAS_LDAP_SCHEMA_CONFIG

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
POSIXACCOUNTOBJECTCLASS	Mandatory	string	User object.
POSIXGROUPOBJECT-CLASS	Mandatory	string	User group object.
NISNETGROUPOBJECTCLASS	Mandatory	string	Network group object.
UIDATTRIBUTE	Mandatory	string	uid attribute.
UIDNUMBERATTRIBUTE	Mandatory	string	uidNumber attribute.
GIDNUMBERATTRIBUTE	Mandatory	string	gidNumber attribute.
CNFORGROUPSATTRI-BUTE	Mandatory	string	Group CN attribute.
CNFORNETGROUPSATTRIBUTE	Mandatory	string	Network group CN attribute.
MEMBERUIDATTRIBUTE	Mandatory	string	memberUid attribute.
MEMBERNISNETGROUPATTRIBUTE	Mandatory	string	memberNisNetgroup attribute.
NISNETGROUPTRIPLEATTRIBUTE	Mandatory	string	nisNetgroupTriple attribute.
ENABLERFC2307BIS	Mandatory	string(bool)	Whether RFC2307bis is supported. **The value is described as follows:** false: not supported true: supported
GROUPOFUNIQUENA-MESOBJECTCLASS	Mandatory	string	groupOfUniqueNames object.
UNIQUEMEMBERATTRIBUTE	Mandatory	string	uniqueMember object.

Example

- This interface is used to query advanced settings of the LDAP domain.

```
Request: GET /deviceManager/rest/210235843710E7000007/SNAS_LDAP_SCHEMA_CONFIG

Response:
```

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```
{
   "data": {
        "CNFORGROUPSATTRIBUTE": "cn",
        "CNFORNETGROUPSATTRIBUTE": "cn",
        "ENABLERFC2307BIS": "false",
        "GIDNUMBERATTRIBUTE": "gidNumber",
        "GROUPOFUNIQUENAMESOBJECTCLASS": "groupOfUniqueNames",
        "MEMBERNISNETGROUPATTRIBUTE": "memberNisNetgroup",
        "MEMBERUIDATTRIBUTE": "memberUid",
        "NISNETGROUPOBJECTCLASS": "nisNetgroup",
        "NISNETGROUPTRIPLEATTRIBUTE": "memNisNetgroupTriple",
        "POSIXACCOUNTOBJECTCLASS": "posixAccount",
        "POSIXGROUPOBJECTCLASS": "posixGroup",
        "UIDATTRIBUTE": "uid",
        "UIDNUMBERATTRIBUTE": "uidNumber",
        "UNIQUEMEMBERATTRIBUTE": "uniqueMember"
   },
   "error": {
       "code": 0,
       "description": "0"
   }
}
```

4.2.5.16 Interface for Modifying Advanced Settings of the LDAP Domain

Function

This interface is used to modify advanced settings of the LDAP domain.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SNAS_LDAP_SCHEMA_CONFIG

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
POSIXACCOUNTOBJECTCLASS	Optional	string	User object. **Default:**posixAccount **Length:**0~1024

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Parameter	Mandatory/Optional/Conditional	Type	Description
POSIXGROUPOBJECT-CLASS	Optional	string	User group object. **Default:**posixGroup **Length:**0~1024
NISNETGROUPOBJECTCLASS	Optional	string	Network group object. **Default:**nisNetgroup **Length:**0~1024
UIDATTRIBUTE	Optional	string	uid attribute. **Default:**uid **Length:**0~1024
UIDNUMBERATTRIBUTE	Optional	string	uidNumber attribute. **Default:**uidNumber **Length:**0~1024
GIDNUMBERATTRIBUTE	Optional	string	gidNumber attribute. **Default:**gidNumber **Length:**0~1024
CNFORGROUPSATTRI-BUTE	Optional	string	Group CN attribute. **Default:**cn **Length:**0~1024
CNFORNETGROUPSATTRIBUTE	Optional	string	Network group CN attribute. **Default:**cn **Length:**0~1024
MEMBERUIDATTRIBUTE	Optional	string	memberUid attribute. **Default:**memberUid **Length:**0~1024
MEMBERNISNETGROUPATTRIBUTE	Optional	string	memberNisNetgroup attribute. **Default:**memberNisNetgroup **Length:**0~1024
NISNETGROUPTRIPLEATTRIBUTE	Optional	string	nisNetgroupTriple attribute. **Default:**nisNetgroupTriple **Length:**0~1024

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLERFC2307BIS	Optional	bool	Whether RFC2307bis is supported. **The value is described as follows:** false: not supported true: supported **Default:**false
GROUPOFUNIQUENA-MESOBJECTCLASS	Optional	string	groupOfUniqueNames object. **Default:**groupOfUniqueNames **Length:**0~1024
UNIQUEMEMBERATTRIBUTE	Optional	string	uniqueMember object. **Default:**uniqueMember **Length:**0~1024

Result

N/A

Example

- This interface is used to modify advanced settings of the LDAP domain.

```
Request: PUT/deviceManager/rest/2102350BSE10G4000057/SNAS_LDAP_SCHEMA_CONFIG
{
 "CNFORGROUPSATTRIBUTE": "cn1",
 "CNFORNETGROUPSATTRIBUTE": "name1",
 "GIDNUMBERATTRIBUTE": "gidNumber1",
 "MEMBERNISNETGROUPATTRIBUTE": "memberNisNetgroup1",
 "MEMBERUIDATTRIBUTE": "memberUid1",
 "NISNETGROUPOBJECTCLASS": "nisNetgroup1",
 "NISNETGROUPTRIPLEATTRIBUTE": "nisNetgroupTriple1"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.5.17 Interface for Initializing Advanced Settings of the LDAP Domain

Function

This interface is used to initialize advanced settings of the LDAP domain.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SNAS_LDAP_SCHEMA_CONFIG

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- This interface is used to initialize advanced settings of the LDAP domain.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/
SNAS_LDAP_SCHEMA_CONFIG

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.6 cifs_service

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4.2.6.1 Interface for Querying CIFS Service Settings

Function

This interface is used to query CIFS service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsservice

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ENABLEABSE	Mandatory	string(bool)	Whether to enable the ABSE. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
ENABLENOTIFY	Mandatory	string(bool)	Whether to enable the Notify. **The value is described as follows:** true: enabled false: disabled
ENABLEOPLOCK	Mandatory	string(bool)	Whether to enable the Oplock. **The value is described as follows:** true: enabled false: disabled
GUESTENABLE	Mandatory	string(bool)	Whether to enable the Guest access. **The value is described as follows:** true: enabled false: disabled
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2:running 3:stopped
SECURITYMODEL	Mandatory	string(enum)	Authentication mode. **The value is described as follows:** 1:local authentication 2:domain authentication 3:local authentication + domain authentication
SIGNINGENABLE	Mandatory	string(bool)	Whether to enable the signature. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
SIGNINGREQUIRED	Mandatory	string(bool)	Whether to enable the enforcing signature. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string(int)	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore Name. **Note:**This field must be returned in vStore scenarios.
USETCPONLY	Mandatory	string(bool)	Using TCP only. **Note:**The field is not used.
CHARSET	Mandatory	string(enum)	**Note:**The field is not used.
ANONYMOUSENABLE	Mandatory	string(bool)	Enabling anonymous access.
OPLOCKTIMEOUT	Mandatory	string(uint32)	Optimized lock timeout interval. **Unit:**seconds

Example

- Querying CIFS service settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/cifsservice


Response:
{
    "data": {
        "ENABLEABSE": "false",
        "ENABLENOTIFY": "false",
        "ENABLEOPLOCK": "false",
        "GUESTENABLE": "false",
        "OPLOCKTIMEOUT": "35",
        "RUNNINGSTATUS": "3",
        "SECURITYMODEL": "3",
        "SIGNINGENABLE": "false",
        "SIGNINGREQUIRED": "true",
         "ANONYMOUSENABLE":"false",
         "CHARSET":"1",
         "USETCPONLY":"true"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.6.2 Interface for Modifying CIFS Service Settings

Function

This interface is used to modify CIFS service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to disable the CIFS SMB1/SMB2 service. This operation causes the CIFS SMB1/SMB2 sharing service provided by the storage device unavailable.

Suggestion: Before performing this operation, ensure that the CIFS SMB1/SMB2 sharing service is no longer needed.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsservice

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLEABSE	Optional	bool	Whether to enable the ABSE. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLENOTIFY	Optional	bool	Whether to enable the Notify. **The value is described as follows:** true: enabled false: disabled
ENABLEOPLOCK	Optional	bool	Whether to enable the Oplock. **The value is described as follows:** true: enabled false: disabled
GUESTENABLE	Optional	bool	Whether to enable the Guest access. **The value is described as follows:** true: enabled false: disabled
RUNNINGSTATUS	Optional	enum	Running status. **The value is described as follows:** 2:running 3:stopped
SECURITYMODEL	Optional	enum	Authentication mode. **The value is described as follows:** 1:local authentication 2:domain authentication 3:local authentication + domain authentication
SIGNINGENABLE	Optional	bool	Whether to enable the signature. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
SIGNINGREQUIRED	Optional	bool	Whether to enable the enforcing signature. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
OPLOCKTIMEOUT	Optional	uint32	Optimized lock timeout interval. **The value is described as follows:** 5~60 **Unit:**seconds

Result

N/A

Example

- Modifying CIFS service settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/cifsservice
{
    "RUNNINGSTATUS": 3,
    "ENABLEABSE": false,
    "SECURITYMODEL": "2",
    "GUESTENABLE": false,
    "SIGNINGREQUIRED": true,
    "SIGNINGENABLE": false,
    "ENABLEOPLOCK": false,
    "OPLOCKTIMEOUT": "35",
    "ENABLENOTIFY": false
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.6.3 Interface for Querying CIFS Homedir(This Interface has been discarded)

Function

This interface is used to query CIFS homedir.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/homedir

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	Store ID.

Result

Parameter	Mandatory/Conditional	Type	Description
FSID	Mandatory	string	File system ID.

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Parameter	Mandatory/ Conditional	Type	Description
ISOPEN	Mandatory	string(bool)	Whether to enable the Homedir service. **The value is described as follows:** true: enabled false: disabled **Note:** Both FSID and SHAREPATH must be specified. Either ISOPEN or FSID/ SHAREPATH must be specified.
SHAREPATH	Mandatory	string	Whether to automatically create the home directory. **Note:** Consists of the file system and quota tree, for example, "/fs01/qt002". "fs01" indicates the name of the file system and "qt002" indicates the name of the quota tree. Both SHAREPATH and FSID must be specified.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying CIFS homedir.

```
Request: GET /deviceManager/rest/210235843910E6000009/homedir

Response:
{
    "data": {
        "FSID": "4",
        "ISOPEN": "true",
        "SHAREPATH": "/FileSystem0040001/233"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.6.4 Interface for Modifying CIFS Homedir(This Interface has been discarded)

Function

This interface is used to modify CIFS homedir.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/homedir

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ISOPEN	Conditional	bool	Whether to enable the Homedir service. **The value is described as follows:** true: enabled false: disabled
FSID	Conditional	bool	File system ID.
SHAREPATH	Conditional	string	Whether to automatically create the home directory.
vstoreId	Conditional	string	vStore ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISAUTOCREATE	Optional	bool	Whether a home directory is created automatically. **The value is described as follows:** false: no true: yes

Result

N/A

Example

- Modifying CIFS homedir.

```
Request: PUT /deviceManager/rest/210235843910E6000009/homedir

{
    "ISOPEN": true,
    "FSID": "4",
    "SHAREPATH": "/FileSystem0040001/233"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.7 nfs_service

4.2.7.1 Interface for Querying NFS Service Settings

Function

This interface is used to query NFS service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/nfsservice

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
SUPPORTV3	Mandatory	string(bool)	Whether to enable the NFSv3 service. **The value is described as follows:** true: enabled false: disabled
SUPPORTV4	Mandatory	string(bool)	Whether to enable the NFSv4 service. **The value is described as follows:** true: enabled false: disabled
NFSV4DOMAIN	Mandatory	string	NFSv4 service domain name.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Parameter	Mandatory/ Conditional	Type	Description
CHARACTERENCODINGLIST	Mandatory	string(array)	Character encoding list that is supported. **Note:**The field is not used.
CHARSET	Mandatory	string(enum)	Character set encoding. **Note:**The field is not used.
ONLYROOTCHOWN	Mandatory	string(bool)	Whether only user root is allowed to run the "chown" command. **Note:**The field is not used.
PORT	Mandatory	string(uint32)	Listening port for mounting NFS. **Note:**The field is not used.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **Note:**The field is not used.
USERESERVEDPORTS	Mandatory	string(bool)	Whether only ports whose number is less than or equal to 1024 are allowed to mount clients. **Note:**The field is not used.

Example

- Querying NFS service settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/nfsservice

Response:
{
    "data": {
        "NFSV4DOMAIN": "localdomain_sys",
        "SUPPORTV3": "true",
        "SUPPORTV4": "true"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.2.7.2 Interface for Modifying NFS Service Settings

Function

This interface is used to modify NFS service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to disable the NFSv3/NFSv4/NFSv4.1 service. This operation causes the NFSv3/NFSv4/NFSv4.1 sharing service provided by the storage device unavailable.

Suggestion: Before performing this operation, ensure that the NFSv3/NFSv4/NFSv4.1 sharing service is no longer needed.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/nfsservice

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SUPPORTV3	Optional	bool	Whether to enable the NFSv3 service. **The value is described as follows:** true: enabled false: disabled
SUPPORTV4	Optional	bool	Whether to enable the NFSv4 service. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
NFSV4DOMAIN	Optional	string	NFSv4 service domain name. **Length:**0~64
TYPE	Optional	enum	Type number of the managed object. **The value is described as follows:** 16452: NFSSERVICE **Note:**The field is not used.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying NFS service settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/nfsservice
{
    "SUPPORTV3": false,
    "SUPPORTV4": true,
    "NFSV4DOMAIN": "aa44"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.8 ftp_service

4.2.8.1 Interface for Querying FTP Service Settings

Function

This interface is used to query FTP service settings.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ftpservice

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
ANONYMOUSACCESSSTATUS	Mandatory	string(bool)	Whether the anonymous access is supported. **The value is described as follows:** false: disabled true: enabled
ANONYMOUSHOMEDIR	Mandatory	string	Primary directory of the anonymous access.
ATTESTMODE	Mandatory	string(uint32)	Reserved field.
CLIENTMAXCONNEC-TION	Mandatory	string(uint32)	Indicate the maximum number of connections of a client.
ENABLEFTP	Mandatory	string(enum)	Whether the FTP connection is supported. **The value is described as follows:** 0: disabled 1: enabled **Note:**This field is effective when the "FTPSCONNECTMODE" is configured as "0".

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Parameter	Mandatory/ Conditional	Type	Description
FSID	Mandatory	string	File system ID.
FTPSCONNECTMODE	Mandatory	string(enum)	FTPS connection method. **The value is described as follows:** 0: explicit connection 1: implicit connection
IDLETIME	Mandatory	string(uint32)	Indicate the idle time between connections(minutes).
MAXACTIVEPROCESS	Mandatory	string(uint32)	Indicate the maximum number of connections of a user.
MAXANONYMOUSACTIVEPROC	Mandatory	string(uint32)	Indicate the maximum number of connections of all anonymous users.
MAXCONNECTION	Mandatory	string(uint32)	Indicate the maximum number of connections.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: enabled 3: disabled
LOGLEVEL	Mandatory	string(bool)	**Note:**This field has been discarded.
LOGPATH	Mandatory	string(uint32)	**Note:**This field has been discarded.
LOGPATHSPACE	Mandatory	string(bool)	**Note:**This field has been discarded.

Example

- Querying FTP service settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/ftpservice

Response:
{
    "data": {
              "ANONYMOUSACCESSSTATUS": "false",
              "ANONYMOUSHOMEDIR": " ",
              "ATTESTMODE": "0",
              "CLIENTMAXCONNECTION": "32",
              "ENABLEFTP": "0",
          "FSID": "",
              "FTPSCONNECTMODE": "0",
```

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```
            "IDLETIME": "10",
            "LOGLEVEL": "false",
            "LOGPATH": "1048576",
            "LOGPATHSPACE": "true",
            "MAXACTIVEPROCESS": "32",
            "MAXANONYMOUSACTIVEPROC": "32",
            "MAXCONNECTION": "64",
            "RUNNINGSTATUS": "3"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.8.2 Interface for Modifing FTP Service Settings

Function

This interface is used to service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to disable the FTP service. This operation causes the FTP service provided by the storage device unavailable.

Suggestion: Before performing this operation, ensure that the FTP service is no longer needed.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ftpservice

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
RUNNINGSTATUS	Optional	enum	Whether to enable the FTP service. **The value is described as follows:** 2: enabled 3: disabled
FTPSCONNECTMODE	Optional	enum	FTPS connection method. **The value is described as follows:** 0: explicit connection 1: implicit connection **Default:**1: implicit connection
ENABLEFTP	Optional	enum	Whether the FTP connection is supported. **The value is described as follows:** 0: disabled 1: enabled **Note:**This field is effective when the "FTPSCONNECTMODE" is configured as "0".
ANONYMOUSHOMEDIR	Optional	string	Primary directory of the anonymous access.
ANONYMOUSACCESSSTATUS	Optional	bool	Whether the anonymous access is supported. **The value is described as follows:** true: supported false: unsupported

Result

N/A

Example

- Modifing FTP service settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/ftpservice
{
```

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```
    "ANONYMOUSACCESSSTATUS": true",
    "ANONYMOUSHOMEDIR": "/FileSystem0040002",
    "ENABLEFTP": "1",
    "FTPSCONNECTMODE": "0",
    "RUNNINGSTATUS": 2
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.9 http_service

4.2.9.1 Interface for Querying HTTP Service Settings

Function

This interface is used to query HTTP service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/httpservice

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
ATTESTMODE	Mandatory	string(uint32)	Reserved field.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEHTTPPORT	Mandatory	string(bool)	Whether to enable the HTTP default port. **The value is described as follows:** false: disabled true: enabled
ENABLEWEBDAV	Mandatory	string(bool)	Whether the DAV extension is supported. **The value is described as follows:** false: disabled true: enabled
MAXCONNECTION	Mandatory	string(uint32)	Maximum connection number. **The value is described as follows:** The minimum value is 1, and the maximum value is decided by the maximum specifications supported by the product. For example: 2800V3, 5100V3, 5300V3, arm: 32 5500V3: 64 5600V3, 5800V3: 128 18500V3, 18800V3: 512
PERMITTEDMAXCON-NECTION	Mandatory	string(uint32)	Reserved field.
PORT	Mandatory	string(uint32)	Reserved field.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: enabled 3: disabled
SHAREPATH	Mandatory	string	Service share path.

Example

- Querying HTTP service settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/httpservice
```

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```
Response:
{
    "data": {
        "ATTESTMODE":"2",
        "ENABLEHTTPPORT": "false",
        "ENABLEWEBDAV": "false",
        "MAXCONNECTION": "32",
        "PERMITTEDMAXCONNECTION","0",
        "PORT":"0",
        "RUNNINGSTATUS": "3",
        "SHAREPATH": ""
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.9.2 Interface for Modifying HTTP Service Settings

Function

This interface is used to modify HTTP service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to disable the HTTP service. This operation causes the HTTP service provided by the storage device unavailable.

Suggestion: Before performing this operation, ensure that the HTTP service is no longer needed.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/httpservice

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
RUNNINGSTATUS	Optional	enum	Running status. **The value is described as follows:** 2: enabled 3: disabled **Default:**3: disabled
SHAREPATH	Optional	string	Service share path.
MAXCONNECTION	Optional	int	Maximum connection number. **The value is described as follows:** The minimum value is 1, and the maximum value is decided by the maximum specifications supported by the product. For example: 2800V3, 5100V3, 5300V3, arm: 32 5500V3: 64 5600V3, 5800V3: 128 18500V3, 18800V3: 512
ENABLEWEBDAV	Optional	bool	Whether the DAV extension is supported. **The value is described as follows:** false: disabled true: enabled **Default:**false: disabled
ENABLEHTTPPORT	Optional	bool	Whether to enable the HTTP default port. **The value is described as follows:** false: disabled true: enabled **Default:**false: disabled

Result

N/A

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Example

- Modifying HTTP service settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/httpservice
{
    "RUNNINGSTATUS": 2,
    "MAXCONNECTION": 40,
    "SHAREPATH": "/FileSystem0040002/ddd",
    "ENABLEWEBDAV": true,
    "ENABLEHTTPPORT": true
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.10 ndmp_service

4.2.10.1 Interface for Querying NDMP Service Settings

Function

This interface is used to query NDMP service settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ndmpservice

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
isEnabled	Mandatory	string(bool)	Whether to enable the NDMP service. **The value is described as follows:** true: enabled false: disabled
ip	Conditional	string	IPV4 or IPV6 address.
isPwdExpired	Conditional	string(bool)	Whether the password is expired. **The value is described as follows:** true: expired false: unexpired
port	Conditional	string(int)	Listening port. **The value is described as follows:** The value ranges from 10,000 to 10,099.
username	Conditional	string	User name.
version	Mandatory	string	Version.
writeThrehold	Conditional	string(int)	Write threshold. **The value is described as follows:** The value ranges from 0 to 100.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ignoreCTime	Mandatory	string(bool)	Whether to ignore the modification time. **The value is described as follows:** true: yes false: no
isSupportSnapshot	Mandatory	string(bool)	Whether the snapshot is supported. **The value is described as follows:** true: yes false: no

Example

- Querying NDMP service settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/NDMPService

Response:
{
    "data": {
        "ignoreCTime": "false",
        "ip": "10.13.3.62",
        "isEnabled": "true",
        "isPwdExpired": "true",
        "isSupportSnapshot": "true",
        "port": "10000",
        "username": "ndmpadmin",
        "version": "V4",
        "writeThrehold": "95"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.10.2 Interface for Modifying NDMP Service Settings

Function

This interface is used to modify NDMP service settings.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to change the monitoring IP address or monitoring port. 1. After this operation, the NDMP service will be automatically restarted. As a result, the NDMP service of all the vStores will be interrupted. 2. After the configurations take effect, the NDMP service of some vStores will become unavailable. Suggestion: After performing this operation, vStore administrators must enable all the monitoring IP addresses to ensure that vStores can access the NDMP service normally.
You are about to disable the NDMP service. This operation causes the NDMP service provided by the storage device unavailable. Suggestion: Before performing this operation, ensure that the NDMP service is no longer needed.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ndmpservice

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
isEnabled	Optional	bool	Whether to enable the NDMP service. **The value is described as follows:** true: enabled false: disabled
ip	Optional	string	IPV4 or IPV6 address. **Note:**This field is not delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
writeThrehold	Optional	bool	Write threshold. **The value is described as follows:** 0~100 **Note:**This field is not delivered in vStore scenarios.
username	Optional	uint32	User name. **The value is described as follows:** 1. The value has 6 to 31 characters. 2. The value cannot contain spaces or the following characters: \ / \\ [ ] < > + : ; , ? * | = @. The value cannot end with a period (.).
oldPasswd	Conditional	string	Old password. **The value is described as follows:** 1. The value has 8 to 32 characters. 2. The value must contain any two types of uppercase letters, lowercase letters and digits, and must contain spaces and special characters, such as ` ~ ! @ # $ % ^ & * () - _ = + \ | [{ }] ; \ : \ " \ ' \ < \ , . \ \ \ > \ / ?. **Note:**This field is mandatory when changing the user name or password.

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Parameter	Mandatory/Optional/Conditional	Type	Description
password	Conditional	string	New password. **The value is described as follows:** 1. The value has 8 to 32 characters. 2. The value must contain any two types of uppercase letters, lowercase letters and digits, and must contain spaces and special characters, such as ` ~ ! @ # $ % ^ & * () - _ = + \ | [{ }] ; \ : \ " \ ' \ < \ , . \ \ \ > \ / ?. **Note:**This field is conditionally mandatory when changing the password.
port	Conditional	uint32	Listening port. **The value is described as follows:** The value ranges from 10000 to 10099. **Note:**This field is not delivered in vStore scenarios.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying NDMP service settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/ndmpservice
{
    "isEnabled": true,
    "ip": "10.13.3.63",
    "writeThrehold": "99",
    "username": "ndmpadmin1",
    "oldPasswd": "Admin@123",
    "password": "Admin@1234",
```

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```
    "port": "10001"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.2.11 iscsi

4.2.11.1 Interface for Modifying a iSCSI Device Name

Function

This interface is used to modify a iSCSI device name.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsidevicename

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ISCSI_DEVICE_NAME	Mandatory	string	iSCSI Device Name. **The value is described as follows:** Contains letters, digits, hyphens (-), and periods (.). **Length:**0~31

Result

N/A

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Example

- Modifying a iSCSI device name.

```
Request: PUT /deviceManager/rest/210235843710E7000007/iscsidevicename
{
    "CMO_ISCSI_DEVICE_NAME" : "name1"
}
Response:
{
    "data" : {},
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.2.11.2 Interface for Querying a iSCSI Device Name

Function

This interface is used to query a iSCSI device name.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsidevicename

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_ISCSI_DEVICE_NAME	Mandatory	string	iSCSI Device Name.

Example

- Querying a iSCSI device name.

```
Request: GET /deviceManager/rest/210235843710E7000007/iscsidevicename
Response:
```

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```
{
    "data" : [
        {
            "CMO_ISCSI_DEVICE_NAME" : "iqn.2006-08.com.huawei:oceanstor:
21001051720c8a61:222"
        }
    ],
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.2.12 isns

4.2.12.1 Interface for Modifying a iSNS Server IP Address

Function

This interface is used to modify a iSNS server IP address.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsiserver

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ISNS_SERVER_IP	Mandatory	string	iSNS Server IP. **The value is described as follows:** IPV4 or IPV6 is supported.

Result

N/A

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Example

- Modifying a iSNS Server IP Address.

```
Request: PUT /deviceManager/rest/210235843710E7000007/iscsiserver
{
    "CMO_ISNS_SERVER_IP" : "127.0.0.1"
}
Response:
{
    "data" : {},
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.2.12.2 Interface for Querying a iSNS Server IP Address

Function

This interface is used to query a iSNS server IP address.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsiserver

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_ISNS_SERVER_IP	Mandatory	string	iSNS Server IP.

Example

- Querying a iSNS Server IP Address.

```
Request: GET /deviceManager/rest/210235843710E7000007/iscsiserver
Response:
```

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```
{
    "data" : [
        {
            "CMO_ISNS_SERVER_IP" : "127.0.0.1"
        }
    ],
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.3 Performance management

4.3.1 audit_strategy

4.3.1.1 Interface for Querying Audit Logs

Function

This interface is used to query audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_stratege?cmo_audit_service_type=${cmo_audit_service_type}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol

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Result

Parameter	Mandatory/ Conditional	Type	Description
AUTO_DELETE_ENABLE	Mandatory	string(uint32)	Automatic deletion switch of audit logs. **The value is described as follows:** 0: disabled 1: enabled
CMO_AUDIT_ENABLE	Mandatory	string(bool)	Switch of starting and stopping audit log collection. **The value is described as follows:** false: disabled true: enabled
CMO_AUDIT_RESERVR_LOGFILE_NUM	Mandatory	string(uint32)	Number of logs reserved. **The value is described as follows:** 1~1000 **Unit:**Thousand
REMAINING_CAPACITY	Mandatory	string(uint64)	Available capacity. **The value is described as follows:** 5~100 **Unit:**GB
CMO_AUDIT_PAUSE	Mandatory	string(bool)	Whether to log recording is paused. **The value is described as follows:** false: no true: yes
CMO_AUDIT_SERVICE_TYPE	Mandatory	string(uint32)	Service type. **The value is described as follows:** 0: NAS protocol
CMO_AUDIT_SINGLE_LOGFILE_SIZE	Mandatory	string(uint32)	Size of a single log. **The value is described as follows:** 10~100 **Unit:**MB

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Parameter	Mandatory/ Conditional	Type	Description
DISABLE_SERVICE_EXCEPTION	Mandatory	string(uint32)	Automatically Interrupt NAS Service. **The value is described as follows:** 0: non-interrupt_service 1: interrupt_service
RETAINED_DAYS	Mandatory	string(uint32)	Retention days. **The value is described as follows:** 1~1200 **Unit:**days
CMO_AUDIT_FILESYSTM_ID	Conditional	string	Audit log file system ID. **The value is described as follows:** 0~65535 **Note:**This field is returned in scenarios where the file system has been configured.
CMO_AUDIT_FILESYSTM_NAME	Conditional	string	Audit log file system name. **Note:**This field is returned in scenarios where the file system has been configured.
CMO_AUDIT_SERVICE_NAME	Mandatory	string	Service name.

Example

- Querying audit logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/audit_stratege?
cmo_audit_service_type=0

Response: {
    "data": {
        "AUTO_DELETE_ENABLE": "1",
        "CMO_AUDIT_ENABLE": "false",
        "CMO_AUDIT_PAUSE": "false",
        "CMO_AUDIT_RESERVR_LOGFILE_NUM": "6",
        "CMO_AUDIT_SERVICE_NAME": "NAS",
        "CMO_AUDIT_SERVICE_TYPE": "0",
        "CMO_AUDIT_SINGLE_LOGFILE_SIZE": "100",
        "DISABLE_SERVICE_EXCEPTION": "1",
        "REMAINING_CAPACITY": "0",
        "RETAINED_DAYS": "0"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    },
}
```

4.3.1.2 Interface for Enabling Audit Logs

Function

This interface is used to enable audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_stratege

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_ENABLE	Optional	bool	Switch of starting and stopping audit log collection. **The value is described as follows:** true:enabled
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol

Result

N/A

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Example

- Enabling audit logs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/audit_stratege
{
    "CMO_AUDIT_ENABLE": true,
    "CMO_AUDIT_SERVICE_TYPE": 0
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    },
}
```

4.3.1.3 Interface for Suspending Audit Logs

Function

This interface is used to suspend audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_stratege

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_PAUSE	Optional	bool	Switch of suspending audit log collection. **The value is described as follows:** true: suspend
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol

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Result

N/A

Example

- Suspending audit logs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/audit_stratege
{
    "CMO_AUDIT_PAUSE": true,
    "CMO_AUDIT_SERVICE_TYPE": 0
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    },
}
```

4.3.1.4 Interface for Restoring Audit Logs

Function

This interface is used to restore audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_stratege

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_PAUSE	Optional	bool	Switch of suspending audit log collection. **The value is described as follows:** false: no
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol

Result

N/A

Example

- Restoring audit logs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/audit_stratege
{
    "CMO_AUDIT_PAUSE": false,
    "CMO_AUDIT_SERVICE_TYPE": 0
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    },
}
```

4.3.1.5 Interface for Disabling Audit Logs

Function

This interface is used to disable audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to disable the audit log function. This operation will uninstall the audit log file system, which contains important audit logs. The audit logs must be handled properly. Exercise caution when performing this operation.

Suggestion: Note the following:

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1. Before performing this operation, stop sharing the audit log file system.
2. After performing this operation, clear or migrate data in the audit log file system.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_stratege

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_ENABLE	Optional	bool	Switch of starting and stopping audit log collection. **The value is described as follows:** false: disabled
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol

Result

N/A

Example

- Disabling audit logs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/audit_stratege
{
    "CMO_AUDIT_ENABLE": false,
    "CMO_AUDIT_SERVICE_TYPE": 0
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    },
}
```

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4.3.1.6 Interface for Deleting Audit Logs

Function

This interface is used to delete audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are going to delete service audit logs. This operation deletes logs generated within a specific period of time. The deleted audit logs cannot be recovered.

Suggestion: Before performing this operation, ensure that the audit logs can be deleted.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/handleDeleteAuditLog

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol

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Parameter	Mandatory/Optional/Conditional	Type	Description
DELETE_AUDIT_LOG_TO_DATE	Mandatory	uint64	End time. **Unit:**seconds **Note:** 1. The start and end time is from local date 2000-01-01 to 2035-12-31. 2. The parameter of start and end time is shown with seconds that have passed since 1970-01-01/00:00:00.
DELETE_AUDIT_LOG_FROM_DATE	Mandatory	uint64	Start time. **Unit:**seconds **Note:** 1. The start and end time is from local date 2000-01-01 to 2035-12-31. 2. The parameter of start and end time is shown with seconds that have passed since 1970-01-01/00:00:00.

Result

N/A

Usage Guidelines

1: This operation will delete logs within a specified period as background tasks. The time for executing background tasks is decided by the number of files to be deleted.

2: Execute the audit log deletion command after the last task is finished.

Example

- Deleting audit logs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/handleDeleteAuditLog
{
    "CMO_AUDIT_SERVICE_TYPE": 0,
    "DELETE_AUDIT_LOG_FROM_DATE": "1478507036",
    "DELETE_AUDIT_LOG_TO_DATE": "1478507036"
}

Response: {
    "data": {},
```

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```
    "error": {
      "code": 0,
     "description": "0"
 },
}
```

4.3.1.7 Interface for Modifying Audit Logs

Function

This interface is used to modify audit logs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to set the service response policy to non-interrupt when audit logs fail to be recorded. After this operation, the utilization of the service cannot be recorded, causing security risks.

Suggestion: Before performing this operation, ensure that the preceding risk is acceptable.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_stratege

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_AUDIT_SERVICE_TYPE	Mandatory	uint32	Service type. **The value is described as follows:** 0: NAS protocol
RETAINED_DAYS	Optional	uint32	Retention days. **The value is described as follows:** 1~1200 **Unit:**days

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Parameter	Mandatory/Optional/Conditional	Type	Description
REMAINING_CAPACITY	Optional	uint64	Available capacity. **The value is described as follows:** 5~100 **Unit:**GB
DISABLE_SERVICE_EXCEPTION	Optional	uint32	Automatically Interrupt NAS Service. **The value is described as follows:** 0: non-interrupt_service 1: interrupt_service
CMO_AUDIT_FILESYSTM_ID	Optional	string	File system ID for audit logs. **The value is described as follows:** 0~65535
CMO_AUDIT_SINGLE_LOGFILE_SIZE	Optional	uint32	Size of a single log. **The value is described as follows:** 10~100 **Unit:**MB
CMO_AUDIT_RESERVR_LOGFILE_NUM	Optional	uint32	Number of logs reserved. **The value is described as follows:** 1~1000 **Unit:**Thousand

Result

N/A

Example

- Modifying audit logs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/audit_stratege
{
   "CMO_AUDIT_FILESYSTM_ID": "115",
   "CMO_AUDIT_SERVICE_TYPE": 0,
   "RETAINED_DAYS": 7
}

Response:
{
    "data": {},
    "error": {
```

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```
        "code": 0,
        "description": "0"
    },

}
```

4.3.1.8 Interface for Creating an Audit Log File

Function

This interface is used to create an audit log file.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/audit_log_file

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
auditLogDateRange	Mandatory	uint64	Date range of audit logs (in yyyy-mm-dd format). **Unit:**seconds **Note:**The date range is in yyyy-mm-dd format.
vstoreId	Conditional	string	vStore ID. **Note:**This field is delivered when the vStore license exists. If the field is not delivered, the system user is delivered by default.

Result

N/A

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Example

- Creating an audit log file for a system user.

```
Request: POST /deviceManager/rest/210235843710E7000007/audit_log_file
{
    "vstoreId": "0",
    "auditLogDateRange": 1489449600
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.1.9 Interface for Querying the Generation Progress of Audit Log Files

Function

This interface is used to query the generation progress of audit log files.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/get_audit_log_file_progress?auditLogDateRange=${auditLogDateRange}

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
auditLogDateRange	Mandatory	uint64	Date range of audit logs (in yyyy-mm-dd format). **Unit:**seconds **Note:**The date range is in yyyy-mm-dd format.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field is delivered when the vStore license exists. If the field is not delivered, the system user is delivered by default.

Result

Parameter	Mandatory/Conditional	Type	Description
progress	Mandatory	string(uint32)	Generation progress of audit log files. **The value is described as follows:** 0: Files are being generated 100: Files have been generated

Example

- Querying the generation progress of audit log files.

```
Request: GET /deviceManager/rest/1016964156/get_audit_log_file_progress?
auditLogDateRange=1491494400

Response: {
    "data":{
        "progress":"100"
    },
    "error":{
        "code":0,
        "description":"0"
    }
}
```

4.3.2 performance

4.3.2.1 Interface for Querying Performance Data of a Managed Object

Function

This interface is used to query the specified performance data of a managed object.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/performace_statistic/cur_statistic_data

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_STATISTIC_UUID	Mandatory	string	Universally unique identifier (UUID) of a managed object. **The value is described as follows:** It is expressed in the format of object type:object ID (If the disk object type number is 10 and the disk ID is 10, the UUID is 10:10.).
CMO_STATISTIC_DATA_ID_LIST	Mandatory	string	List of enumeration numbers (each maps to a performance indicator). **The value is described as follows:** If the list contains multiple enumeration numbers, the numbers are separated by commas (,). For details, see appendix "Object Performance Indicators."
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_STATISTIC_DATA_LIST	Mandatory	string	List of performance collection values. **The value is described as follows:** The sequence of which is the same as that of CMO_STATISTIC_DATA_ID_LIST and is separated by commas (,).
CMO_STATISTIC_TIMESTAMP	Mandatory	string(uint64)	Performance collection time. **Unit:**ms
CMO_STATISTIC_UUID	Mandatory	string	Universally unique identifier (UUID) of a managed object. **The value is described as follows:** It is expressed in the format of object type:object ID (If the disk object type number is 10 and the disk ID is 10, the UUID is 10:10.).
CMO_STATISTIC_DATA_ID_LIST	Mandatory	string	List of enumeration numbers (each maps to a performance indicator). **The value is described as follows:** If the list contains multiple enumeration numbers, the numbers are separated by commas (,). For details, see appendix "Object Performance Indicators."

Example

- Querying bandwidth and read IOPS of disk(Object type: 10, ID: 1).

```
Request: GET /deviceManager/rest/210235843710E7000007/performace_statistic/
cur_statistic_data?CMO_STATISTIC_UUID=10:1&CMO_STATISTIC_DATA_ID_LIST=21,25

Response:
{
    "data": [
```

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```
        {
            "CMO_STATISTIC_DATA_ID_LIST": "21,25",
            "CMO_STATISTIC_UUID": "10:1",
            "CMO_STATISTIC_DATA_LIST": "12,25",
            "CMO_STATISTIC_TIMESTAMP": "1450795530"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.2.2 Interface for Querying Performance Monitoring Statistics

Function

This interface is used to query performance monitoring statistics.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/performance_statistic_strategy

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_STATISTIC_ARCHIVE_SWITCH	Mandatory	string(uint64)	Whether or not to save performance monitoring data on the storage device. **The value is described as follows:** 0: disable 1: enable

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Parameter	Mandatory/ Conditional	Type	Description
CMO_STATISTIC_AUTO_STOP	Mandatory	string(uint64)	Automatic stop switch. **The value is described as follows:** 0: disable 1: enable
CMO_STATISTIC_INTERVAL	Mandatory	string(uint64)	Real-time performance data sampling interval. **Unit:**seconds
CMO_STATISTIC_ARCHIVE_TIME	Mandatory	string(uint64)	Historical performance monitoring period. **Unit:**seconds
CMO_STATISTIC_MAX_TIME	Mandatory	string(uint64)	The validity period of the collection policy. **Unit:**days **Note:**When the automatic stop function is enabled, the system automatically stops collecting monitoring data after the collection policy expires.

Example

- Querying performance monitoring statistics.

```
Request: GET /deviceManager/rest/210235843910E6000009/
performance_statistic_strategy

Response:
{
    "data": [
        {
            "CMO_STATISTIC_ARCHIVE_SWITCH": "1",
            "CMO_STATISTIC_ARCHIVE_TIME": "60",
            "CMO_STATISTIC_AUTO_STOP": "0",
            "CMO_STATISTIC_INTERVAL": "5",
            "CMO_STATISTIC_MAX_TIME": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.2.3 Interface for Querying Performance Monitoring Switch

Function

This interface is used to query performance monitoring switch.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/performance_statistic_switch

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
CMO_PERFORMANCE_BEGIN_TIME	Conditional	string(uint64)	Performance statistics start time. **Note:**Returns when performance monitoring is enabled.

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Parameter	Mandatory/ Conditional	Type	Description
CMO_PERFORMANCE_SWITCH	Mandatory	string(uint64)	Performance monitoring switch. **The value is described as follows:** 0: disable 1: enable **Note:**You can monitor the performance of the storage device only when the performance monitoring status is "Enabled".

Example

- Querying performance monitoring switch.

```
Request: GET /deviceManager/rest/210235843910E6000009/
performance_statistic_switch

Response:
{
    "data": [
        {
            "CMO_PERFORMANCE_BEGIN_TIME": "1478207205",
            "CMO_PERFORMANCE_SWITCH": "1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.2.4 Interface for Setting Performance Monitoring Switch

Function

This interface is used to set performance monitoring switch.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/performance_statistic_switch

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_PERFORMANCE_SWITCH	Mandatory	uint64	Performance monitoring switch. **The value is described as follows:** 0: disable 1: enable **Note:**You can monitor the performance of the storage device only when the performance monitoring status is "Enabled".

Result

N/A

Example

- Setting performance monitoring switch.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
performance_statistic_switch

{
    "CMO_PERFORMANCE_SWITCH": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.2.5 Interface for Configuring Performance Monitoring Statistics

Function

This interface is used to configure performance monitoring statistics.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/performance_statistic_strategy

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_STATISTIC_ARCHIVE_SWITCH	Optional	uint64	Whether or not to save performance monitoring data on the storage device. **The value is described as follows:** 0: disable 1: enable
CMO_STATISTIC_AUTO_STOP	Optional	uint64	Automatic stop switch. **The value is described as follows:** 0: disable 1: enable
CMO_STATISTIC_INTERVAL	Optional	uint64	Real-time performance data sampling interval. **The value is described as follows:** 5,10,30,60seconds. **Unit:**seconds
CMO_STATISTIC_ARCHIVE_TIME	Optional	uint64	Historical performance monitoring period. **The value is described as follows:** 5,60,120,300,600,1800,3600seconds. **Unit:**seconds

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_STATISTIC_MAX_TIME	Conditional	uint64	The validity period of the collection policy. **The value is described as follows:** 1 to 31days. **Unit:**days **Note:** When automatic stop is enabled, it must be delivered. After the collection policy expires, the system automatically stops collecting monitoring data.

Result

N/A

Usage Guidelines

The performance monitoring parameters can be modified when the performance statistics switch is disabled.

Example

- Configuring performance monitoring statistics.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
performance_statistic_strategy

{
    "CMO_STATISTIC_INTERVAL": 10,
    "CMO_STATISTIC_ARCHIVE_SWITCH": 1,
    "CMO_STATISTIC_AUTO_STOP": 0,
    "CMO_STATISTIC_ARCHIVE_TIME": 3600
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.3.2.6 Interface for Setting Performance Dump

Function

This interface is used to set performance dump.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/perf_data_restore

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_STATISTIC_RESTORE_ADDRESS	Conditional	string	Dumping server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~255 **Note:**This parameter is required when the switch of automatic dump is not 0 or 2.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_STATISTIC_RESTORE_VISUALPATH	Conditional	string	The path for storing the performance monitoring statistics to be dumped. **Length:**1~255 **Note:**This parameter is required when the switch of automatic dump is not 0 or 2.
CMO_STATISTIC_RESTORE_ENABLE	Mandatory	uint32	Switch of automatic dump. **The value is described as follows:** 0:off 1:on 2:dumped to the SVP server The default value is "0".
CMO_STATISTIC_RESTORE_ACCOUNT	Conditional	string	User name. **Length:**1~63 **Note:**This parameter is required when the switch of automatic dump is not 0 or 2.
CMO_STATISTIC_RESTORE_PASSWD	Conditional	string	Password. **Length:**1~63 **Note:**This parameter is required when the switch of automatic dump is not 0 or 2.
CMO_STATISTIC_RESTORE_PROTOCOL	Conditional	enum	Protocol. **The value is described as follows:** 0: FTP 1: SFTP **Note:**This parameter is required when the switch of automatic dump is not 0 or 2.

Result

N/A

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Example

- Setting performance dump.

```
Request: PUT /deviceManager/rest/210235843910E6000009/perf_data_restore

{
    "CMO_STATISTIC_RESTORE_ACCOUNT": "admin",
    "CMO_STATISTIC_RESTORE_ADDRESS": "10.169.6.20",
    "CMO_STATISTIC_RESTORE_ENABLE": 1,
    "CMO_STATISTIC_RESTORE_PASSWD": "123456",
    "CMO_STATISTIC_RESTORE_PROTOCOL": 1,
    "CMO_STATISTIC_RESTORE_VISUALPATH": "/opt"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.2.7 Interface for Querying Performance Dump Settings

Function

This interface is used to query performance dump settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/perf_data_restore

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_STATISTIC_RESTORE_ENABLE	Mandatory	string(uint32)	Switch of automatic dump. **The value is described as follows:** 0: off 1: on 2: dumped to the SVP server
CMO_STATISTIC_RESTORE_ADDRESS	Mandatory	string	Dumping server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
CMO_STATISTIC_RESTORE_VISUALPATH	Mandatory	string	The path for storing the performance monitoring statistics to be dumped.
CMO_STATISTIC_RESTORE_ACCOUNT	Mandatory	string	User name.
CMO_STATISTIC_RESTORE_PROTOCOL	Mandatory	string(enum)	Protocol. **The value is described as follows:** 0: FTP 1: SFTP

Example

- Querying performance dump settings.

```
Request: GET/deviceManager/rest/210235843910E6000009/perf_data_restore

Response:
{
    "data": {
```

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```
        "CMO_STATISTIC_RESTORE_ACCOUNT": "admin",
        "CMO_STATISTIC_RESTORE_ADDRESS": "10.169.6.20",
        "CMO_STATISTIC_RESTORE_ENABLE": 1,
        "CMO_STATISTIC_RESTORE_PROTOCOL": 1,
        "CMO_STATISTIC_RESTORE_VISUALPATH": "/opt"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.2.8 Interface for Testing Performance Dump Settings

Function

This interface is used to test performance dump setttings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/test_perf_data_restore

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_STATISTIC_RESTORE_ADDRESS	Mandatory	string	Dumping server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~255
CMO_STATISTIC_RESTORE_VISUALPATH	Mandatory	string	The path for storing the performance monitoring statistics to be dumped. **Length:**1~255
CMO_STATISTIC_RESTORE_ENABLE	Mandatory	uint32	Switch of automatic dump. **The value is described as follows:** 0:off 1:on 2:dumped to the SVP server
CMO_STATISTIC_RESTORE_ACCOUNT	Mandatory	string	User name. **Length:**1~63
CMO_STATISTIC_RESTORE_PROTOCOL	Mandatory	enum	Protocol. **The value is described as follows:** 0: FTP 1: SFTP

Result

N/A

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Example

- Testing performance dump setttings.

```
Request: POST /deviceManager/rest/210235843910E6000009/test_perf_data_restore

{
    "CMO_STATISTIC_RESTORE_ACCOUNT": "admin",
    "CMO_STATISTIC_RESTORE_ADDRESS": "10.169.6.20",
    "CMO_STATISTIC_RESTORE_ENABLE": 1,
    "CMO_STATISTIC_RESTORE_PROTOCOL": 1,
    "CMO_STATISTIC_RESTORE_VISUALPATH": "/opt"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.3.3 power_supply

4.3.3.1 Interface for Querying Power Consumption

Function

This interface is used to query power consumption.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/get/powerconsumption?START_TIME=${START_TIME}&TIME_TYPE=${TIME_TYPE}

Access Method

GET

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
TIME_TYPE	Mandatory	uint32	Statistics type. **The value is described as follows:** 0: year 1: month 2: day
START_TIME	Mandatory	uint64	Start time. **The value is described as follows:** The number of milliseconds in a date since midnight of January 1, 1970, according to UTC time.

Result

Parameter	Mandatory/Conditional	Type	Description
POWER_CONSUMPTION_VALUE	Mandatory	string(uint32)	Power consumption.
TIME_STAMP	Mandatory	string(uint64)	UTC timestamp.

Example

- Querying power consumption.

```
Request: GET /deviceManager/rest/210235843710E7000007/get/powerconsumption?
START_TIME=1451692800&TIME_TYPE=2

Response: {
    "data": [
        {
            POWER_CONSUMPTION_VALUE: "0",
            TIME_STAMP: "1451606400"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    },
}
```

4.4 vStore management

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4.4.1 vstore

4.4.1.1 Interface for Querying the Summary of vStore Resources

Function

This interface is used to query the summary of vStore resources.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_resource_summary

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16542:The summary of vStore resources
ID	Mandatory	string	ID.
fileSystemCapacity	Mandatory	string(uint64)	Total capacity of the file system.
fileSystemCount	Mandatory	string(uint32)	Number of the file system.

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Parameter	Mandatory/ Conditional	Type	Description
unmappedLUNTotalCapacity	Mandatory	string(uint64)	Total capacity of unmapped LUNs.
unmappedLUNCount	Mandatory	string(uint32)	Number of unmapped LUNs.
mappedLUNTotalCapacity	Mandatory	string(uint64)	Total capacity of mapped LUNs.
mappedLUNCount	Mandatory	string(uint32)	Number of mapped LUNs.
lunTotalCapacity	Mandatory	string(uint64)	Total capacity of LUNs.

Example

- Querying the summary of vStore resources.

```
Request: GET /deviceManager/rest/210235843710E7000007/vstore_resource_summary

Response:
 {
    "data": {
        "ID:"1",
        "TYPE":16542,
        "fileSystemCapacity":"0",
        "fileSystemCount":"0",
         "lunTotalCapacity":"0",
         "mappedLUNCount":"0",
         "mappedLUNTotalCapacity":"0",
         "unmappedLUNCount":"0",
         "unmappedLUNTotalCapacity":"0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.1.2 Interface for Deleting a vStore

Function

This interface is used to delete a vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore/${id}

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Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	vStore ID.

Result

N/A

Example

- Deleting a vStore.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/vstore/1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.1.3 Interface for Creating a vStore

Function

This interface is used to create a vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16442: vStore
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 1: normal 53: initializing
DESCRIPTION	Mandatory	string	Description.

Example

- Creating a vStore.

```
Request: POST /deviceManager/rest/210235843710E7000007/vstore
{
    "DESCRIPTION": "this is a vstore",
    "NAME": "vStore009"
}
```

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```
Response:
{
    "data":{
        "DESCRIPTION":"this is a vstore",
        "ID":"9",
        "NAME":"vStore009",
        "RUNNINGSTATUS":"53",
        "TYPE":16442
    },
    "error":{
        "code":0,
        "description":"0"
    }
}
```

4.4.1.4 Interface for Modifying vStore Information

Function

This interface is used to modify vStore information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	vStore ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
DESCRIPTION	Optional	string	Description. **Length:**0~255

Result

N/A

Example

- Modifying vStore information.

```
Request: PUT /deviceManager/rest/210235843710E7000007/vstore/1
{
    "DESCRIPTION": "123456"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.1.5 Interface for Querying vStore Information

Function

This interface is used to query basic information about vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	vStore ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16442: vStore
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 1: normal 53: initializing
DESCRIPTION	Mandatory	string	Description.

Example

- Querying basic information about vStore.

```
Request: GET /deviceManager/rest/210235843710E7000007/vstore/1

Response:
 {
    "data": {
        "DESCRIPTION":"",
        "ID":"1",
        "NAME":"vStore001",
        "RUNNINGSTATUS":"1",
        "TYPE":16442
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.4.1.6 Interface for Batch Querying vStore Information

Function

This interface is used to batch query vStore Information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16442: vStore
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 1: Normal 53: initializing
DESCRIPTION	Mandatory	string	Description.

Example

- Batch querying vStore Information.

```
Request: GET /deviceManager/rest/210235843710E7000007/vstore?range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "ID": "0",
            "NAME": "vStore001",
            "RUNNINGSTATUS": "1",
            "TYPE": 16442
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.1.7 Interface for Querying the Number of vStore

Function

This interface is used to query the number of vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	**The value is described as follows:** Parameters NAME and ID are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried vStore.

Example

- Querying the number of vStore.

```
Request: GET /deviceManager/rest/210235843910E6000009/vstore/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.1.8 Interface for Changing vStore View

Function

This interface is used to switch the vStore view.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/change_vstore_view

Access Method

PUT

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	vStore ID. **Note:**After the request is delivered, the vStore view is displayed. In the vStore view, all delivered requests will automatically added with the vstoreId field (requests without the field are not affected). If you want to switch back to the system view, deliver the request again and set the ID to 0.

Result

N/A

Example

- Switch the vStore view.

```
Request: PUT /deviceManager/rest/210235843710E7000007/change_vstore_view
{
    "ID": "1"
}


Response:
{
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2 hyper_metro_vstore_pair

4.4.2.1 Interface for Batch Querying Local vStores not Added to the vStore Pair

Function

This interface is used to batch query local vStores not added to the vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vStore/getbatchavailable

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16442:local vStore.
NAME	Mandatory	string	name
ID	Mandatory	string	ID

Example

- Batch querying local vStores not added to the vStore pair.

```
Request: GET /deviceManager/rest/1016964156/vStore/getbatchavailable?
range=[0-100]

Response:
{
    "data": [
       {
        "ID":"6",
        "NAME":"vStore006",
        "TYPE":16442
       }
     ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.4.2.2 Interface for Querying the Number of Local vStores not Added to the vStore Pair

Function

This interface is used to query the number of local vStores not added to the vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vStore/getbatchavailable/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of local vStores that are queried based on certain criteria.

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Example

- Querying the number of local vStores added to the vStore pair.

```
Request: GET /deviceManager/rest/1016964156/vStore/getbatchavailable/count

Response:
{
    "data": [{
        "COUNT": "1"
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.3 Interface for Querying the Number of Remote vStores not Added to the vStore Pair

Function

This interface is used to query the number of remote vStores not added to the vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_vstore/getbatchavailable/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by NAME is supported.
REMOTEDEVICEID	Mandatory	string	Remote device ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
USETYPE	Mandatory	enum	Usage. **The value is described as follows:** 1: HyperMetro 2: Replication

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of local vStores that are queried based on certain criteria.
USETYPE	Mandatory	enum	Usage. **The value is described as follows:** 1: HyperMetro 2: Replication

Example

- Querying the number of remote vStores not added to the vStore pair.

```
Request: GET /deviceManager/rest/1016964156/remote_vstore/getbatchavailable/
count?REMOTEDEVICEID=0&USETYPE=1

Response: {
    "data": [
        {
            "COUNT": "1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.4 Interface for Batch Querying Remote vStores not Added to the vStore Pair

Function

This interface is used to batch query remote vStores not added to the vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_vstore/getbatchavailable

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME is supported.
REMOTEDEVICEID	Mandatory	string	Remote device ID.
USETYPE	Mandatory	enum	Usage. **The value is described as follows:** 1: HyperMetro 2: Replication
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16543: Remote vStore
NAME	Mandatory	string	name.
ID	Mandatory	string	ID.
USETYPE	Mandatory	enum	usage. **The value is described as follows:** 1: HyperMetro 2: Replication

Example

- Batch querying remote vStores not added to the vStore pair.

```
Request: GET /deviceManager/rest/1016964156/remote_vstore/getbatchavailable?
REMOTEDEVICEID=0&USETYPE=1&range=[0-100]

Response:
{
    "data": [
        {
            "ID":"74",
            "NAME":"vStore006",
            "USETYPE":"1",
            "TYPE":16543
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.5 Interface for Querying the Number of HyperMetro vStore Pair Information

Function

This interface is used to query the number of HyperMetro vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by ID is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried HyperMetro vStore pair information.

Example

- Querying the number of HyperMetro vStore pair.

```
Request: GET /deviceManager/rest/1016964156/vstore_pair/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


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4.4.2.6 Interface for Performing a Primary_Secondary Switchover on a HyperMetro vStore Pair

Function

This interface is used to perform a primary_secondary switchover on a remote HyperMetro vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to switch over the working site of the HyperMetro vStore pair. In addition, if the capacities of the resources at the two ends that belong to the HyperMetro pair of the HyperMetro vStore pair are inconsistent, the following risks may arise:

1. If the capacity of the active resource is larger than that of the passive resource, the HyperMetro pair I/Os may become abnormal, HyperMetro pair may be interrupted unexpectedly, or the data at the two ends may become inconsistent.

2. If the capacity of the primary resource is smaller than that of the passive resource, the remaining space of the passive resource is wasted.

Suggestion: Before performing this operation, ensure that you need to switch over the host services to the non-working site of the vStore pair.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/SWAP_PRIMARY_SECONDARY

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro vStore Pair ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISFORCESWAP	Optional	bool	Whether to forcibly switch over. **The value is described as follows:** true:true false:false **Default:**false:false **Note:** 1 represent true 0 represent faslse

Result

N/A

Example

- Performing a primary_secondary switchover on a remote HyperMetro vStore pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/vstore_pair/
SWAP_PRIMARY_SECONDARY?ISFORCESWAP=1
{
    "ISFORCESWAP":"1",
    "ID":"4"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.7 Interface for Associate Querying HyperMetro vStore Pair Information

Function

This interface is used to query HyperMetro vStore pairs associated with vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/associate

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 16442: vStore
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15366: HyperMetro vStore pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 25: unsynchronized 35: invalid 93: force start
DOMAINID	Mandatory	string	HyperMetro domain ID.

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Parameter	Mandatory/ Conditional	Type	Description
DOMAINNAME	Mandatory	string	HyperMetro domain name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
CONFIGSTATUS	Mandatory	string(enum)	Configuration synchronization status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be recoverd
ROLE	Mandatory	string(enum)	Role. **The value is described as follows:** 0: non preferred 1: preferred
LOCALVSTOREID	Mandatory	string	Local vStore ID.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name.
PREFERREDMODE	Mandatory	string(enum)	Preferred site switchover mode. **The value is described as follows:** 0: consistent with the activated end 1: manual
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation status. **The value is described as follows:** 0: active 1: passive

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Example

- Querying HyperMetro HyperMetro vStore pairs associated with vStore.

```
Request: GET /deviceManager/rest/210235843910E6000009/vstore_pair/associate?
ASSOCIATEOBJTYPE=16442&ASSOCIATEOBJID=8

Response: {
    "data": [
        {
            "ACTIVEORPASSIVE": "0",
            "CONFIGSTATUS": "0",
            "DOMAINID": "643e8c453ffa0100",
            "DOMAINNAME": "G",
            "HEALTHSTATUS": "1",
            "ID": "643e8c453ffac000",
            "LINKSTATUS": "1",
            "LOCALVSTOREID": "8",
            "LOCALVSTORENAME": "cmq",
            "PREFERREDMODE": "0",
            "REMOTEVSTOREID": "8",
            "REMOTEVSTORENAME": "cmq",
            "ROLE": "0",
            "RUNNINGSTATUS": "1",
            "TYPE": 15366
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.8 Interface for Batch Querying HyperMetro vStore Pair Information

Function

This interface is used to batch query HyperMetro vStore pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
filter	Optional	string	Query criteria. **The value is described as follows:** Query by ID is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
CONFIGSTATUS	Mandatory	string(enum)	Configuration status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be recoverd
DOMAINID	Mandatory	string	HyperMetro domain ID.
DOMAINNAME	Mandatory	string	HyperMetro domain NAME.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
LOCALVSTOREID	Mandatory	string	Remote vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name.
ROLE	Mandatory	string(enum)	Role. **The value is described as follows:** 0: non preferred 1: preferred
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 25: unsynchronized 35: invalid 93: force start
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 15366: HyperMetro vStore pair
PREFERREDMODE	Mandatory	string(enum)	Preferred site switchover mode. **The value is described as follows:** 0: consistent with the activated end 1: manual

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Parameter	Mandatory/ Conditional	Type	Description
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation status. **The value is described as follows:** 0: active 1: passive

Example

- Batch querying HyperMetro vStore pairs.

```
Request: GET/deviceManager/rest/210235843910E6000009/vstore_pair?range=[0-100]
Response: {
    "data": [
        {
            "ACTIVEORPASSIVE": "0",
            "CONFIGSTATUS": "0",
            "DOMAINID": "0",
            "DOMAINNAME": "HyperMetroDomain_001",
            "HEALTHSTATUS": "1"
            "ID": "0",
            "LINKSTATUS": "1",
            "LOCALVSTOREID": "1",
            "LOCALVSTORENAME": "vStore001",
            "PREFERREDMODE": "0",
            "REMOTEVSTOREID": "4",
            "REMOTEVSTORENAME": "vStore001",
            "ROLE": "0",
            "RUNNINGSTATUS": "1",
            "TYPE": 15366
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.9 Interface for Forcibly Starting a HyperMetro vStore Pair

Function

This interface is used to forcibly start a HyperMetro vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are going to forcibly enable host access for local storage resource services of all member pairs in the HyperMetro vstore pair.

Before performing this operation, ensure that host access at the remote site is stopped. Otherwise, data loss may occur.

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Suggestion: Before performing this operation, disconnect the storage array at the remote site from hosts.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/start_force_vstore_pair

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro vStore Pair ID.

Result

N/A

Example

- Forcibly Starting a HyperMetro vStore pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/vstore_pair/
start_force_vstore_pair
{
    "ID":"4"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.10 Interface for Deleting a HyperMetro vStore Pair

Function

This interface is used to delete a HyperMetro vStore pair.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro vStore ID.
ISLOCALDELETEDONLY	Optional	bool	Whether a hyperMetro task can be locally deleted. **The value is described as follows:** true: yes false: no **Default:**false: no **Note:**Only delete the configuration information about the local device if the HyperMetro pair fails or the remote device is disconnected.

Result

N/A

Example

- Deleting a HyperMetro vStore pair.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/vstore_pair/1?
ISLOCALDELETEDONLY=false

Response:
{
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.11 Interface for Querying a HyperMetro vStore Pair Information

Function

This interface is used to query a HyperMetro vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro vStore Pair ID.

Result

Parameter	Mandatory/Conditional	Type	Description
CONFIGSTATUS	Mandatory	string(enum)	Configuration status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be recoverd
DOMAINID	Mandatory	string	HyperMetro domain ID.

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Parameter	Mandatory/ Conditional	Type	Description
DOMAINNAME	Mandatory	string	HyperMetro domain NAME.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
ID	Mandatory	string	ID.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
LOCALVSTOREID	Mandatory	string	Local vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name.
ROLE	Mandatory	string(enum)	Role. **The value is described as follows:** 0: non preferred 1: preferred
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 25: unsynchronized 35: invalid 93: force start
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 15366: HyperMetro vStore pair

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Parameter	Mandatory/ Conditional	Type	Description
PREFERREDMODE	Mandatory	string(enum)	Preferred site switchover mode. **The value is described as follows:** 0: consistent with the activated end 1: manual
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation status. **The value is described as follows:** 0: active 1: passive

Example

- Querying a HyperMetro vStore pair.

```
Request: GET /deviceManager/rest/210235843910E6000009/vstore_pair/
1051720c8a61c000

Response:
{
    "data": {
        "ACTIVEORPASSIVE":"0",
        "CONFIGSTATUS": "2",
        "DOMAINID": "30d17eb4f7610100",
        "DOMAINNAME": "HyperMetroDomain_001",
        "HEALTHSTATUS": "1",
        "ID": "1051720c8a61c000",
        "LINKSTATUS": "1",
        "LOCALVSTOREID": "6",
        "PREFERREDMODE": "0",
        "LOCALVSTORENAME": "Test_wGvStore006",
        "REMOTEVSTOREID": "5",
        "REMOTEVSTORENAME": "T4_vStore005",
        "ROLE": "0",
        "RUNNINGSTATUS": "1",
        "TYPE": 15366
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.12 Interface for Creating HyperMetro vStore Pairs

Function

This interface is used to create HyperMetro vStore pairs.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DOMAINID	Mandatory	string	HyperMetro domain ID.
LOCALVSTOREID	Mandatory	string	Local vStore ID.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
PREFERREDMODE	Optional	enum	Preferred site switchover mode. **The value is described as follows:** 0: consistent with the activated end 1: manual **Default:**0: consistent with the activated end
PREFERREDSITE	Conditional	enum	Preferred. **The value is described as follows:** 0: switch to local end 1: switch to remote end **Note:**This field must be delivered when the value of the PREFERREDMODE parameter is 1.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15366: HyperMetro vStore pair
ID	Mandatory	string	ID.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 25: unsynchronized 35: invalid 93: force start
DOMAINID	Mandatory	string	HyperMetro domain ID.
DOMAINNAME	Mandatory	string	HyperMetro domain name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
CONFIGSTATUS	Mandatory	string	Configuration status.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
ROLE	Mandatory	string(enum)	Role. **The value is described as follows:** 0: non preferred 1: preferred
LOCALVSTOREID	Mandatory	string	Local vStore ID.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.

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Parameter	Mandatory/ Conditional	Type	Description
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name.
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation status. **The value is described as follows:** 0: active 1: passive

Example

- Creating a HyperMetro vStore pair.

```
Request: POST /deviceManager/rest/210235843910E6000009/vstore_pair
{
      "DOMAINID":"0",
      "LOCALVSTOREID":"2",
       "REMOTEVSTOREID":"18" ,
       "PREFERREDMODE":"0"
   }

Response:
{
    "data": {
        "ACTIVEORPASSIVE":"1",
        "CONFIGSTATUS":"0",
        "DOMAINID":"0",
        "DOMAINNAME":"HyperMetroDomain_001",
        "HEALTHSTATUS": "1"
        "ID":"1",
        "LINKSTATUS":"1",
        "LOCALVSTOREID":"2",
        "LOCALVSTORENAME":"vStore002",
        "REMOTEVSTOREID":"18",
         "REMOTEVSTORENAME":"vStore002",
          "ROLE":"0",
          "RUNNINGSTATUS":"1",
          "TYPE": 15366
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.13 Interface for Showing HyperMetro vStore Pair Check Session

Function

This interface is used to show HyperMetro vStore pair check session.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/CHECK_HYPER_METRO_VSTORE_PAIR

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro vStore Pair ID.

Result

Parameter	Mandatory/Conditional	Type	Description
CONFIGSTATUS	Mandatory	string(enum)	HyperMetro vStore pair configuration status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be synchronized
FSCHECKRESULT	Mandatory	string(enum)	Result of checking the file system. **The value is described as follows:** 0: normal 15: abnormal 16: warning 19: invalid or unknown value

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Parameter	Mandatory/ Conditional	Type	Description
FSCONFIGCHECKRE-SULT	Mandatory	string(enum)	Result of checking the configuration status of the file system. **The value is described as follows:** 0: normal 9: the primary vstore contains file systems not configured with HyperMetro (not recommended) 10: the secondary vstore contains file systems not configured with HyperMetro (not recommended) 13: file system capacities at primary and secondary ends are inconsistent (not recommended) 14: file system names at primary and secondary ends are inconsistent 19: invalid or unknown value
FSHEALTHCHECKRE-SULT	Mandatory	string(enum)	Result of checking the health status of the file system. **The value is described as follows:** 0: normal 11: the primary vStore contains faulty file systems 12: the secondary vStore contains faulty file systems 19: invalid or unknown value

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Parameter	Mandatory/ Conditional	Type	Description
LIFCHECKRESULT	Mandatory	string(enum)	Result of checking the logical port. **The value is described as follows:** 0: normal 15: abnormal 19: invalid or unknown value
ID	Mandatory	string	HyperMetro vStore Pair ID.
LIFCONFIGCHECKRE-SULT	Mandatory	string(enum)	Result of checking the configuration status of the logical port. **The value is described as follows:** 0: normal 1: subnet masks of logical ports at two ends are inconsistent 4: IP addresses of logical ports at two ends are inconsistent 5: LIF roles of logical ports at two ends are inconsistent 6: types of current LIF ports at two ends are inconsistent 7: VLAN IDs of current LIF ports at two ends are inconsistent 8: gateways of logical ports at two ends are inconsistent 17: failback modes of logical ports at two ends are inconsistent 18: failover switches of logical ports at two ends are inconsistent 19: invalid or unknown value

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Parameter	Mandatory/ Conditional	Type	Description
LIFHEALTHCHECKRE-SULT	Mandatory	string(enum)	Result of checking the health status of the logical port. **The value is described as follows:** 0: normal 2: the primary LIF port of the primary end fails 3: the primary LIF port of the secondary end fails 19: invalid or unknown value
PAIRCHECKRESULT	Mandatory	string(enum)	Result of checking the HyperMetro vStore pair. **The value is described as follows:** 0: normal 15: abnormal 19: invalid or unknown value
RUNNINGSTATUS	Mandatory	string(enum)	HyperMetro vStore pair running status. **The value is described as follows:** 1: normal 25: unsynchronized 35: invalid 93: force start

Example

- Showing HyperMetro vStore Pair Check Session.

```
Request: GET/deviceManager/rest/1016964156/vstore_pair/
CHEK_HYPER_METRO_VSTORE_PAIR?ID=0Response: {
    "data": [
        {
            "CONFIGSTATUS": "0",
            "FSCHECKRESULT": "0",
            "FSCONFIGCHECKRESULT": "0",
            "FSHEALTHCHECKRESULT": "0",
            "ID": "0",
            "LIFCHECKRESULT": "15",
            "LIFCONFIGCHECKRESULT": "0",
            "LIFHEALTHCHECKRESULT": "2",
            "PAIRCHECKRESULT": "0",
            "RUNNINGSTATUS": "1"
        }
```

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```
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.2.14 Interface for Modifying the Preferred Site for NAS-based HyperMetro

Function

This interface is used to modify the Preferred Site for NAS-based HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vstore_pair/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro vStore Pair ID.
PREFERREDMODE	Mandatory	enum	Preferred site switchover mode. **The value is described as follows:** 0: consistent with the activated end 1: manual

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Parameter	Mandatory/Optional/Conditional	Type	Description
PREFERREDSITE	Conditional	enum	Preferred. **The value is described as follows:** 0: switch to local end 1: switch to remote end **Note:**This field must be delivered when the value of the PREFERREDMODE parameter is 1.

Result

N/A

Example

- Modifying the Preferred Site for NAS-based HyperMetro.

```
Request: PUT /deviceManager/rest/210235843910E6000009/vstore_pair/0
{
    "ID": "0",
    "PREFERREDMODE": "0"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3 remote_replication_vstore_pair

4.4.3.1 Interface for Batch Querying Remote Replication vStore Pair Information

Function

This interface is used to batch query remote replication vStore pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** Range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query.
filter	Optional	string	Query criteria. **The value is described as follows:** Query by IDs is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 2000: replication vStore pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 26: split 35: invalid 100: to be synchronized
IDENTITYPERSERVE	Mandatory	string(enum)	Wheter to retain the host access method. **The value is described as follows:** 0: no 1: yes
LOCALVSTOREID	Mandatory	string	Local vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name. **Note:**After the remote replication vStore pair is deleted at the remote end, the name of the remote vStore displayed for the local vStore is not precise and two hyphens (--) may be displayed.
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTEDEVICENAME	Mandatory	string	Remote device name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
REMOTEDEVICESN	Mandatory	string	Remote device SN.

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Parameter	Mandatory/ Conditional	Type	Description
ROLE	Mandatory	string(uint32)	Role. **The value is described as follows:** 0: primary 1: secondary
SECVSTOREACCESS	Mandatory	string(enum)	Read/write permission of the secondary end. **The value is described as follows:** 2: read-only 3: read/write
FORCIBLYDEACTIVA-TELOGICALPORT	Mandatory	string(enum)	Port status of the local vStore. **The value is described as follows:** 0: active 1: inactive 255: --
VSTCFGSTATUS	Mandatory	string(enum)	Remote replication vStore pair configuration status. **The value is described as follows:** 1: normal 23: synchronizing 100: to be synchronized

Example

- Batch querying remote replication vStore pairs.

```
Request: GET /deviceManager/rest/2102350DJV10EC000001/replication_vstorepair?
range=[0-100]

Response: {
    "data": [
        {
            "HEALTHSTATUS": "1",
            " ID": "4846fb8ca1790000,
            "IDENTITYPERSERVE": "1",
            "LINKSTATUS": "1",
            "LOCALVSTOREID": "3",
            "LOCALVSTORENAME": "sss",
            "REMOTEDEVICEID": "0",
            "REMOTEDEVICENAME": "LocalStorage",
            "REMOTEDEVICESN": "5345A4C89612455DA54B",
            "REMOTEVSTOREID": "157",
            "REMOTEVSTORENAME": "sss",
```

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```
            "ROLE": "1",
            "RUNNINGSTATUS": "1",
            "SECVSTOREACCESS": "2",
            "TYPE": 2000,
            "VSTCFGSTATUS": "1",
            "FORCIBLYDEACTIVATELOGICALPORT":"0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.2 Interface for Associate Querying Remote Replication vStore Pair Information

Function

This interface is used to query remote replication vStore pairs associated with vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 16442: vStore
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 2000: replication vStore pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 26: split 35: invalid 100: to be synchronized
IDENTITYPERSERVE	Mandatory	string(enum)	Wheter to retain the host access method. **The value is described as follows:** 0: no 1: yes
LOCALVSTOREID	Mandatory	string	Local vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name. **Note:**After the remote replication vStore pair is deleted at the remote end, the name of the remote vStore displayed for the local vStore is not precise and two hyphens (--) may be displayed.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTEDEVICENAME	Mandatory	string	Remote device name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
REMOTEDEVICESN	Mandatory	string	Remote device SN.
ROLE	Mandatory	string(uint32)	Role. **The value is described as follows:** 0: primary 1: secondary
SECVSTOREACCESS	Mandatory	string(enum)	Read/write permission of the secondary end. **The value is described as follows:** 2: read-only 3: read/write
FORCIBLYDEACTIVATELOGICALPORT	Mandatory	string(enum)	Port status of the local vStore. **The value is described as follows:** 0: active 1: inactive 255: --
VSTCFGSTATUS	Mandatory	string(enum)	Remote replication vStore pair configuration status. **The value is described as follows:** 1: normal 23: synchronizing 100: to be synchronized

Example

- Querying remote replication vStore pairs associated with vStore.

```
Request: GET /deviceManager/rest/2102350DJV10EC000001/replication_vstorepair/
associate?ASSOCIATEOBJTYPE=16442&ASSOCIATEOBJID=3
```

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```
Response: {
    "data": [
        {
            "HEALTHSTATUS": "1",
            " ID": "4846fb8ca1790000,
            "IDENTITYPERSERVE": "1",
            "LINKSTATUS": "1",
            "LOCALVSTOREID": "3",
            "LOCALVSTORENAME": "sss",
            "REMOTEDEVICEID": "0",
            "REMOTEDEVICENAME": "LocalStorage",
            "REMOTEDEVICESN": "5345A4C89612455DA54B",
            "REMOTEVSTOREID": "157",
            "REMOTEVSTORENAME": "sss",
            "ROLE": "1",
            "RUNNINGSTATUS": "1",
            "SECVSTOREACCESS": "2",
            "TYPE": 2000,
            "VSTCFGSTATUS": "1",
            "FORCIBLYDEACTIVATELOGICALPORT":"0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.3 Interface for Setting Secondary Resource Protection for a Remote Replication vStore Pair

Function

This interface is used to set the secondary resource protection for a remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to modify the read-write attribute of the secondary end of the remote replication vStore pair. This operation causes the following results:

1. The read-write attribute of the secondary end of the remote replication vStore pair is modified.

2. The attribute of the secondary end of the remote replication pair in the remote replication vStore pair is modified.

Suggestion: Before performing this operation, confirm the read-write attribute of the secondary end of the remote replication vStore pair, and confirm the read-write attribute of the secondary end of the remote replication pair in the vStore pair.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication pair ID.
SECVSTOREACCESS	Mandatory	enum	Status of secondary resource protection. **The value is described as follows:** 2: Read-only 3: Read/write

Result

N/A

Example

- Setting the secondary resource protection for a remote replication vStore pair.

```
Request: PUT /deviceManager/rest/5345A4C89612455DA54B/replication_vstorepair
{
    "ID": "643e8c453ffb0000",
    "SECVSTOREACCESS": "3"
}
Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.4 Interface for Creating Remote Replication vStore Pair

Function

This interface is used to create remote replication vStore pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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HighRisk

You are about to create a remote replication vStore pair. If the value of "Identity Preserve" is "true", it indicates that all configurations are synchronized, and IP addresses and domain names for accessing the primary and secondary end are consistent. Ensure that the IP address of the primary and secondary end are not activated at the same time.

Suggestion: Before performing this operation, check whether the selected primary and secondary resource and the configured parameters are correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LOCALVSTOREID	Mandatory	string	Local vStore ID.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEDEVICEID	Mandatory	string	Remote device ID.
FTRTYPE	Mandatory	unit32	Feature Type. **The value is described as follows:** 1: remote replication vStore pair
IDENTITYPERSERVE	Mandatory	enum	Wheter to retain the host access method. **The value is described as follows:** 0: no 1: yes

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 2000: replication vStore pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 26: split 35: invalid 100: to be synchronized
IDENTITYPERSERVE	Mandatory	string(enum)	Wheter to retain the host access method. **The value is described as follows:** 0: no 1: yes
LOCALVSTOREID	Mandatory	string	Local vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name. **Note:**After the remote replication vStore pair is deleted at the remote end, the name of the remote vStore displayed for the local vStore is not precise and two hyphens (--) may be displayed.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTEDEVICENAME	Mandatory	string	Remote device name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
REMOTEDEVICESN	Mandatory	string	Remote device SN.
ROLE	Mandatory	string(uint32)	Role. **The value is described as follows:** 0: primary 1: secondary
SECVSTOREACCESS	Mandatory	string(enum)	Read/write permission of the secondary end. **The value is described as follows:** 2: read-only 3: read/write
FORCIBLYDEACTIVATELOGICALPORT	Mandatory	string(enum)	Port status of the local vStore. **The value is described as follows:** 0: active 1: inactive 255: --
VSTCFGSTATUS	Mandatory	string(enum)	Remote replication vStore pair configuration status. **The value is described as follows:** 1: normal 23: synchronizing 100: to be synchronized

Example

- Creating a remote replication vStore pair.

```
Request: POST /deviceManager/rest/210235843910E6000009/replication_vstorepair
```

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```
{
    "FTRTYPE": 1,
    "IDENTITYPERSERVE": "1",
    "LOCALVSTOREID": "4",
    "REMOTEDEVICEID": "0",
    "REMOTEVSTOREID": "4"
}

Response: {
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "643e8c453ffb0002",
        "IDENTITYPERSERVE": "1",
        "LINKSTATUS": "1",
        "LOCALVSTOREID": "4",
        "LOCALVSTORENAME": "cmq3",
        "REMOTEDEVICEID": "0",
        "REMOTEDEVICENAME": "LocalStorage",
        "REMOTEDEVICESN": "5345A4C89612455DA54B",
        "REMOTEVSTOREID": "4",
        "REMOTEVSTORENAME": "cmq3",
        "ROLE": "0",
        "RUNNINGSTATUS": "100",
        "SECVSTOREACCESS": "2",
        "TYPE": 2000,
        "VSTCFGSTATUS": "100",
        "FORCIBLYDEACTIVATELOGICALPORT":"0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.5 Interface for Deleting a Remote Replication vStore Pair

Function

This interface is used to delete a remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication vStore pair ID.
ISLOCALDELETEDONLY	Optional	bool	Whether a hyperMetro task can be locally deleted. **The value is described as follows:** true: yes false: no **Default:**false: no **Note:**Only delete the configuration information about the local device if the remote replication vstore pair fails or the remote device is disconnected.

Result

N/A

Example

- Deleting a remote replication vStore pair.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
replication_vstorepair/1?ISLOCALDELETEDONLY=false

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.6 Interface for Querying the Number of Remote Replication vStore Pair Information

Function

This interface is used to query the number of remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by ID is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried remote replication vStore pair information.

Example

- Querying the number of remote replication vStore pair.

```
Request: GET /deviceManager/rest/1016964156/replication_vstorepair/count

Response: {
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.4.3.7 Interface for Performing a Primary_Secondary Switchover on a Remote Replication vStore Pair

Function

This interface is used to perform a primary_secondary switchover on a remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to perform primary-secondary switchover of the remote replication vStore pair. This operation causes the following results:

1. The primary and secondary ends of the remote replication vStore pair exchange.

2. The primary and secondary ends of the remote replication pair in the remote replication vStore pair exchange.

Suggestion: Before performing this operation, check the primary-secondary relationship of the remote replication vStore pair that you want to switch over, and check the primary-secondary relationship of the remote replication pair in the vStore pair.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/switch

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication vStore pair ID.

Result

N/A

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Example

- Performing a primary_secondary switchover on a remote replication vStore pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATION_VSTOREPAIR/
switch

{
    "ID": "4"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.8 Interface for Querying a Remote Replication vStore Pair Information

Function

This interface is used to query a remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication vStore pair ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 2000: replication vStore pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 26: split 35: invalid 100: to be synchronized
IDENTITYPERSERVE	Mandatory	string(enum)	Wheter to retain the host access method. **The value is described as follows:** 0: no 1: yes
LOCALVSTOREID	Mandatory	string	Local vStore ID.
LOCALVSTORENAME	Mandatory	string	Local vStore name.
REMOTEVSTOREID	Mandatory	string	Remote vStore ID.
REMOTEVSTORENAME	Mandatory	string	Remote vStore name.
REMOTEDEVICEID	Mandatory	string	Remote device ID.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEDEVICENAME	Mandatory	string	Remote device name. **Note:**After the remote replication vStore pair is deleted at the remote end, the name of the remote vStore displayed for the local vStore is not precise and two hyphens (--) may be displayed.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
REMOTEDEVICESN	Mandatory	string	Remote device SN.
ROLE	Mandatory	string(uint32)	Role. **The value is described as follows:** 0: primary 1: secondary
SECVSTOREACCESS	Mandatory	string(enum)	Read/write permission of the secondary end. **The value is described as follows:** 2: read-only 3: read/write
FORCIBLYDEACTIVATELOGICALPORT	Mandatory	string(enum)	Port status of the local vStore. **The value is described as follows:** 0: active 1: inactive 255: --
VSTCFGSTATUS	Mandatory	string(enum)	Remote replication vStore pair configuration status. **The value is described as follows:** 1: normal 23: synchronizing 100: to be synchronized

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Example

- Querying a remote replication vStore pair.

```
Request: GET /deviceManager/rest/2102350DJV10EC000001/REPLICATION_VSTOREPAIR/
4846fb8ca1790000

Response:
{
    "data": {
        "HEALTHSTATUS": "1",
        " ID": "4846fb8ca1790000",
        "IDENTITYPERSERVE": "1",
        "LINKSTATUS": "1",
        "LOCALVSTOREID": "3",
        "LOCALVSTORENAME": "sss",
        "REMOTEDEVICEID": "0",
        "REMOTEDEVICENAME": "LocalStorage",
        "REMOTEDEVICESN": "5345A4C89612455DA54B",
        "REMOTEVSTOREID": "157",
        "REMOTEVSTORENAME": "sss",
        "ROLE": "1",
        "RUNNINGSTATUS": "1",
        "SECVSTOREACCESS": "2",
        "TYPE": 2000,
        "VSTCFGSTATUS": "1",
        "FORCIBLYDEACTIVATELOGICALPORT":"0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.9 Interface for Synchronizing a Remote Replication vStore Pair

Function

This interface is used to synchronize a remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/sync

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication vStore pair ID.

Result

N/A

Example

- Synchronizing a remote replication vStore pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATION_VSTOREPAIR/
sync
{
    "ID": "4846fb8ca15c0004"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.10 Interface for Splitting a Remote Replication vStore Pair

Function

This interface is used to split a remote replication vStore pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to split the primary resource from the secondary resource in remote replication vStore pair({0}). This operation causes the data on the secondary resource to become inconsistent with the data on the primary resource.

Suggestion: Before performing this operation, determine whether the split is necessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/split

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication vStore pair ID.

Result

N/A

Example

- Splitting a remote replication vStore pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATION_VSTOREPAIR/
split
{
    "ID": "4846fb8ca15c0004"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.4.3.11 Interface for Deactivating All Logical Ports of the Local vStore of the Remote Replication vStore Pair

Function

This interface is used to deactivate all logical ports of the local vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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HighRisk

You are about to activate all the logical ports of the local vStore of the remote replication vStore pair. If the logical port of the remote vStore is in the active state, this operation will cause service interruption and IP conflict. Suggestion: Before performing this operation, confirm that all logical ports of the remote vStore are in the inactive state.
You are about to deactivate all the logical ports of the local vStore of the remote replication vStore pair. This operation will cause service interruption or cause service exceptions. Suggestion: Before you perform this operation, determine whether the modification is necessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATION_VSTOREPAIR/inOrActive

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication vStore pair ID.
FORCIBLYDEACTIVATELOGICALPORT	Mandatory	enum	The port status of local vStore. **The value is described as follows:** 0: active 1: inactive

Result

N/A

Example

- Deactivating all logical ports of the local vStore.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATION_VSTOREPAIR/inOrActive
```

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```
{
    "ID": "4846fb8ca15c0004",
    "FORCIBLYDEACTIVATELOGICALPORT":"0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5 Alarm management

4.5.1 snmp

4.5.1.1 Interface for Querying SNMP Trap Settings

Function

This interface is used to query SNMP Trap Settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_trap_addr

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_TRAP_SERVER_IP	Mandatory	string	Trap server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
CMO_TRAP_SERVER_PORT	Mandatory	string(uint32)	Trap server port. **The value is described as follows:** The value ranges from 1 to 65535.
CMO_TRAP_SERVER_USER	Mandatory	string	USM username.
ID	Mandatory	string	Object ID.
CMO_TRAP_SERVER_TYPE	Mandatory	string(enum)	Trap server type. **The value is described as follows:** 1: Parsed 2: Original 3: All 4:Parsed alarm oid 5:Parsed time string 6:Original time string
CMO_TRAP_VERSION	Mandatory	string(enum)	Trap version. **The value is described as follows:** 1: SNMPv1 2: SNMPv2c 3: SNMPv3

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Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string	Type number of the managed object. **The value is described as follows:** 240: SNMP_TRAP_ADDR

Example

- Querying SNMP Trap Settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/snmp_trap_addr
{

}

Response: {
    "data": [
        {
            "CMO_TRAP_SERVER_IP": "1.2.3.1",
            "CMO_TRAP_SERVER_PORT": "162",
            "CMO_TRAP_SERVER_TYPE": "3",
            "CMO_TRAP_SERVER_USER": "dddddd",
            "CMO_TRAP_VERSION": "3",
            "ID": "0",
            "TYPE": 240
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.1.2 Interface for Querying USM User Information

Function

This interface is used to query USM user information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_usm/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	USM user ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 242: SNMP_USM
ID	Mandatory	string	USM user ID.
CMO_USM_AUTH_PROT	Mandatory	string(enum)	Authentication protocol type. **The value is described as follows:** 0: MD5 1: NONE 3: SHA
CMO_USM_ISDEFAULT	Mandatory	string(bool)	Whether the USM user is a default user. **The value is described as follows:** true: yes false: no **Note:**Deprecated.
CMO_USM_PRIV_PROT	Mandatory	string(enum)	Data encryption protocol type. **The value is described as follows:** 0: NONE 2: DES 3: 3DES 4: AES

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Parameter	Mandatory/ Conditional	Type	Description
CMO_USM_USER	Mandatory	string	Security user name.
CMO_USM_USER_LEVEL	Mandatory	string(uint16)	User level. **The value is described as follows:** 0: read/write user 1: read-only user

Example

- Querying USM user information.

```
Request: GET /deviceManager/rest/210235843910E6000009/snmp_usm/dddddd

Response:
{
 "data": {
  "CMO_USM_AUTH_PROT": "3",
  "CMO_USM_ISDEFAULT": "false",
  "CMO_USM_PRIV_PROT": "4",
  "CMO_USM_USER": "dddddd",
  "CMO_USM_USER_LEVEL": "0",
  "ID": "dddddd",
  "TYPE": 242
 },
 "error": {
  "code": 0,
  "description": "0"
 }
}
```

4.5.1.3 Interface for Deleting a USM User

Function

This interface is used to delete a USM user.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_usm/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.

Result

N/A

Example

- Deleting a USM user.

```
Request: DELEDE /deviceManager/rest/210235843910E6000009/snmp_usm/dddddd

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.1.4 Interface for Modifying USM User Information

Function

This interface is used to modify USM user information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_usm

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_USM_USER	Mandatory	string	Security user name. **Length:**4~32
CMO_USM_AUTH_PROT	Optional	enum	Authentication protocol type. **The value is described as follows:** 0: MD5 1: NONE 3: SHA
CMO_USM_PASSWD	Conditional	string	Authentication password. **Note:** 1. For the user to be modified that has configured CMO_USM_PASSWD (no matter whether the protocol is NONE), if CMO_USM_PASSWD is not modified, the latest delivered password will be used. 2. For the user to be modified that does not configure CMO_USM_PASSWD, if the value of CMO_USM_AUTH_PROT changes from NONE to MD5 or SHA, delivering the field is mandatory; if the value changes to NONE, delivering the field is optional.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_USM_PRIV_PASSWD	Conditional	string	Data encryption password. **Note:** 1. For the user to be modified that has configured CMO_USM_PRIV_PASSWD (no matter whether the protocol is NONE), if CMO_USM_PRIV_PASSWD is not modified, the latest delivered password will be used. 2. For the user to be modified that does not configure CMO_USM_PRIV_PASSWD, if the value of CMO_USM_PRIV_PROT changes from NONE to DES, 3DES, or AES, delivering the field is mandatory; if the value changes to NONE, delivering the field is optional.
CMO_USM_PRIV_PROT	Optional	enum	Data encryption protocol type. **The value is described as follows:** 0: NONE 2: DES 3: 3DES 4: AES
CMO_USM_USER_LEVEL	Optional	uint16	User level. **The value is described as follows:** 0: read/write user 1: read-only user

Result

N/A

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Example

- Modifying USM user information.

```
Request: PUT /deviceManager/rest/210235843910E6000009/snmp_usm
{
    "CMO_USM_USER": "dddddd",
    "CMO_USM_USER_LEVEL": "0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.1.5 Interface for Adding a USM User

Function

This interface is used to add a USM user.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_usm

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_USM_AUTH_PROT	Mandatory	enum	Authentication protocol type. **The value is described as follows:** 0: MD5 1: NONE 3: SHA

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_USM_PASSWD	Conditional	string	Authentication password. **Note:**This field must be delivered when the value of CMO_USM_AUTH_PROT is not "NONE".
CMO_USM_PRIV_PASSWD	Conditional	string	Data encryption password. **Note:**This field must be delivered when the value of CMO_USM_PRIV_PROT is not "NONE".
CMO_USM_PRIV_PROT	Mandatory	enum	Data encryption protocol type. **The value is described as follows:** 0: NONE 2: DES 3: 3DES 4: AES
CMO_USM_USER	Mandatory	string	Security user name. **Length:**4~32
CMO_USM_USER_LEVEL	Optional	uint16	User level. **The value is described as follows:** 0: read/write user 1: read-only user **Default:**0: read/write user

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 242: SNMP_USM

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	USM user ID.
CMO_USM_AUTH_PROT	Mandatory	string(enum)	Authentication protocol type. **The value is described as follows:** 0: MD5 1: NONE 3: SHA
CMO_USM_ISDEFAULT	Mandatory	string(bool)	Whether the USM user is a default user. **The value is described as follows:** true: yes false: no **Note:**Deprecated.
CMO_USM_PRIV_PROT	Mandatory	string(enum)	Data encryption protocol type. **The value is described as follows:** 0: NONE 2: DES 3: 3DES 4: AES
CMO_USM_USER	Mandatory	string	Security user name.
CMO_USM_USER_LEVEL	Mandatory	string(uint16)	User level. **The value is described as follows:** 0: read/write user 1: read-only user

Example

- Adding a USM user.

```
Request: POST /deviceManager/rest/210235843910E6000009/snmp_usm
{
     "CMO_USM_AUTH_PROT": "3",
     "CMO_USM_PASSWD": "Admin@storage",
     "CMO_USM_PRIV_PASSWD": "Admin@123456",
     "CMO_USM_PRIV_PROT": "4",
     "CMO_USM_USER": "dddddd",
     "CMO_USM_USER_LEVEL": "0"
}

Response:
```

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```
{
 "data": {
      "CMO_USM_AUTH_PROT": "3",
      "CMO_USM_ISDEFAULT": "false",
      "CMO_USM_PRIV_PROT": "4",
      "CMO_USM_USER": "dddddd",
      "CMO_USM_USER_LEVEL": "0",
      "ID": "dddddd",
      "TYPE": 242
 },
 "error": {
      "code": 0,
      "description": "0"
 }
}
```

4.5.1.6 Interface for Adding an SNMP Trap Server Address

Function

This interface is used to add an SNMP Trap server address.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_trap_addr

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_TRAP_SERVER_IP	Mandatory	string	Trap server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
CMO_TRAP_SERVER_PORT	Mandatory	uint32	Trap server port. **The value is described as follows:** The value ranges from 1 to 65535.
CMO_TRAP_SERVER_USER	Conditional	string	USM username. **Length:**4~32 **Note:**This field is delivered only when the Trap server type is SNMPv3.
CMO_TRAP_SERVER_TYPE	Optional	enum	Trap server type. **The value is described as follows:** 1: Parsed 2: Original 3: All 4:Parsed alarm oid 5:Parsed time string 6:Original time string **Default:**3: All

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_TRAP_VERSION	Optional	enum	Trap version. **The value is described as follows:** 1: SNMPv1 2: SNMPv2c 3: SNMPv3 **Default:**1: SNMPv1

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	ID.
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 240: SNMP_TRAP_ADDR
CMO_TRAP_SERVER_IP	Mandatory	string	Trap server address. **The value is described as follows:** IPV4,IPV6 or domain is supported.
CMO_TRAP_SERVER_PORT	Mandatory	string(uint32)	Trap server port. **The value is described as follows:** The value ranges from 1 to 65535.
CMO_TRAP_SERVER_USER	Mandatory	string	USM username.

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Parameter	Mandatory/ Conditional	Type	Description
CMO_TRAP_SERVER_TYPE	Mandatory	string(enum)	Trap server type. **The value is described as follows:** 1: Parsed 2: Original 3: All 4:Parsed alarm oid 5:Parsed time string 6:Original time string
CMO_TRAP_VERSION	Mandatory	string(enum)	Trap version. **The value is described as follows:** 1: SNMPv1 2: SNMPv2c 3: SNMPv3

Example

- Adding an SNMP Trap server address.

```
Request: POST /deviceManager/rest/210235843910E6000009/snmp_trap_addr
{
    "CMO_TRAP_SERVER_IP": "www.test.com",
        "CMO_TRAP_SERVER_PORT": "162",
        "CMO_TRAP_SERVER_TYPE": "3",
        "CMO_TRAP_SERVER_USER": "test",
        "CMO_TRAP_VERSION": "3"
}

Response:
{
    "data": {
        "CMO_TRAP_SERVER_IP": "www.test.com",
        "CMO_TRAP_SERVER_PORT": "162",
        "CMO_TRAP_SERVER_TYPE": "3",
        "CMO_TRAP_SERVER_USER": "test",
        "CMO_TRAP_VERSION": "3",
        "ID": "2",
        "TYPE": 240
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.1.7 Interface for Batch Querying USM User Information

Function

This interface is used to query USM user information in batches.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_usm

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 242: SNMP_USM
ID	Mandatory	string	USM user ID.
CMO_USM_AUTH_PROT	Mandatory	string(enum)	Authentication protocol type. **The value is described as follows:** 0: MD5 1: NONE 3: SHA
CMO_USM_ISDEFAULT	Mandatory	string(bool)	Whether the USM user is a default user. **The value is described as follows:** true: yes false: no **Note:**Deprecated.

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Parameter	Mandatory/ Conditional	Type	Description
CMO_USM_PRIV_PROT	Mandatory	string(enum)	Data encryption protocol type. **The value is described as follows:** 0: NONE 2: DES 3: 3DES 4: AES
CMO_USM_USER	Mandatory	string	Security user name.
CMO_USM_USER_LEVEL	Mandatory	string(uint16)	User level. **The value is described as follows:** 0: read/write user 1: read-only user

Example

- Querying USM user information in batches.

```
Request: GET /deviceManager/rest/210235843910E6000009/snmp_usm

Response:
{
    "data": [
        {
            "CMO_USM_AUTH_PROT": "3",
            "CMO_USM_ISDEFAULT": "false",
            "CMO_USM_PRIV_PROT": "4",
            "CMO_USM_USER": "dddddd",
            "CMO_USM_USER_LEVEL": "0",
            "ID": "dddddd",
            "TYPE": 242
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.1.8 Interface for Deleting an SNMP Trap Server Address

Function

This interface is used to delete an SNMP Trap server address.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_trap_addr/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.

Result

N/A

Example

- Deleting an SNMP Trap server address.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/snmp_trap_addr/2

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
}
```

4.5.1.9 Interface for Modifying an SNMP Trap Server Address

Function

This interface is used to modify an SNMP Trap server address.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_trap_addr/${id}

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_TRAP_SERVER_IP	Mandatory	string	Trap server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
CMO_TRAP_SERVER_TYPE	Optional	enum	Trap server type. **The value is described as follows:** 1: Parsed 2: Original 3: All 4:Parsed alarm oid 5:Parsed time string 6:Original time string **Default:**3: All
CMO_TRAP_SERVER_USER	Conditional	string	USM username. **Length:**4~32 **Note:**This field is delivered only when the Trap server type is SNMPv3.
ID	Mandatory	string	Object ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_TRAP_SERVER_PORT	Mandatory	uint32	Trap server port. **The value is described as follows:** The value ranges from 1 to 65535.
CMO_TRAP_VERSION	Optional	enum	Trap version. **The value is described as follows:** 1: SNMPv1 2: SNMPv2c 3: SNMPv3 **Default:**1: SNMPv1

Result

N/A

Example

- Modifying an SNMP Trap server address.

```
Request: PUT/deviceManager/rest/210235843910E6000009/snmp_trap_addr/2
{
    "CMO_TRAP_SERVER_IP":"1.1.1.1",
    "CMO_TRAP_SERVER_PORT":"162",
    "CMO_TRAP_SERVER_TYPE":"3",
    "CMO_TRAP_SERVER_USER":"dddddd",
    "CMO_TRAP_VERSION":"3",
    "ID":"2"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.1.10 Interface for Testing an SNMP Trap Server Address

Function

This interface is used to test an SNMP Trap server address.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snmp_trap_addr/send_test_trapmsg

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_TRAP_SERVER_PORT	Mandatory	uint32	Trap server port. **The value is described as follows:** The value ranges from 1 to 65535.
CMO_TRAP_SERVER_USER	Conditional	string	USM username. **Length:**4~32 **Note:**This field is delivered only when the Trap server type is SNMPv3.
CMO_TRAP_SERVER_IP	Mandatory	string	Trap server address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_TRAP_VERSION	Mandatory	enum	Trap version. **The value is described as follows:** 1: SNMPv1 2: SNMPv2c 3: SNMPv3
CMO_TRAP_SERVER_TYPE	Mandatory	enum	Trap server type. **The value is described as follows:** 1: Parsed 2: Original 3: All 4:Parsed alarm oid 5:Parsed time string 6:Original time string

Result

N/A

Example

- Testing an SNMP Trap server address.

```
Request: PUT /deviceManager/rest/210235843910E6000009/snmp_trap_addr/
send_test_trapmsg
{
    "CMO_TRAP_SERVER_IP":"1.1.1.1",
    "CMO_TRAP_SERVER_PORT":"162",
    "CMO_TRAP_SERVER_TYPE":"3",
    "CMO_TRAP_SERVER_USER":"dddddd",
    "CMO_TRAP_VERSION":"3"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2 alarm

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4.5.2.1 Interface for Querying the Address Information About a Storage System Maintenance Terminal

Function

This interface is used to query the address information about a storage system maintenance terminal.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/client_info

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_CLIENT_NAME	Mandatory	string	Address information about a storage system maintenance terminal. **The value is described as follows:** The value contains 1 to 511 characters,excluding single quotation marks (‘).

Example

- Querying the address information about a storage system maintenance terminal.

```
Request: GET /deviceManager/rest/210235843910E6000009/client_info

Response: {
    "data": [
        {
            "CMO_CLIENT_NAME": "CLIENTINFO"
```

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```
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.2 Interface for Modifying the Address Information About a Storage System Maintenance Terminal

Function

This interface is used to modify the address information about a storage system maintenance terminal.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/client_info

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_CLIENT_NAME	Mandatory	string	Address information about a storage system maintenance terminal. **The value is described as follows:** The value contains 1 to 511 characters,excluding single quotation marks ('). **Length:**1~511

Result

N/A

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Example

- Modifying the address information about a storage system maintenance terminal.

```
Request: PUT /deviceManager/rest/210235843910E6000009/client_info
{
    "CMO_CLIENT_NAME": "clientName"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.3 Interface for Querying the Number of Historical Alarms and Events

Function

This interface is used to query the number of historical alarms and events.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm/historyalarm/count

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters level, startTime, alarmStatus, type and alarmObjType are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	uint32	Number of alarms.

Example

- Querying the total number of historical alarms.

```
Request: GET /deviceManager/rest/210235843710E7000007/alarm/historyalarm/
count?sortby=startTime,d

Response:
{
    "data": {
        "COUNT": 6776
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.4 Interface for Clearing an Alarm

Function

This interface is used to clear an alarm.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm/currentalarm

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/ Conditional	Type	Description
sequence	Mandatory	uint32	Alarm SN.

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Result

N/A

Example

- Clearing an alarm.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/alarm/currentalarm?
sequence=3482

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.5 Interface for Querying the Number of Current Alarms

Function

This interface is used to query the number of current alarms.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm/currentalarm/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters level, startTime, and alarmObjType are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	uint32	Number of alarms.

Example

- Querying the number of major alarms generated between 2015-12-01 and 2015-12-31.

```
Request: GET /deviceManager/rest/210235843710E7000007/alarm/currentalarm/
count?filter=level::5%20and%20startTime:[1448899200,1451577599]

Response:
{
    "data": {
        "COUNT": 35
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.6 Interface for Querying Current Alarm Information

Function

This interface is used to query the list of current alarms.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm/currentalarm

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters level, startTime and alarmObjType are supported.
range	Optional	string	Range query is supported. **Note:**A maximum of 10000 results can be returned.
sortby	Optional	string	Sorting fields. Sorting the startTime field is supported. **The value is described as follows:** startTime,d indicates a descending order. **Default:**startTime,d **Note:**Currently, only a descending order is supported.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
alarmStatus	Mandatory	enum	Alarm status. **The value is described as follows:** 1:Unrecovered 2:Cleared 4:Recovered

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Parameter	Mandatory/ Conditional	Type	Description
clearName	Mandatory	string	User name that clears the alarm.
detail	Mandatory	string	Alarm details.
recoverTime	Mandatory	uint64	Time when the fault is rectified.
clearTime	Mandatory	uint64	Time when the alarm is cleared.
startTime	Mandatory	uint64	Time when the alarm is generated.
type	Mandatory	enum	Type. **The value is described as follows:** 1: alarm
eventID	Mandatory	uint64	Decimal alarm ID.
level	Mandatory	enum	Alarm severity. **The value is described as follows:** 3: warning 5: major 6: critical
description	Mandatory	string	Alarm description.
sequence	Mandatory	uint32	Alarm SN.
name	Mandatory	string	Alarm name.
suggestion	Mandatory	string	Alarm clear suggestion.
alarmObjType	Mandatory	string	Type of the alarm object.
eventParam	Mandatory	string	Param of the alarm.
strEventID	Mandatory	string	Hexadecimal ID of the alarm.
confirmTime	Mandatory	uint64	Time when the alarm is confirmed.
location	Mandatory	string	Information about the module where the alarm occurred.
sourceID	Mandatory	string	ID of the alarm source.
sourceType	Mandatory	string	Type of the alarm source.

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Parameter	Mandatory/ Conditional	Type	Description
position	Mandatory	uint32	The field is meaningless. **Note:**The field is not used.
room	Mandatory	string	The field is meaningless. **Note:**The field is not used.

Example

- Querying the first 100 major alarms reported between 2015-12-01 and 2015-12-31 in descending order by time.

```
Request: GET /deviceManager/rest/210235843710E7000007/alarm/currentalarm?
filter=level::5%20and%20startTime:
[1448899200,1451577599]&sortby=startTime,d&range=[0-100]

Response:
{
    "data": [
        {
            "alarmObjType": 244,
            "alarmStatus": 1,
            "clearName": 0,
            "clearTime": 0,
            "confirmTime": 0,
            "description": "The license feature (SmartDedupe(for FS)) has
expired.",
            "detail": "The license feature (SmartDedupe(for FS)) has expired
and entered the trial period. It will become invalid the day after
2016-01-10.",
            "eventID": 4039704578,
            "eventParam": "51,2016-01-10",
            "level": 5,
            "location": "param1=admin,param2= 100.136.1.96",
            "name": "License Has Expired",
            "position": 0,
            "recoverTime": 0,
            "room": "",
            "sequence": 17333,
            "sourceID": "",
            "sourceType": "",
            "startTime": 1450588315,
            "strEventID": "0xF0C90002",
            "suggestion": "Purchase and import required license files.",
            "type": 1
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.5.2.7 Interface for Querying Historical Alarms and Events Information

Function

This interface is used to query historical alarms and events.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm/historyalarm

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters level, startTime, alarmStatus, type and alarmObjType are supported.
range	Optional	string	Range query is supported. **Note:**A maximum of 10000 results can be returned.
sortby	Optional	string	Sorting fields. Sorting the startTime field is supported. **The value is described as follows:** startTime,d indicates a descending order. **Default:**startTime,d **Note:**Currently, only a descending order is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
clearName	Mandatory	string	User name that clears the alarm.
detail	Mandatory	string	Alarm details.
type	Mandatory	enum	Type. **The value is described as follows:** 0: event 1: alarm 2: cleared alarm 3: operation log 4: running log
recoverTime	Mandatory	uint64	Time when the fault is rectified.
clearTime	Mandatory	uint64	Time when the alarm is cleared.
startTime	Mandatory	uint64	Time when the alarm is generated.
eventID	Mandatory	uint64	Decimal alarm ID.
level	Mandatory	enum	Alarm severity. **The value is described as follows:** 2: info 3: warning 5: major 6: critical
description	Mandatory	string	Alarm description.
sequence	Mandatory	uint32	Alarm SN.

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Parameter	Mandatory/ Conditional	Type	Description
name	Mandatory	string	Alarm name.
suggestion	Mandatory	string	Alarm clear suggestion.
alarmObjType	Mandatory	string	Type of the alarm object.
eventParam	Mandatory	string	Param of the alarm.
strEventID	Mandatory	string	Hexadecimal ID of the alarm.
alarmStatus	Mandatory	enum	Alarm status. **The value is described as follows:** 1:Unrecovered 2:Cleared 4:Recovered
confirmTime	Mandatory	uint64	Time when the alarm is confirmed.
location	Mandatory	string	Information about the module where the alarm occurred.
sourceID	Mandatory	string	ID of the alarm source.
sourceType	Mandatory	string	Type of the alarm source.
position	Mandatory	uint32	The field is meaningless. **Note:**The field is not used.
room	Mandatory	string	The field is meaningless. **Note:**The field is not used.

Example

- Querying historical alarms and events generated between 2016-1-1 and 2016-1-31.

```
Request: GET /deviceManager/rest/210235843710E7000007/alarm/historyalarm?
filter=level: : 2%20and%20startTime:
[1451577600,1454255999]&sortby=startTime,d&range=[0-100]

Response: {
    "data": [
        {
            "alarmObjType": 202,
            "clearName": 0,
            "clearTime": 0,
            "confirmTime": 0,
            "description": "The login of the user (user name admin) from the
source (100.136.1.96) succeeded.",
```

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```
            "detail": "The login of the user (user name admin) from the
source (100.136.1.96) succeeded.",
            "eventID": 35248799350805,
            "eventParam": "admin, 100.136.1.96",
            "level": 2,
            "location": "param1=admin,param2= 100.136.1.96",
            "name": "User Login Succeeded",
            "position": 0,
            "recoverTime": 0,
            "room": "",
            "sequence": 50522,
            "sourceID": "",
            "sourceType": "",
            "startTime": 1459746295,
            "strEventID": "0x200F002A0015",
            "suggestion": "N/A",
            "type": 0,
            "alarmStatus": 1
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.5.2.8 Interface for Modifying Alarm Masking

Function

This interface is used to modify alarm masking.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to enable the alarm masking function.This operation will make the masked alarms are neither reported to the DeviceManager nor sent by email, short message, or syslog. But the alarm masking function does not affect email test alarms and short message test alarms.

Suggestion: Before performing this operation, ensure that the alarms need to be masked.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_definition

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_ID	Mandatory	enum	Alarm ID.
enableClose	Mandatory	bool	Switch of the alarm masking function. **The value is described as follows:** true: enable false: disable

Result

N/A

Example

- Enabling alarm masking.

```
Request: PUT /deviceManager/rest/210235843910E6000009/alarm_definition
{
    "CMO_ALARM_ID": "64425164820",
    "enableClose": true
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Disabling alarm masking.

```
Request: PUT /deviceManager/rest/210235843910E6000009/alarm_definition
{
    "CMO_ALARM_ID": "64425164820",
    "enableClose": false
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.9 Interface for Adding Recipient Email Addresses

Function

The interface is used to add recipient email addresses.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/email/add_alarm_email

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
newRecipientEmail	Mandatory	string	Recipient email addresses. **Length:**1~255
alarmSeverityList	Mandatory	array	Alarm severity. **The value is described as follows:** 3: warning 5: major 6: critical

Result

N/A

Example

- Adding recipient email addresses.

```
Request: POST /deviceManager/rest/210235843710E7000007/email/add_alarm_email
{
   "newRecipientEmail":"2311212@qq.com",
   "alarmSeverityList":[6]
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.5.2.10 Interface for Deleting Recipient Email Addresses

Function

This interface is used to delete recipient email addresses.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/email/remove_alarm_email/?oldRecipientEmail=${oldRecipientEmail}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
oldRecipientEmail	Mandatory	string	Old recipient email address. **Length:**1~255

Result

N/A

Example

- Deleting recipient email addresses.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/email/
remove_alarm_email/?oldRecipientEmail=2@2.com

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.5.2.11 Interface for Testing Recipient Email Addresses

Function

This interface is used to test recipient email addresses.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/email/send_test_email

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_EMAIL_LEVEL_ENABLE	Optional	enum	Whether to show alarm severities in email titles. **The value is described as follows:** 0: no 1: yes
CMO_EMAIL_SUBJECT	Optional	string	Email title prefix. **Length:**0~511
CMO_EMAIL_SMTP_SERVER	Mandatory	string	SMTP service address. **Length:**1~255
CMO_EMAIL_SENDER	Mandatory	string	Sender. **Length:**1~255
CMO_EMAIL_NEED_SMTP_CHECK	Mandatory	uint32	Whether SMTP verification is required. **The value is described as follows:** 0: no 1: yes

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_EMAIL_SMTP_USER_NAME	Conditional	string	Identification user name. **Length:**1~63 **Note:**Yes when SMTP server verification is selected.
CMO_EMAIL_SMTP_USER_PASSWD	Optional	string	Identification user password. **Length:**1~63 **Note:**If this field is not delivered, use the last value that has been successfully configured.
CMO_EMAIL_RECEIVER	Mandatory	string	List of recipient email addresses.
CMO_EMAIL_SSL	Optional	uint32	Whether SSL connections are used. **The value is described as follows:** 0: not encrypted 1: SSL/TLS 3: STARTTLS
CMO_EMAIL_SMTP_SERVER_PORT	Optional	uint32	SMTP port number. **The value is described as follows:** 1~65535

Result

N/A

Example

- Testing recipient email address.

```
Request: PUT /deviceManager/rest/210235843910E6000009/email/send_test_email
{
    "CMO_EMAIL_SUBJECT": "123456789",
    "CMO_EMAIL_LEVEL_ENABLE": "1",
    "CMO_EMAIL_SMTP_SERVER": "yanggd01.test",
    "CMO_EMAIL_SENDER": "test1@foxmail.com",
    "CMO_EMAIL_NEED_SMTP_CHECK": "1",
    "CMO_EMAIL_SMTP_USER_NAME": "admin12333",
    "CMO_EMAIL_SMTP_USER_PASSWD":"Admin@123",
    "CMO_EMAIL_RECEIVER": "1234566@qq.com,1234566@qq.com,",
    "CMO_EMAIL_SSL": "3",
    "CMO_EMAIL_SMTP_SERVER_PORT": 25
}
```

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```
Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.12 Interface for Deleting Recipient Phone Numbers

Function

This interface is used to delete recipient phone numbers.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_sms/remove_alarm_sms/?oldRecipientPhoneNumber=${oldRecipientPhoneNumber}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
oldRecipientPhoneNum-ber	Mandatory	string	Old recipient phone number. **Length:**3~31

Result

N/A

Example

- Deleting recipient phone numbers.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/alarm_sms/
remove_alarm_sms/?oldRecipientPhoneNumber=123213

Response:
{
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.13 Interface for Adding Recipient Phone Numbers

Function

This interface is used to add recipient phone numbers.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_sms/add_alarm_sms

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
newRecipientPhoneNumber	Mandatory	string	Recipient phone number. **Length:**3~31
alarmSeverityList	Mandatory	array	Alarm severity. **The value is described as follows:** 3: warning 5: major 6: critical

Result

N/A

Example

- Adding recipient phone numbers.

```
Request: POST /deviceManager/rest/210235843710E7000007/alarm_sms/add_alarm_sms
{
```

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```
   "newRecipientPhoneNumber":"18227424430",
   "alarmSeverityList":[6,5]
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.14 Interface for Changing Recipient Phone Numbers

Function

This interface is used to change recipient phone numbers.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_sms/modify_alarm_sms

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
newRecipientPhoneNumber	Mandatory	string	New recipient phone number. **Length:**3~31
oldRecipientPhoneNumber	Mandatory	string	Old recipient phone number. **Length:**3~31
alarmSeverityList	Mandatory	array	Alarm severity. **The value is described as follows:** 3: warning 5: major 6: critical

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Result

N/A

Example

- Change recipient phone numbers.

```
Request: PUT /deviceManager/rest/210235843710E7000007/alarm_sms/
modify_alarm_sms
{
    "oldRecipientPhoneNumber": "182284481415",
    "newRecipientPhoneNumber": "18228448141",
    "alarmSeverityList": [6]
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.15 Interface for Sending Test Short Messages

Function

This interface is used to send test short messages.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_sms/send_test_sms

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SMS_SEND_COUNTRY	Mandatory	uint32	Country code. **The value is described as follows:** The value can be "0", "1", or "86".
CMO_SMS_RECEIVER	Mandatory	string	Recipient phone number.
CMO_SMS_SERVICE_CENTRE	Mandatory	string	Short message service center phone number. **Length:**3~31 **Note:**The phone number of the SM service center starts with +country code.

Result

N/A

Example

- Sending test short messages.

```
Request: PUT/deviceManager/rest/210235843710E7000007/alarm_sms/send_test_sms
{
    "CMO_SMS_SEND_COUNTRY": "86",
    "CMO_SMS_RECEIVER": "82244251,82244251,",
    "CMO_SMS_SERVICE_CENTRE": "+861222555523333336663366622"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.16 Interface for Setting Short Message Notification

Function

This interface is used to set short message notification.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_sms

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SMS_SERVICE_CENTRE	Mandatory	string	Short message service center phone number. **Length:**3~31 **Note:**The phone number of the SM service center starts with +country code.
CMO_SMS_SEND_COUNTRY	Mandatory	string	Country code. **The value is described as follows:** The value can be "0", "1", or "86".
CMO_SMS_NEED_SEND	Mandatory	uint32	Whether to send short messages. **The value is described as follows:** 0:no 1:yes

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SMS_RECEIVER	Conditional	string	Recipient phone number and alarm severity. For example, "123456789;18225527432,123456789;18225527432,123456789;18225527432". Alarm severities (Critical, Major, and Warning) are separated by commas (,). Recipient phone numbers are separated by semicolons (;). **Note:**In the initialization scenario,a recipient phone number must be delivered.

Result

N/A

Example

- Setting short message notification.

```
Request: PUT /deviceManager/rest/210235843710E7000007/alarm_sms
{
    "CMO_SMS_NEED_SEND": "1",
     "CMO_SMS_SEND_COUNTRY": "86",
     "CMO_SMS_SERVICE_CENTRE": "+86123456"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.17 Interface for Querying Short Message Notifications

Function

This interface is used to query short message notifications.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_sms

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_SMS_NEED_SEND	Mandatory	string(uint32)	Whether to send short messages.
CMO_SMS_RECEIVER	Mandatory	string	Recipient phone number.
CMO_SMS_SEND_COUNTRY	Mandatory	string(uint32)	Country code.
CMO_SMS_SERVICE_CENTRE	Mandatory	string	Short message service center phone number.

Example

- Querying short message notifications.

```
Request: GET /deviceManager/rest/210235843710E7000007/alarm_sms

Response: {
    "data": {
        CMO_SMS_NEED_SEND: "1",
        CMO_SMS_RECEIVER:
"18224427430;1562364;156332364877777,156332364877777,",
        CMO_SMS_SEND_COUNTRY: "86",
        CMO_SMS_SERVICE_CENTRE: "+861234555"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.18 Interface for Setting Email Notifications

Function

This interface is used to set email notifications.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/email

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_EMAIL_SUBJECT	Optional	string	Email title prefix. **Length:**0~511
CMO_EMAIL_SMTP_USER_PASSWD	Optional	string	Identification user password. **Length:**1~63
CMO_EMAIL_LEVEL_ENABLE	Optional	enum	Whether to show alarm severities in email titles. **The value is described as follows:** 0: no 1: yes **Default:**0: no
CMO_EMAIL_SENDER	Mandatory	string	Sender. **Length:**1~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_EMAIL_SMTP_SERVER	Mandatory	string	SMTP service address. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
CMO_EMAIL_NEED_SEND	Optional	enum	Whether to send email. **The value is described as follows:** 0: no 1: yes **Default:**0: no
CMO_EMAIL_NEED_SMTP_CHECK	Mandatory	enum	Whether SMTP verification is required. **The value is described as follows:** 0: no 1: yes
CMO_EMAIL_SMTP_USER_NAME	Conditional	string	Identification user name. **Length:**1~63 **Note:**This field needs to be delivered when the value of CMO_EMAIL_NEED_SMTP_CHECK is 1.
CMO_EMAIL_SSL	Optional	uint32	Whether SSL connections are used. **The value is described as follows:** 0: not encrypted 1: SSL/TLS 3: STARTTLS **Default:**0: not encrypted

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_EMAIL_SMTP_SERVER_PORT	Optional	uint32	SMTP port number. **The value is described as follows:** 1~65535 **Default:**25
CMO_EMAIL_RECEIVER	Conditional	string	Recipient email address list and alarm severity. For example, "1411559652@qq.com; 2323999352@qq.com, 1411559652@qq.com; 2323999352@qq.com, 1411559652@qq.com; 2323999352@qq.com". Alarm severities (Critical, Major, and Warning) are separated by commas (,). Recipient phone numbers are separated by semicolons (;). **Note:**In the initialization scenario, a recipient email address list must be delivered.

Result

N/A

Example

- Setting email notifications.

```
Request: PUT /deviceManager/rest/210235843710E7000007/email
{
        "CMO_EMAIL_LEVEL_ENABLE": "0",
        "CMO_EMAIL_NEED_SEND": "1",
        "CMO_EMAIL_NEED_SMTP_CHECK": "0",
        "CMO_EMAIL_SENDER": "23139993219@qq.com",
        "CMO_EMAIL_RECEIVER":"15215515@qq.com;12212121@qq.com,
12212121@qq.com,",
        "CMO_EMAIL_SMTP_SERVER": "100.136.1.35",
        "CMO_EMAIL_SMTP_SERVER_PORT": "24",
        "CMO_EMAIL_SSL": "3",
        "CMO_EMAIL_SUBJECT": "sd"
}

Response: {
    "data": { },
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.5.2.19 Interface for Modifying Recipient Email Addresses

Function

The interface is used to modify recipient email addresses.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/email/modify_alarm_email

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
newRecipientEmail	Mandatory	string	New recipient email address. **Length:**1~255
oldRecipientEmail	Mandatory	string	Old recipient email address. **Length:**1~255
alarmSeverityList	Mandatory	array	Alarm severity. **The value is described as follows:** 3: warning 5: major 6: critical

Result

N/A

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Example

- Modifying recipient email addresses.

```
Request: PUT/deviceManager/rest/210235843710E7000007/email/modify_alarm_email
{
    "oldRecipientEmail": "1411559465@qq.com",
    "newRecipientEmail": "1411559466@qq.com",
    "alarmSeverityList": [6]
}

Response: {
    "data": {

    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.20 Interface for Querying Syslog Notification

Function

This interface is used to query Syslog notification.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/syslog

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
OM_MSG_OP_SET_ALARM_SYSLOG_CFG	Mandatory	string(enum)	Whether to enable the Syslog notification function. **The value is described as follows:** 0: disabled 1: enabled
CMO_ALARM_SYSLOG_SERVER_IP	Mandatory	string	Receiver server addresses.
CMO_SYSLOG_ALARM_RECOVERY_ENABLE	Mandatory	string(bool)	Send Alarm Restore Notification switch. **The value is described as follows:** true: enabled false: disabled
WHETHER_SEND_DEVICE_NAME	Mandatory	string(bool)	Whether to enable Send Device Name. **The value is described as follows:** true: enabled false: disabled
SYSLOG_SERVER_CHANNEL_PROTOCOL	Mandatory	string(enum)	Transfer protocol. **The value is described as follows:** 1: UDP 2: TCP 3: TCP+SSL/TLS
CMO_ALARM_SYSLOG_SEVERITY	Mandatory	string(uint32)	Indicates the lowest alarm level for a storage system to report alarms. **The value is described as follows:** 2: informational 3: warning 5: major 6: critical

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Parameter	Mandatory/ Conditional	Type	Description
CMO_SYSLOG_ALARM_ENABLE	Mandatory	string(bool)	Send Alarm switch. **The value is described as follows:** true: enabled false: disabled
CMO_SYSLOG_EVENT_ENABLE	Mandatory	string(bool)	Send Event switch. **The value is described as follows:** true: enabled false: disabled
SYSLOG_SERVER_PORT	Mandatory	string(uint32)	Port number.

Example

- Querying Syslog notification.

```
Request: GET /deviceManager/rest/210235843710E7000007/syslog

Response:
{
    "data": [
        {
            "CMO_ALARM_SYSLOG_SERVER_IP": "test.com",
            "CMO_ALARM_SYSLOG_SEVERITY": "2",
            "CMO_SYSLOG_ALARM_ENABLE": "true",
            "CMO_SYSLOG_ALARM_RECOVERY_ENABLE": "false",
            "CMO_SYSLOG_EVENT_ENABLE": "false",
            "OM_MSG_OP_SET_ALARM_SYSLOG_CFG": "1",
            "SYSLOG_SERVER_CHANNEL_PROTOCOL": "1",
            "SYSLOG_SERVER_PORT": "514",
            "WHETHER_SEND_DEVICE_NAME": "false"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.21 Interface for Querying Remote Alarm Settings

Function

This interface is used to query remote alarm settings.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_alarm

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_HEALTH_WATCH_INFO_ENABLE	Mandatory	string(uint32)	Remote alarm transmission switch. **The value is described as follows:** 0: disable 1: enable
CMO_HEALTH_WATCH_INFO_PERIOD	Mandatory	string(uint32)	Period of remote alarm transmission. **The value is described as follows:** 1~168 **Unit:**hours

Example

- Querying remote alarm settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/remote_alarm

Response: {
    "data": [
        {
            "CMO_HEALTH_WATCH_INFO_ENABLE": "1",
            "CMO_HEALTH_WATCH_INFO_PERIOD": "168"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.5.2.22 Interface for Modifying Remote Alarm Settings

Function

This interface is used to modify remote alarm settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_alarm

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_HEALTH_WATCH_INFO_PERIOD	Mandatory	uint32	Period of remote alarm transmission. **The value is described as follows:** 1~168 **Unit:**hours
CMO_HEALTH_WATCH_INFO_ENABLE	Mandatory	uint32	Remote alarm transmission switch. **The value is described as follows:** 0: disable 1: enable

Result

N/A

Example

- Modifying remote alarm settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/remote_alarm
{
```

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```
    "CMO_HEALTH_WATCH_INFO_ENABLE": "1",
    "CMO_HEALTH_WATCH_INFO_PERIOD": 168
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.23 Interface for Setting Syslog Notification

Function

This interface is used to set Syslog notification.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/syslog

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_SYSLOG_SEVERITY	Optional	uint32	Indicates the lowest alarm level for a storage system to report alarms. **The value is described as follows:** 2: informational 3: warning 5: major 6: critical

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Parameter	Mandatory/Optional/Conditional	Type	Description
SYSLOG_SERVER_CHANNEL_PROTOCOL	Conditional	enum	Transfer protocol. **The value is described as follows:** 1: UDP 2: TCP 3: TCP+SSL/TLS **Note:**The field must be delivered when parameter CMO_TEST_SYSLOG_SERVER (determining whether to detect connectivity of the server address) is true.
CMO_SYSLOG_EVENT_ENABLE	Optional	bool	Send Event switch. **The value is described as follows:** true: enabled false: disabled
WHETHER_SEND_DEVICE_NAME	Optional	bool	Whether to enable Send Device Name. **The value is described as follows:** true: enabled false: disabled
OM_MSG_OP_SET_ALARM_SYSLOG_CFG	Optional	uint32	Whether to enable the Syslog notification function. **The value is described as follows:** 0: disabled 1: enabled
SYSLOG_SERVER_PORT	Conditional	uint32	Port number. **The value is described as follows:** The value ranges from 1 to 65535. **Note:**The field must be delivered when parameter CMO_TEST_SYSLOG_SERVER (determining whether to detect connectivity of the server address) is true.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SYSLOG_ALARM_ENABLE	Optional	bool	Send Alarm switch. **The value is described as follows:** true: enabled false: disabled
CMO_SYSLOG_ALARM_RECOVERY_ENABLE	Optional	bool	Send Alarm Restore Notification switch. **The value is described as follows:** true: enabled false: disabled
CMO_TEST_SYSLOG_SERVER	Optional	bool	Whether to detect connectivity. **The value is described as follows:** true: detect false: not detect

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Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_SYSLOG_SERVER_IP	Conditional	string	Receiver server addresses. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. A maximum of four addresses can be configured and separated with commas (,). **Length:**1-255 **Note:**The field must be delivered when parameter CMO_TEST_SYSLOG_SERVER (determining whether to detect connectivity of the server address) is true.

Result

N/A

Example

- Setting Syslog notification.

```
Request: PUT /deviceManager/rest/210235843710E7000007/syslog

{
    "OM_MSG_OP_SET_ALARM_SYSLOG_CFG": 0
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.5.2.24 Interface for Adding Receiver Server Addresses

Function

This interface is used to add receiver server addresses.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/syslog_addip

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_SYSLOG_SERVER_IP	Mandatory	string	Receiver server addresses. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~255

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Result

N/A

Example

- Adding receiver server addresses.

```
Request: POST /deviceManager/rest/210235843710E7000007/syslog_addip

{
    "CMO_ALARM_SYSLOG_SERVER_IP": "server"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.25 Interface for Removing Receiver Server Addresses

Function

This interface is used to remove receiver server addresses.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/syslog_removeip

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_SYSLOG_SERVER_IP	Mandatory	string	Receiver server addresses. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~255

Result

N/A

Example

- Removing receiver server addresses.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/syslog_removeip?
CMO_ALARM_SYSLOG_SERVER_IP=fdsafdsa1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.26 Interface for Exporting System Logs

Function

This interface is used to export system logs.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/exportAllLog

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
tag	Mandatory	string	Export operation flag. **The value is described as follows:** package: packing logs getpath: obtaining the path check: checking whether logs can be downloaded Node ID: downloading logs
exportall	Optional	string	Flag for exporting all logs. **The value is described as follows:** The value is true when all logs are exported. **Note:**If this parameter is not configured, only recent logs are exported by default.
nid	Conditional	string	Node ID. **Note:**The value must be configured for checking whether logs can be downloaded.

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Result

Parameter	Mandatory/ Conditional	Type	Description
description	Conditional	string	Description. **Note:**The value is returned when the path for exporting system logs is queried.
name	Conditional	string	Log file name. **Note:**The value is returned when the path for exporting system logs is queried and the log files are successfully exported.
nodeid	Conditional	string	Node ID. **Note:**The value is returned when the path for exporting system logs is queried.
result	Conditional	uint32	Export result. **The value is described as follows:** 0: successful 1: exporting 2: partially successful 3: busy 4: failed 5: export node offline 6: insufficient memory on export node 100: downloading 101: download successful 102: download failed **Note:**The value is returned when the path for exporting system logs is queried.

Usage Guidelines

File streams are returned.

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Example

- Packing all system logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportAllLog?
tag=package&exportall=true

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Obtaining the path for exporting system logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportAllLog?tag=getpath

Response:
 {
    "data": [
        {
            "description":"",
            "name":"log_controller_0A_MAIN.tgz",
            "nodeid":"0A",
            "result":101
        },
        {
            "description":"",
            "nodeid":"0B",
            "result":0
        }
    ],
    "error": {
        "code": 0,
        "description": ""
    }
}
```

- Checking whether system logs can be downloaded.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportAllLog?
tag=check&nid=0A

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Downloading system logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportAllLog?tag=0A

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.5.2.27 Interface for Querying Alarm Maskings

Function

This interface is used to query alarm maskings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_definition

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters CMO_ALARM_OBJ_TYPE, CMO_ALARM_LEVEL, and enableClose are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Parameter	Mandatory/Optional/Conditional	Type	Description
language	Optional	enum	Language. **The value is described as follows:** 1: EN 2: ZH_CN **Default:**1: EN

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16435: ALARM_DEFINITION
ID	Mandatory	string	ID.
CMO_ALARM_ID	Mandatory	string(uint64)	Alarm ID.
CMO_ALARM_LEVEL	Mandatory	string(uint32)	Alarm severity. **The value is described as follows:** 2: Infomational 3: warning 5: major 6: critical
CMO_ALARM_NAME	Mandatory	string	Alarm name.

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Parameter	Mandatory/ Conditional	Type	Description
CMO_ALARM_OBJ_TYPE	Mandatory	string(enum)	Alarm object type. **The value is described as follows:** 6: port 10: disk 11: LUN 14: host group 21: host 23: power 27: snapshot 29: file system snapshot 40: file system 49: event 103: performance 113: om 201: system 202: user 203: domain 206: enclosure 207: controller 208: expand board module 209: interface module 210: backup power module 211: fan module 216: storage pool 217: storage tier 218: smart cache pool 219: LUN copy 220: clone 221: consistent group 224: remote device 232: PCIE data switch 234: SFP optical transceiver 238: LDAP configuration 244: license 245: mapping view

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Parameter	Mandatory/ Conditional	Type	Description
			253: LUN migration task 256: LUN group 257: port group 263: replication pair 266: disk domain 268: cache partition 269: QoS 270: LUN destroy data 273: smart cache partition 279: lif 280: VLAN 285: anti-virus 289: failover group 293: hyper vault 305: mirror domain 306: Assistant Cooling Unit 350: DDP 414: ODX 525: iSNS 558: upgrade 562: ethernet 580: initiator 583: LUN mirror 813: MMC 813: block device 818: device manager 822: SystemReporter 823: Server Agent 15361: HyperMetro 15362:HyperMetroDomain 15363: QuorumServer 15364: HyperMetroConsistency-Group 15365: QuorumServerLink

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Parameter	Mandatory/ Conditional	Type	Description
			15366: Hyper Metro Vstore Pair 16386: protocol cluster 16398: protocol 16442: vStore 16445: quota tree 16446: resource user 16450: HTTP service 16451: FTP service 16452: NFS service 16453: CIFS service 16457: home directory 16458: file system quota 16494: NDMP 20480: Certificate Management 20481: PAIR 32760: smis 57350: virtual machine
enableClose	Mandatory	string(bool)	Switch of the alarm masking function. **The value is described as follows:** true: enable false: disable
isExistAlarm	Mandatory	string(bool)	Whether uncleared fault alarms exist. **The value is described as follows:** true: yes false: no

Example

- Querying alarm maskings.

```
Request: GET /deviceManager/rest/210235843910E6000009/alarm_definition?
language=1&range=[0-100]

Response:
{
 "data": [
     {
```

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```
        "CMO_ALARM_ID": "14155777",
        "CMO_ALARM_LEVEL": "5",
        "CMO_ALARM_NAME": "Storage Pool Remaining Capacity Is Insufficient",
        "CMO_ALARM_OBJ_TYPE": "216",
        "ID": "0",
        "TYPE": 16435,
        "enableClose": "false",
        "isExistAlarm": "false"
    }
],
 "error": {
  "code": 0,
  "description": "0"
 }
}
```

4.5.2.28 Interface for Querying Email Notifications

Function

This interface is used to query email notifications.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/email

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_EMAIL_LEVEL_ENABLE	Conditional	string(enum)	Whether to show alarm severities in email titles. **The value is described as follows:** 0: no 1: yes

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Parameter	Mandatory/ Conditional	Type	Description
CMO_EMAIL_NEED_SEND	Mandatory	string(uint32)	Whether to send email. **The value is described as follows:** 0: no 1: yes
CMO_EMAIL_NEED_SMTP_CHECK	Mandatory	string(uint32)	Whether SMTP verification is required. **The value is described as follows:** 0: no 1: yes
CMO_EMAIL_RECEIVER	Mandatory	string	Recipient email address list.
CMO_EMAIL_SUBJECT	Conditional	string	Email title prefix.
CMO_EMAIL_SSL	Mandatory	string(uint32)	Whether SSL connections are used. **The value is described as follows:** 0: not encrypted 1: SSL/TLS 3: STARTTLS
CMO_EMAIL_SMTP_USER_NAME	Mandatory	string	Identification user name.
CMO_EMAIL_SENDER	Mandatory	string	Sender.
CMO_EMAIL_SMTP_SERVER	Mandatory	string	SMTP service address.
CMO_EMAIL_SMTP_SERVER_PORT	Mandatory	string(uint32)	SMTP port number. **The value is described as follows:** 1~65535

Example

- Querying email notifications.

```
Request: GET /deviceManager/rest/210235843710E7000007/email

Response: {
    "data": {
        "CMO_EMAIL_LEVEL_ENABLE": "0",
        "CMO_EMAIL_NEED_SEND": "1",
        "CMO_EMAIL_NEED_SMTP_CHECK": "1",
```

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```
        "CMO_EMAIL_RECEIVER": "2313999329@qq.com;huawei123@123.com,,",
        "CMO_EMAIL_SENDER": "23139993219@qq.com",
        "CMO_EMAIL_SMTP_SERVER": "100.136.1.35",
        "CMO_EMAIL_SMTP_SERVER_PORT": "24",
        "CMO_EMAIL_SMTP_USER_NAME": "asdasd",
        "CMO_EMAIL_SSL": "3",
        "CMO_EMAIL_SUBJECT": "23"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.29 Interface for Setting Alarm Dump

Function

This interface is used to set alarm dump.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_restore

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_RESTORE_ADDRESS	Mandatory	string	Address of the dump server. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~63
CMO_ALARM_RESTORE_VISUALPATH	Mandatory	string	Save path of the dumped file. **Length:**1~255
CMO_ALARM_RESTORE_ACCOUNT	Mandatory	string	Username. **Length:**1~63
CMO_ALARM_RESTORE_PASSWD	Conditional	string	Password. **Length:**1~63 **Note:**In the initialization scenario, password must be delivered.
CMO_ALARM_RESTORE_PROTOCOL	Mandatory	enum	Protocol. **The value is described as follows:** 0: FTP 1: SFTP

Result

N/A

Example

- Setting alarm dump.

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```
Request: PUT /deviceManager/rest/210235843910E6000009/alarm_restore
{
    "CMO_ALARM_RESTORE_ACCOUNT": "root",
    "CMO_ALARM_RESTORE_ADDRESS": "10.169.3.22",
    "CMO_ALARM_RESTORE_PASSWD": "12345",
    "CMO_ALARM_RESTORE_PROTOCOL": "0",
    "CMO_ALARM_RESTORE_VISUALPATH": "/opt"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.30 Interface for Testing Alarm Dump Settings

Function

This interface is used to test alarm dump Settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_restore/test_alarm_restore_address

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_RESTORE_ADDRESS	Mandatory	string	Address of the dump server. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name. **Length:**1~63
CMO_ALARM_RESTORE_VISUALPATH	Mandatory	string	Save path of dumped files. **Length:**1~255
CMO_ALARM_RESTORE_PASSWD	Optional	string	Password. **Length:**1~63 **Note:**If this field is not delivered, use the last value that has been successfully configured.
CMO_ALARM_RESTORE_ACCOUNT	Mandatory	string	User name. **Length:**1~63
CMO_ALARM_RESTORE_PROTOCOL	Mandatory	enum	Protocol. **The value is described as follows:** 0: FTP 1: SFTP

Result

N/A

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Example

- Testing alarm dump settings.

```
Request: PUT /deviceManager/rest/210235843910E6000009/alarm_restore/
test_alarm_restore_address
{
    "CMO_ALARM_RESTORE_ACCOUNT": "root",
    "CMO_ALARM_RESTORE_ADDRESS": "10.169.3.22",
    "CMO_ALARM_RESTORE_PASSWD": "12345",
    "CMO_ALARM_RESTORE_PROTOCOL": "1",
    "CMO_ALARM_RESTORE_VISUALPATH": "/optt"
}

Response: {
    "data": {
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.31 Interface for Setting Alarm Dump Switch

Function

This interface is used to set alarm dump switch.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_restore/set_alarm_restore_enable

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_ALARM_RESTORE_ENABLE	Mandatory	uint32	Alarm restore switch. **The value is described as follows:** 0: disable 1: enable

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Result

N/A

Example

- Setting alarm dump switch.

```
Request: PUT /deviceManager/rest/210235843910E6000009/alarm_restore/
set_alarm_restore_enable

{
    "CMO_ALARM_RESTORE_ENABLE": "0"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.32 Interface for Querying Alarm Dump Settings

Function

This interface is used to query alarm restore settings.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/alarm_restore

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_ALARM_RESTORE_ENABLE	Mandatory	string(uint32)	Switch of automatic dump. **The value is described as follows:** 0:Off 1:On
CMO_ALARM_RESTORE_ADDRESS	Mandatory	string	Address of the dump server. **The value is described as follows:** The value can be a domain name or an IPv4 or IPv6 address. The domain name is a case-insensitive string of 1 to 255 characters, including letters, digits, and hyphens (-). Domain names at various levels are separated by periods (.). Hyphens (-) cannot be the start or end of the domain name.
CMO_ALARM_RESTORE_VISUALPATH	Mandatory	string	Save path of dumped files.
CMO_ALARM_RESTORE_ACCOUNT	Mandatory	string	User name.
CMO_ALARM_RESTORE_PROTOCOL	Mandatory	string(enum)	Protocol. **The value is described as follows:** 0: FTP 1: SFTP

Example

- Querying alarm restore settings.

```
Request: GET /deviceManager/rest/210235843910E6000009/alarm_restore
{

}

Response:
{
    "data": {
```

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```
        "CMO_ALARM_RESTORE_ACCOUNT": "root"
        "CMO_ALARM_RESTORE_ADDRESS": "10.169.3.22"
        "CMO_ALARM_RESTORE_ENABLE": "1"
        "CMO_ALARM_RESTORE_PROTOCOL": "1"
        "CMO_ALARM_RESTORE_VISUALPATH": "/optt"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.5.2.33 Interface for Batch Querying Alarm Types

Function

This interface is used to batch query alarm types.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ALARM_DEFINITION_OBJ

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
language	Optional	enum	Language. **The value is described as follows:** 1:English 2:Chinese **Note:**Default:English.

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Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_ALARM_OBJ_NAME	Mandatory	string	name
CMO_ALARM_OBJ_TYPE	Mandatory	string(uint32)	type.
id	Mandatory	string(uint32)	Id.

Example

- Batch querying alarm types.

```
Request: GET  /deviceManager/rest/210235843710E7000007/ALARM_DEFINITION_OBJ?
language=2
Response:
{
  "data": [
    {
      "CMO_ALARM_OBJ_NAME": "port",
      "CMO_ALARM_OBJ_TYPE": "6",
      "ID": "0",
      "TYPE": 16508
    },
    {
      "CMO_ALARM_OBJ_NAME": "disk",
      "CMO_ALARM_OBJ_TYPE": "10",
      "ID": "1",
      "TYPE": 16508
    },
    {
      "CMO_ALARM_OBJ_NAME": "LUN",
      "CMO_ALARM_OBJ_TYPE": "11",
      "ID": "2",
      "TYPE": 16508
    },...
  ],
  "error": {
    "code": 0,
    "description": "0"
  }
}
```

4.6 License management

4.6.1 license

4.6.1.1 Interface for Batch Querying License Utilization

Function

This interface is used to batch query the utilization of licenses.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/license/activelicense

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CreatedTime	Mandatory	string	Time when a license file is created(UTC).
FileExist	Mandatory	string	Whether a file exists. **The value is described as follows:** The value can be "0" or "1", where: 0: existent 1: nonexistent
LibVer	Mandatory	string	Version of a license file.
LicenseFunction	Mandatory	jsonarray	Function controlled by a license. **The value is described as follows:** FeatureId: license enumeration FuncSwitch: function switch (0: off; 1: on) RunTime: expiration date

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Parameter	Mandatory/ Conditional	Type	Description
LicenseResource	Mandatory	jsonarray	Resource controlled by a license. **The value is described as follows:** FeatureId: license enumeration FeatureName: feature name ResourceNum: number of supported resource items RunTime: expiration date
LicenseSerialNo	Mandatory	string	Serial number of a license.
LicenseUsageInfo	Mandatory	jsonarray	Information about license utilization **The value is described as follows:** FeatureId: license enumeration OpenStatus: license status 0: not initialized 1: opened 2: closed State: license validity 1: valid 2: expired 3: invalid TotalNum: total number of licenses. 0x7FFFFFFF indicates there is no limit on the number of resources. UsedNum: number of used licenses usedResourceUnit: unit enumeration. The default value is 72.

Example

- This interface is used to batch query the utilization of licenses.

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```
Request:GET /deviceManager/rest/210235843710E7000007/license/activelicense

Response:
{
    "data": {
        "CreatedTime": "2016-06-21 11:20:22",
        "FileExist": "0",
        "LibVer": "AdaptiveLMV100R002C05SPC007",
        "LicenseFunction": Array,
        "LicenseResource": Array,
        "LicenseSerialNo": "LIC2016062165VG50",
        "LicenseUsageInfo": Array
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.6.1.2 Interface for Batch Querying the Inactive License File

Function

This interface is used to batch query the inactive license file.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/license/inactivelicense

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
FileExist	Mandatory	string	Whether a file exists. **The value is described as follows:** The value can be "0" or "1", where: 0: existent 1: nonexistent
LicenseFunction	Mandatory	jsonarray	Function controlled by a license. **The value is described as follows:** FeatureId: license enumeration FuncSwitch: function switch (0: off; 1: on) RunTime: expiration date
LicenseSerialNo	Mandatory	string	Serial number of a license.
CreatedTime	Mandatory	string	Time when a license file is created(UTC).
LibVer	Mandatory	string	Version of a license file.
LicenseResource	Mandatory	jsonarray	Resource controlled by a license. **The value is described as follows:** FeatureId: license enumeration FeatureName: feature name ResourceNum: number of supported resource items RunTime: expiration date

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Parameter	Mandatory/ Conditional	Type	Description
LicenseUsageInfo	Mandatory	jsonarray	Information about license utilization **The value is described as follows:** FeatureId: license enumeration OpenStatus: license status 0: not initialized 1: opened 2: closed State: license validity 1: valid 2: expired 3: invalid TotalNum: total number of licenses. 0x7FFFFFFF indicates there is no limit on the number of resources. UsedNum: number of used licenses usedResourceUnit: unit enumeration. The default value is 72.

Example

- Batch querying the inactive license file.

```
Request: GET /deviceManager/rest/210235843710E7000007/license/inactivelicense

Response:
{
    "data": {
        "CreatedTime": "2016-10-24 16:13:45",
        "FileExist": "0",
        "LibVer": "AdaptiveLMV100R002C05SPC037",
        "LicenseFunction": [],
        "LicenseResource": [],
        "LicenseSerialNo": "LIC201610247PQM50",
        "LicenseUsageInfo": []
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.6.1.3 Interface for Backing Up the Active License File

Function

This interface is used to back up the active license file.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/license/Upload

Access Method

GET

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
path	Mandatory	string	License import path. **Note:**The license import path is a returned path when an interface is used to query the active license file import path.

Result

N/A

Usage Guidelines

File streams are returned.

Example

- Backing up the active license file.

```
Request: GET /deviceManager/rest/210235843710E7000007/file/license/Upload?
path=5159585947987378626

Response:
    SHVhd2VpIFRlY2hub2xvZ2llc......
```

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4.6.1.4 Interface for Querying the Active License File Import Path

Function

This interface is used to query the active license file import path.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/license/exportpath

Access Method

GET

User Privilege

Super administrator

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_LICENSE_DIR_INFO_DIR	Mandatory	string	License import path.

Example

- Querying the active license file import path.

```
Request: GET /deviceManager/rest/210235843710E7000007/license/exportpath

Response:
{
    "data": {
        "CMO_LICENSE_DIR_INFO_DIR": "150349248070288940"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.6.1.5 Interface for Importing a License File

Function

This interface is used to importing a license file.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/license/Upload

Access Method

POST

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
iBaseToken	Mandatory	string	Random code for preventing cross-site request forgery (CSRF). A random code is generated after each successful authentication.

Result

N/A

Usage Guidelines

1. In the message header, Content-Type must be set to multipart/form-data.
2. iBaseToken must be delivered in the message body.

Example

- Importing a license file.

```
Request: POST /deviceManager/rest/210235843710E7000007/file/license/Upload

------WebKitFormBoundaryCxA9QGN2PkMZL4wD
Content-Disposition: form-data; name="UPLOAD_FILE";
```

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```
filename="ActiveLicenseFile20161105162915.dat"
Content-Type: application/octet-stream


------WebKitFormBoundaryCxA9QGN2PkMZL4wD
Content-Disposition: form-data; name="iBaseToken"

8B070F7412EC4A898A465B9D41F99C171C15004038D5C36D48BCD43061C94FBD
------WebKitFormBoundaryCxA9QGN2PkMZL4wD--

Response:

None
```

4.6.1.6 Interface for Activating a License File

Function

This interface is used to activate a license file.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/license

Access Method

PUT

User Privilege

Super administrator

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
LicenseActiveResult	Conditional	enum	Active result. **The value is described as follows:** 0: successful **Note:**The value is returned when the result is successful.

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Example

- Activating a license file.

```
Request: PUT /deviceManager/rest/210235843710E7000007/license

Response:

{
    "data": {
        "LicenseActiveResult": 0
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.7 Import and export management

4.7.1 running_data

4.7.1.1 Interface for Exporting Running Data

Function

This interface is used to export running data.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to export the system running data. This operation may leak users' information.

Suggestion: Before performing this operation, please acknowledge the aforementioned risks.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/exportRunningData

Access Method

GET

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
tag	Mandatory	string	Export operation flag. **The value is described as follows:** getpath: obtaining the path Character string of the path: downloading logs

Result

Parameter	Mandatory/Conditional	Type	Description
data	Mandatory	string	character string of the path. **Note:**The value is returned for obtaining the path.

Usage Guidelines

File streams are returned.

Example

- Obtaining the path of running data.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportRunningData?
tag=getpath

Response:
 {
    "data": "11475708494212772230",
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Downloading running data.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportRunningData?
tag=11475708494212772230

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.7.2 logfile

4.7.2.1 Interface for Exporting DHA Run Logs

Function

This interface is used to export DHA run logs.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/exportDHA

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
tag	Mandatory	string	Export operation flag. **The value is described as follows:** package: packing logs getpath: obtaining the path check: checking whether logs can be downloaded Node ID: downloading logs
nid	Conditional	string	Node ID. **Note:**The value must be configured for checking whether logs can be downloaded.

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Result

Parameter	Mandatory/ Conditional	Type	Description
description	Conditional	string	Description. **Note:**The value is returned when the path for exporting DHA run logs is queried.
name	Conditional	string	Log file name. **Note:**The value is returned when the path for exporting DHA run logs is queried and the log files are successfully exported.
nodeid	Conditional	string	Node ID. **Note:**The value is returned when the path for exporting DHA run logs is queried.
result	Conditional	uint32	Export result. **The value is described as follows:** 0: successful 1: exporting 2: partially successful 3: busy 4: failed 5: export node offline 6: insufficient memory on export node 100: downloading 101: download successful 102: download failed **Note:**The value is returned when the path for exporting DHA run logs is queried.

Example

- Packing DHA run logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportDHA?tag=package
```

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```
Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Obtaining the path for exporting DHA run logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportDHA?tag=getpath

Response:
 {
    "data": [
        {
            "description":"",
            "name":"dha_ctrl0A.tgz",
            "nodeid":"0A",
            "result":101
        },
        {
            "description":"",
            "nodeid":"0B",
            "result":0
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Checking whether DHA run logs can be downloaded.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportDHA?
tag=check&nid=0A

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Downloading DHA run logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportDHA?tag=0A

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.7.2.2 Interface for Exporting HSSD Logs

Function

This interface is used to export HSSD logs.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/exportHSSD

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
tag	Mandatory	string	Export operation flag. **The value is described as follows:** package: packing logs getpath: obtaining the path check: checking whether logs can be downloaded Node ID: downloading logs
nid	Conditional	string	Node ID. **Note:**The value must be configured for checking whether logs can be downloaded.

Result

Parameter	Mandatory/Conditional	Type	Description
description	Conditional	string	Description. **Note:**The value is returned when the path for exporting HSSD logs is queried.

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Parameter	Mandatory/ Conditional	Type	Description
name	Conditional	string	Log file name. **Note:**The value is returned when the path for exporting HSSD logs is queried and the log files are successfully exported.
nodeid	Conditional	string	Node ID. **Note:**The value is returned when the path for exporting HSSD logs is queried.
result	Conditional	uint32	Export result. **The value is described as follows:** 0: successful 1: exporting 2: partially successful 3: busy 4: failed 5: export node offline 6: insufficient memory on export node 100: downloading 101: download successful 102: download failed **Note:**The value is returned when the path for exporting HSSD logs is queried.

Usage Guidelines

File streams are returned.

Example

- Packing HSSD logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportHSSD?tag=package

Response:
 {
    "data": {},
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

- Obtaining the path for exporting HSSD logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportHSSD?tag=getpath

Response:
 {
    "data": [
        {
            "description":"",
            "name":"hssd_log_0A.tgz",
            "nodeid":"0A",
            "result":101
        },
        {
            "description":"",
            "nodeid":"0B",
            "result":0
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Checking whether HSSD logs can be downloaded.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportHSSD?
tag=check&nid=0A

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Downloading HSSD logs.

```
Request: GET /deviceManager/rest/210235843710E7000007/exportHSSD?tag=0A

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.7.3 configuration_data

4.7.3.1 Interface for Exporting a Configuration File

Function

This interface is used to export a configuration file.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/export_db_config

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_EXPORT_DB_TYPE	Optional	uint32	Export mode. **The value is described as follows:** "0": exported from the memory **Default:**0

Result

Parameter	Mandatory/Conditional	Type	Description
CMO_EXPORT_DB_DATA_DIR	Mandatory	string	Export path.

Usage Guidelines

File streams are returned.

Example

- Export configuration file.

```
Request: PUT /deviceManager/rest/210235843910E6000009/export_db_config
{
    "CMO_EXPORT_DB_TYPE":0
}
Response:
{
    "data": {
        "CMO_EXPORT_DB_DATA_DIR": "127.127.127.10,127.127.127.10:/OSM/
```

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```
export_import/db.dat"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8 System information management

4.8.1 enclosure

4.8.1.1 Interface for Querying Enclosure Information

Function

This interface is used to query enclosure information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/enclosure/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 206: enclosure
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 205: cabinet
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 5: sleep in high temperature 27: online 28: offline

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Parameter	Mandatory/ Conditional	Type	Description
MODEL	Mandatory	string(enum)	Model. **The value is described as follows:** 0: baseboard management controller (BMC) enclosure 1: 2 U 2-controller 12-slot 3.5-inch 6 Gbit/s SAS controller enclosure 2: 2 U 2-controller 24-slot 6 Gbit/s SAS controller enclosure 16: 2 U 12-slot 3.5-inch 6 Gbit/s SAS disk enclosure 17: 2 U SAS 24-disk expansion enclosure 18: 4 U 24-slot 3.5-inch 12 Gbit/s SAS disk enclosure 19: 4 U Fibre Channel 24-disk expansion enclosure 20: 1 U PCIe data switch 21: 4 U 75-slot 3.5-inch 6 Gbit/s SAS disk enclosure 22: service processor (SVP) 97: 6 U 4-controller controller enclosure 96: 3 U 2-controller controller enclosure 24: 2 U 25-slot 2.5-inch 6 Gbit/s SAS disk enclosure 25: 4 U 24-slot 3.5-inch 6 Gbit/s SAS disk enclosure 26: 2 U 2-controller 25-slot 2.5-inch 6 Gbit/s SAS controller enclosure 23: 2 U 2-controller 12-slot 3.5-inch 6 Gbit/s SAS controller enclosure

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Parameter	Mandatory/ Conditional	Type	Description
			39: 4 U 75-slot 3.5-inch 12 Gbit/s SAS disk enclosure 65: 2 U 25-slot 2.5-inch 12 Gbit/s SAS disk enclosure 66: 4 U 24-slot 3.5-inch 12 Gbit/s SAS disk enclosure 40: 2 U 2-controller 25-slot 2.5-inch 12 Gbit/s SAS controller enclosure 37: 2 U 2-controller 12-slot 3.5-inch 6 Gbit/s SAS controller enclosure 38: 2 U 2-controller 25-slot 2.5-inch 6 Gbit/s SAS controller enclosure **Note:**39: 4 U 12 GB 75-slot 3.5-inch SAS disks enclosure. The enclosure is supported by the following storage device models: 2600 V3, 5300 V3, 5500 V3, 5600 V3, 5800 V3, and 6800 V3.
LOGICTYPE	Mandatory	string(enum)	Logic type. **The value is described as follows:** 0: expansion controller (disk enclosure) 1: controller enclosure 2: data switch 3: management switch 4: management server
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**℃
SERIALNUM	Mandatory	string	SN.
MACADDRESS	Mandatory	string	MAC address.
HEIGHT	Mandatory	string(uint32)	Enclosure height.

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Parameter	Mandatory/ Conditional	Type	Description
EXPANDERDEPTH	Mandatory	string(uint32)	Cascading level (This parameter is available only for disk enclosures.).
EXPANDERPORT	Mandatory	string	Back-end disk port (This parameter is available only for disk enclosure and specifies the SAS domain or Fibre Channel loop where the disk resides.).
SWITCHSTATUS	Mandatory	string(enum)	Switch status. **The value is described as follows:** 1: on 2: off
ELABEL	Mandatory	string	Electronic label.

Example

- Querying basic information about the enclosure whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/enclosure/0

Response:
{
    "data": {
        "ELABEL": "[Board Properties]\nBoardType=STLZA9SPE
\nBarCode=210235843910E6000009\nItem=02358439\nDescription=PANGEA,STLZA9SPE,PA
NGEA Controller Enclosure&#40;2U,Dual Controller,AC,6*8GB,
12*3.5\",SPE33C0212&#41;,V2R1C00\nManufactured=2014-06-18\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n",
        "EXPANDERDEPTH": "0",
        "EXPANDERPORT": "2039808",
        "HEALTHSTATUS": "1",
        "HEIGHT": "2",
        "ID": "0",
        "LOCATION": "0.1",
        "LOGICTYPE": "1",
        "MACADDRESS": "30:d1:7e:b4:f7:61",
        "MODEL": "23",
        "NAME": "CTE0",
        "PARENTID": "0",
        "PARENTTYPE": 205,
        "RUNNINGSTATUS": "27",
        "SERIALNUM": "210235843910E6000009",
        "SWITCHSTATUS": "2",
        "TEMPERATURE": "31",
        "TYPE": 206
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.1.2 Interface for Batch Querying Enclosure Information

Function

This interface is used to batch query basic information about enclosures.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/enclosure

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 206: enclosure
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 205: bay
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 5: sleep in high temperature 27: online 28: offline

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Parameter	Mandatory/ Conditional	Type	Description
MODEL	Mandatory	string(enum)	Model. **The value is described as follows:** 0: baseboard management controller (BMC) enclosure 1: 2 U 2-controller 12-slot 3.5-inch 6 Gbit/s SAS controller enclosure 2: 2 U 2-controller 24-slot 6 Gbit/s SAS controller enclosure 16: 2 U 12-slot 3.5-inch 6 Gbit/s SAS disk enclosure 17: 2 U SAS 24-disk expansion enclosure 18: 4 U 24-slot 3.5-inch 12 Gbit/s SAS disk enclosure 19: 4 U Fibre Channel 24-disk expansion enclosure 20: 1 U PCIe data switch 21: 4 U 75-slot 3.5-inch 6 Gbit/s SAS disk enclosure 22: service processor (SVP) 97: 6 U 4-controller controller enclosure 96: 3 U 2-controller controller enclosure 24: 2 U 25-slot 2.5-inch 6 Gbit/s SAS disk enclosure 25: 4 U 24-slot 3.5-inch 6 Gbit/s SAS disk enclosure 26: 2 U 2-controller 25-slot 2.5-inch 6 Gbit/s SAS controller enclosure 23: 2 U 2-controller 12-slot 3.5-inch 6 Gbit/s SAS controller enclosure

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Parameter	Mandatory/ Conditional	Type	Description
			39: 4 U 75-slot 3.5-inch 12 Gbit/s SAS disk enclosure 65: 2 U 25-slot 2.5-inch 12 Gbit/s SAS disk enclosure 66: 4 U 24-slot 3.5-inch 12 Gbit/s SAS disk enclosure 40: 2 U 2-controller 25-slot 2.5-inch 12 Gbit/s SAS controller enclosure 37: 2 U 2-controller 12-slot 3.5-inch 6 Gbit/s SAS controller enclosure 38: 2 U 2-controller 25-slot 2.5-inch 6 Gbit/s SAS controller enclosure **Note:**39: 4 U 12 GB 75-slot 3.5-inch SAS disks enclosure. The enclosure is supported by the following storage device models: 2600 V3, 5300 V3, 5500 V3, 5600 V3, 5800 V3, and 6800 V3.
LOGICTYPE	Mandatory	string(enum)	Logic type. **The value is described as follows:** 0: expansion controller (disk enclosure) 1: controller enclosure 2: data switch 3: management switch 4: management server
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**℃
SERIALNUM	Mandatory	string	SN.
MACADDRESS	Mandatory	string	MAC address.
HEIGHT	Mandatory	string(uint32)	Enclosure height.

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Parameter	Mandatory/ Conditional	Type	Description
EXPANDERDEPTH	Mandatory	string(uint32)	Cascading level (This parameter is available only for disk enclosures.).
EXPANDERPORT	Mandatory	string	Back-end disk port (This parameter is available only for disk enclosure and specifies the SAS domain or Fibre Channel loop where the disk resides.).
SWITCHSTATUS	Mandatory	string(enum)	Status. **The value is described as follows:** 1: on 2: off
ELABEL	Mandatory	string	Electronic label.

Example

- Batch querying enclosure information.

```
Request: GET /deviceManager/rest/210235843910E6000009/enclosure

Response:
{
    "data": [
        {
            "ELABEL": "[Board Properties]\nBoardType=STLZA9SPE
\nBarCode=210235843910E6000009\nItem=02358439\nDescription=PANGEA,STLZA9SPE,PA
NGEA Controller Enclosure&#40;2U,Dual Controller,AC,6*8GB,
12*3.5\",SPE33C0212&#41;,V2R1C00\nManufactured=2014-06-18\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n",
            "EXPANDERDEPTH": "0",
            "EXPANDERPORT": "2039808",
            "HEALTHSTATUS": "1",
            "HEIGHT": "2",
            "ID": "0",
            "LOCATION": "0.1",
            "LOGICTYPE": "1",
            "MACADDRESS": "30:d1:7e:b4:f7:61",
            "MODEL": "23",
            "NAME": "CTE0",
            "PARENTID": "0",
            "PARENTTYPE": 205,
            "RUNNINGSTATUS": "27",
            "SERIALNUM": "210235843910E6000009",
            "SWITCHSTATUS": "2",
            "TEMPERATURE": "30",
            "TYPE": 206
            }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.8.1.3 Interface for Setting the Status of Enclosure Location

Function

This interface is used to set the status of enclosure location.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/enclosure/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.
SWITCHSTATUS	Optional	enum	Status of the location indicator. **The value is described as follows:** 1: on 2: off

Result

N/A

Example

- Locate the enclosure whose ID is "0".

```
Request: PUT /deviceManager/rest/210235843910E6000009/enclosure/0
{
 "SWITCHSTATUS": 1
}

Response:
```

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```
{
 "data": {},
 "error": {
  "code": 0,
  "description": "0"
 }
}
```

4.8.2 controller

4.8.2.1 Interface for Querying Controller Information

Function

This interface is used to query basic information about a controller.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/controller/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Controller ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 207: controller

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Internal ID of the controller enclosure.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 1: normal 2: running 27: online 28: offline
DESCRIPTION	Mandatory	string	Description.
SOFTVER	Mandatory	string	Firmware version.
ISMASTER	Mandatory	string(bool)	Primary/secondary status. **The value is described as follows:** true: primary false: secondary **Note:**This field has been discarded.
ELABEL	Mandatory	string	Electronic label.
PCBVER	Mandatory	string	PCB version.
SESVER	Mandatory	string	SES version.

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Parameter	Mandatory/ Conditional	Type	Description
BMCVER	Mandatory	string	BMC version.
LOGICVER	Mandatory	string	Logic version.
BIOSVER	Mandatory	string	BIOS version.
MEMORYSIZE	Mandatory	string(uint32)	Cache size.
CPUINFO	Mandatory	string	CPU information.
ROLE	Mandatory	string(enum)	Role. **The value is described as follows:** 0: ordinary member 1: cluster primary node 2: cluster secondary node
CPUUSAGE	Mandatory	string(uint32)	CPU utilization.
MEMORYUSAGE	Mandatory	string(uint32)	Memory utilization.
VOLTAGE	Mandatory	string(uint32)	Voltage.
LIGHT_STATUS	Mandatory	string(enum)	Indicator status. **The value is described as follows:** 1: off 2: on
DIRTYDATARATE	Mandatory	string(uint32)	Dirty page usage.
MULTMODE	Mandatory	string(bool)	Multi-working mode supported or not. **The value is described as follows:** true:supported false:not supported
RUNMODE	Mandatory	string(enum)	Operating mode of the interface module. **The value is described as follows:** 1: fibre channel 2: FCoE/iSCSI 3: cluster **Note:**Other values are invalid.
RUNMODELIST	Mandatory	array	List of supported working modes.

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Parameter	Mandatory/ Conditional	Type	Description
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**°C

Example

- Querying basic information about a controller.

```
Request: GET /deviceManager/rest/210235843910E6000009/controller/0A

Response:
{
    "data": {
        "BIOSVER": "10.01.07T02",
        "BMCVER": "--",
        "CPUINFO": "Intel 6core 2.1GHz *1",
        "CPUUSAGE": "52",
        "DESCRIPTION": "Intel 6core 2.1GHz *1",
        "DIRTYDATARATE": "0",
        "ELABEL": "[Board Properties]
         BoardType=STL2CONT01
         BarCode=210305573810E6000026
         Item=03055738
         Description=Finished Board Unit,PANGEA,STL2CONT01,SAS
Service Processing Controller Unit&#40;1*Intel E5 2603 V2,3*         8G
Cache&#41;,V2R1C00
         Manufactured=2014-06-18
         VendorName=Huawei
         IssueNumber=00
         CLEICode=
        BOM=
        ",
        "HEALTHSTATUS": "2",
        "ID": "0A",
        "ISMASTER": "false",
        "LIGHT_STATUS": "0",
        "LOCATION": "CTE0.A",
        "LOGICVER": "130T08",
        "MEMORYSIZE": "24576",
        "MEMORYUSAGE": "74",
        "MULTMODE": "false",
        "NAME": "A",
        "PARENTID": "0",
        "PARENTTYPE": 206,
        "PCBVER": "VER.A",
        "ROLE": "1",
        "RUNMODE": "4",
        "RUNMODELIST": "--",
        "RUNNINGSTATUS": "27",
        "SESVER": "20.70T33",
        "SOFTVER": "3.20.05.100",
        "TEMPERATURE": "-1",
        "TYPE": 207,
        "VOLTAGE": "120"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.2.2 Interface for Batch Querying Controller Information

Function

This interface is used to batch query basic information about controllers.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/controller

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type of the managed object. **The value is described as follows:** 207: controller
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Internal ID of the controller enclosure.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 1: normal 2: running 27: online 28: offline
DESCRIPTION	Mandatory	string	Description.
SOFTVER	Mandatory	string	Firmware version.
ISMASTER	Mandatory	string(bool)	Primary/secondary status. **The value is described as follows:** true: primary false: secondary **Note:**This field has been discarded.
ELABEL	Mandatory	string	Electronic label.
PCBVER	Mandatory	string	PCB version.
SESVER	Mandatory	string	SES version.
BMCVER	Mandatory	string	BMC version.
LOGICVER	Mandatory	string	Logic version.
BIOSVER	Mandatory	string	BIOS version.
MEMORYSIZE	Mandatory	string(uint32)	Cache size.
CPUINFO	Mandatory	string	CPU information.

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Parameter	Mandatory/ Conditional	Type	Description
ROLE	Mandatory	string(enum)	Role. **The value is described as follows:** 0: ordinary member 1: cluster primary node 2: cluster secondary node
CPUUSAGE	Mandatory	string(uint32)	CPU utilization.
MEMORYUSAGE	Mandatory	string(uint32)	Memory utilization.
VOLTAGE	Mandatory	string(uint32)	Voltage.
LIGHT_STATUS	Mandatory	string(enum)	Indicator status. **The value is described as follows:** 1: off 2: on
DIRTYDATARATE	Mandatory	string(uint32)	Dirty page usage.
MULTMODE	Mandatory	string(bool)	Multi-working mode supported or not. **The value is described as follows:** true:supported false:not supported
RUNMODE	Mandatory	string(enum)	Operating mode of the interface module. **The value is described as follows:** 1: fibre channel 2: FCoE/iSCSI 3: cluster **Note:**Other values are invalid.
RUNMODELIST	Mandatory	array	List of supported working modes.
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**°C

Example

- Batch querying controllers.

```
Request: GET /deviceManager/rest/210235843910E6000009/controller
```

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```
Response:
{
    "data": [
        {
            "BIOSVER": "10.01.07T02",
            "BMCVER": "--",
            "CPUINFO": "Intel 6core 2.1GHz *1",
            "CPUUSAGE": "3",
            "DESCRIPTION": "Intel 6core 2.1GHz *1",
            "DIRTYDATARATE": "0",
            "ELABEL": "[Board Properties]
\nBoardType=STL2CONT01\nBarCode=210305573810E6000026\nItem=03055738\nDescripti
on=Finished Board Unit,PANGEA,STL2CONT01,SAS Service Processing Controller
Unit&#40;1*Intel E5 2603 V2,3*8G
Cache&#41;,V2R1C00\nManufactured=2014-06-18\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n",
            "HEALTHSTATUS": "2",
            "ID": "0A",
            "ISMASTER": "false",
            "LIGHT_STATUS": "0",
            "LOCATION": "CTE0.A",
            "LOGICVER": "130T08",
            "MEMORYSIZE": "24576",
            "MEMORYUSAGE": "75",
            "MULTMODE": "false",
            "NAME": "A",
            "PARENTID": "0",
            "PARENTTYPE": 206,
            "PCBVER": "VER.A",
            "ROLE": "1",
            "RUNMODE": "4",
            "RUNMODELIST": "--",
            "RUNNINGSTATUS": "27",
            "SESVER": "20.70T33",
            "SOFTVER": "3.20.05.100",
            "TEMPERATURE": "-1",
            "TYPE": 207,
            "VOLTAGE": "120"
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.3 expansion_module

4.8.3.1 Interface for Batch Querying Expansion Board Information

Function

This interface is used to batch query basic information about expansion boards.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/expboard

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 208: expansion board
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Expansion board location, which is in the format of enclosure ID.slot silkscreen of the expansion board.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 12: powering on 13: powered off 27: online 28: offline
MODEL	Mandatory	string(enum)	Model. **The value is described as follows:** 0: SAS 1: fibre channel
LOGICVER	Mandatory	string	Logic version.
PCBVER	Mandatory	string	PCB version.
SESVER	Mandatory	string	SES version.
ELABEL	Mandatory	string	Electronic label.

Example

- Batch querying all expansion boards of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/expboard

Response:
{
    "data": [
        {
            "ELABEL": "[Board Properties]\r\r\nBoardType=STL2DESA\r\r
\nBarCode=022HVF10E2000180\r\r\nItem=03022HVF\r\r\nDescription=Manufactured
Board,PANGEA,STL2DESA,Disk Enclosure Cascading Board,V200R001C00,1*1\r\r
\nManufactured=2014-02-20\r\r\nVendorName=Huawei\nIssueNumber=00\r\r
\nCLEICode=\r\r\nBOM=\r\r\n\u001A",
            "HEALTHSTATUS": "1",
            "ID": "2.0",
            "LOCATION": "DAE010.A",
            "LOGICVER": "120T09",
            "MODEL": "0",
            "NAME": "A",
            "PARENTID": "2",
            "PARENTTYPE": 206,
            "PCBVER": "VER.A",
            "RUNNINGSTATUS": "2",
            "SESVER": "20.70T33",
            "TYPE": 208
        }, ...
    ],
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.3.2 Interface for Querying Expansion Board Information

Function

This interface is used to query basic information about an expansion board.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/expboard/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Expansion board ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 208: expansion board
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Expansion board location, which is in the format of enclosure ID.slot silkscreen of the expansion board.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 12: powering on 13: powered off 27: online 28: offline
MODEL	Mandatory	string(enum)	Model. **The value is described as follows:** 0: SAS 1: fibre channel
LOGICVER	Mandatory	string	Logic version.
PCBVER	Mandatory	string	PCB version.
SESVER	Mandatory	string	SES version.
ELABEL	Mandatory	string	Electronic label.

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Example

- Querying basic information about the expansion board whose ID is 2.0.

```
Request: GET /deviceManager/rest/210235843910E6000009/expboard/2.0

Response:
{
    "data": {
        "ELABEL": "[Board Properties]\r\r\nBoardType=STL2DESA\r\r
\nBarCode=022HVF10E2000180\r\r\nItem=03022HVF\r\r\nDescription=Manufactured
Board,PANGEA,STL2DESA,Disk Enclosure Cascading Board,V200R001C00,1*1\r\r
\nManufactured=2014-02-20\r\r\nVendorName=Huawei\nIssueNumber=00\r\r
\nCLEICode=\r\r\nBOM=\r\r\n\u001A",
        "HEALTHSTATUS": "1",
        "ID": "2.0",
        "LOCATION": "DAE010.A",
        "LOGICVER": "120T09",
        "MODEL": "0",
        "NAME": "A",
        "PARENTID": "2",
        "PARENTTYPE": 206,
        "PCBVER": "VER.A",
        "RUNNINGSTATUS": "2",
        "SESVER": "20.70T33",
        "TYPE": 208
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.4 interface_module

4.8.4.1 Interface for Batch Querying Interface Module Information

Function

This interface is used to batch query basic information about interface modules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/intf_module

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 209: Interface module
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Expansion board location, which is in the format of enclosure ID.slot silkscreen of the expansion board.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 1: normal 2: running 12: powering on 13: powered off 27: online 28: offline 103: power-on failed

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Parameter	Mandatory/ Conditional	Type	Description
MODEL	Mandatory	string(enum)	Model. **The value is described as follows:** 6: 2x10GE Optical Interface Module 12: 4xGE Electrical Interface Module 13: 4x8G FC Optical Interface Module 21: 4x10G FCoE Optical Interface Module 24: Management Board 25: 4x10GE Interface Module 26: PCIe Interface Module 29: 2x16G FC Optical Interface Module 30: 4x12G SAS QSFP Interface Module 31: 4x10GE Electrical Interface Module 33: 2-port 4x14G IB I/O Module 35: Smart ACC Module 36: 4x10GE Electrical Interface Module 37: 4-port SmartIO I/O Module 38: 8x8G FC Optical Interface Module 40: 4x16G FC Optical Interface Module 41: 12-port 4x12G SAS Back-End Interconnect I/O Module 44: 2-port PCIe 3.0 Interface Module 58: 8x16G FC Optical Interface Module
ELABEL	Mandatory	string	Electronic label.
LOGICVER	Mandatory	string	Logic version.

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Parameter	Mandatory/ Conditional	Type	Description
PCBVER	Mandatory	string	PCB version.
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**℃
MULTMODE	Mandatory	string(bool)	Multi-working mode supported or not. **The value is described as follows:** true:supported false:not supported
RUNMODE	Mandatory	string(enum)	Working mode. **The value is described as follows:** 1: FC 2: FCoE/iSCSI 3: Cluster **Note:**Other values are invalid.
RUNMODELIST	Mandatory	array	List of supported working modes (If a working mode is not supported, -- is returned.).
LIGHTSTATUS	Mandatory	string(enum)	Indicator status. **The value is described as follows:** 0: off 1: on

Example

- Batch querying all interface modules of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/intf_module

Response:
{
    "data": [
        {
            "ELABEL": "[Board Properties]
\nBoardType=STL2IEG4\nBarCode=022LPR10E3000094\nItem=03022LPR
\nDescription=Manufactured Board,PANGEA hardware platform,STL2IEG4,4 ports
Gbps Ethernet I/O modules-4*1\nManufactured=2014-03-13\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n\n",
            "HEALTHSTATUS": "1",
            "ID": "0A.1",
            "LIGHTSTATUS": "0",
            "LOCATION": "CTE0.A.IOM1",
            "LOGICVER": "--",
```

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```
            "MODEL": "12",
            "MULTMODE": "false",
            "NAME": "A.IOM1",
            "PARENTID": "0A",
            "PARENTTYPE": 207,
            "PCBVER": "VER.A",
            "RUNMODE": "4",
            "RUNMODELIST": "--",
            "RUNNINGSTATUS": "2",
            "TEMPERATURE": "-1",
            "TYPE": 209
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.4.2 Interface for Querying Interface Module Information

Function

This interface is used to query basic information about an interface module.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/intf_module/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Interface module ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 209: Interface module.
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure 207: controller
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Expansion board location, which is in the format of enclosure ID.slot silkscreen of the expansion board.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 1: normal 2: running 12: powering on 13: powered off 27: online 28: offline 103: power-on failed

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Parameter	Mandatory/ Conditional	Type	Description
MODEL	Mandatory	string(enum)	Model. **The value is described as follows:** 6: 2x10GE Optical Interface Module 12: 4xGE Electrical Interface Module 13: 4x8G FC Optical Interface Module 21: 4x10G FCoE Optical Interface Module 24: Management Board 25: 4x10GE Interface Module 26: PCIe Interface Module 29: 2x16G FC Optical Interface Module 30: 4x12G SAS QSFP Interface Module 31: 4x10GE Electrical Interface Module 33: 2-port 4x14G IB I/O Module 35: Smart ACC Module 36: 4x10GE Electrical Interface Module 37: 4-port SmartIO I/O Module 38: 8x8G FC Optical Interface Module 40: 4x16G FC Optical Interface Module 41: 12-port 4x12G SAS Back-End Interconnect I/O Module 44: 2-port PCIe 3.0 Interface Module 58: 8x16G FC Optical Interface Module
ELABEL	Mandatory	string	Electronic label.
LOGICVER	Mandatory	string	Logic version.

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Parameter	Mandatory/ Conditional	Type	Description
PCBVER	Mandatory	string	PCB version.
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**℃
MULTMODE	Mandatory	string(bool)	Multi-working mode supported or not. **The value is described as follows:** true:supported false:not supported
RUNMODE	Mandatory	string(enum)	Working mode. **The value is described as follows:** 1: FC 2: FCoE/iSCSI 3: Cluster **Note:**Other values are invalid.
RUNMODELIST	Mandatory	array	List of supported working modes (If a working mode is not supported, -- is returned.).
LIGHTSTATUS	Mandatory	string(enum)	Indicator status. **The value is described as follows:** 0: off 1: on

Example

- Querying basic information about the interface module whose ID is 0A.1.

```
Request: GET /deviceManager/rest/210235843910E6000009/intf_module/0A.1

Response:
{
    "data": {
        "ELABEL": "[Board Properties]
\nBoardType=STL2IEG4\nBarCode=022LPR10E3000094\nItem=03022LPR
\nDescription=Manufactured Board,PANGEA hardware platform,STL2IEG4,4 ports
Gbps Ethernet I/O modules-4*1\nManufactured=2014-03-13\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n\n",
        "HEALTHSTATUS": "1",
        "ID": "0A.1",
        "LIGHTSTATUS": "0",
        "LOCATION": "CTE0.A.IOM1",
        "LOGICVER": "--",
        "MODEL": "12",
```

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```
        "MULTMODE": "false",
        "NAME": "A.IOM1",
        "PARENTID": "0A",
        "PARENTTYPE": 207,
        "PCBVER": "VER.A",
        "RUNMODE": "4",
        "RUNMODELIST": "--",
        "RUNNINGSTATUS": "2",
        "TEMPERATURE": "-1",
        "TYPE": 209
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.4.3 Interface for Modifying Interface Module Information

Function

This interface is used to modify interface module information.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to modify the work mode of the interface module.

This operation will cause that the services of all ports on the interface module are interrupted.

Suggestion:

1. Before you perform this operation, ensure that the services of all ports on the interface module are stopped.

2. After performing this operation, create a new network based on the current work mode of the interface module.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/INTF_MODULE/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Interface module ID.
RUNMODE	Optional	enum	Working mode. **The value is described as follows:** 1: FC 2: FCoE/iSCSI 3: Cluster

Result

N/A

Example

- Modifying interface module information.

```
Request: PUT /deviceManager/rest/210235843910E6000009/INTF_MODULE/0A.0
{
    "RUNMODE":1
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.4.4 Interface for Powering Off Interface Modules

Function

This interface is used to power off interface modules.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to power off the interface module.

This operation will cause that the services of all ports on the interface module are interrupted.

Suggestion: Before you perform this operation, ensure that the services of all ports on the interface module are stopped.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/INTF_MODULE/INTF_MODULE_POWER_OFF

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Interface module ID.

Result

N/A

Example

- Powering off interface module.

```
Request: PUT /deviceManager/rest/210235843910E6000009/INTF_MODULE/
INTF_MODULE_POWER_OFF
{
    "ID":"0A.0"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.4.5 Interface for Powering On Interface Modules

Function

This interface is used to power on interface modules.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/INTF_MODULE/INTF_MODULE_POWER_ON

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Interface module ID.

Result

N/A

Example

- Powering on interface module.

```
Request: PUT /deviceManager/rest/210235843910E6000009/INTF_MODULE/
INTF_MODULE_POWER_ON
{
    "ID":"0A.0"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.5 disk

4.8.5.1 Interface for Querying Disk Information

Function

This interface is used to query basic information about a disk.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/disk/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Disk ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 10: disk
ID	Mandatory	string	ID.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 14: pre-copy 16: reconstruction 27: online 28: offline
DISKTYPE	Mandatory	string(enum)	Disk type. **The value is described as follows:** 0: FC 1: SAS 2: SATA 3: SSD 4: NL-SAS 5: SLC SSD 6: MLC SSD 7: FC SED 8: SAS SED 9: SATA SED 10: SSD SED 11: NL-SAS SED 12: SLC SSD SED 13: MLC SSD SED
SECTORS	Mandatory	string(uint64)	Number of sectors.
BANDWIDTH	Mandatory	string(uint64)	Interface bandwidth. **Unit:**Mbit/s
SECTORSIZE	Mandatory	string(uint32)	Sector size. **Unit:**bytes
SPEEDRPM	Mandatory	string(uint32)	Rotational speed. **Unit:**RPM
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**℃

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Parameter	Mandatory/ Conditional	Type	Description
MODEL	Mandatory	string	Model. **Note:**The format of models varies with providers. For example, the format of a Seagate disk model is as follows: ST+Disk size+Capacity +Primary label +Secondary label +Interface type.
FIRMWAREVER	Mandatory	string	Firmware version.
MANUFACTURER	Mandatory	string	Manufacturer.
SERIALNUMBER	Mandatory	string	SN.
LIGHTSTATUS	Mandatory	string(enum)	Indicator status. **The value is described as follows:** 0:off 1:location indicator is blinking 2:fault indicator is steady on
LOGICTYPE	Mandatory	string(enum)	Logical type. **The value is described as follows:** 1: free disk 2: member disk 3: hot spare disk 4: cache disk
POOLID	Mandatory	string	Pool ID.
POOLNAME	Mandatory	string	Pool name.
POOLTIERID	Mandatory	string	ID of the tier where the disk resides.
ISCOFFERDISK	Mandatory	string(bool)	Coffer disk or not. **The value is described as follows:** true: coffer false: not coffer

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Parameter	Mandatory/ Conditional	Type	Description
RUNTIME	Mandatory	string(uint32)	Number of operating days. **Unit:**day
PROGRESS	Mandatory	string(uint32)	Progresses of reconstruction, copyback, pre-copy, and destruction. **Unit:**%
barcode	Mandatory	string	Huawei 21 code.
CAPACITYUSAGE	Mandatory	string(uint32)	Capacity usage. **Unit:**%
MULTIPATH	Mandatory	string	Disk path information. **The value is described as follows:** A0 controller ID|B0 controller ID, A1 controller ID|B1 controller ID, and so on.
HEALTHMARK	Mandatory	string(uint32)	Health score of the disk.
DISKIFTYPE	Mandatory	string(enum)	Disk interface type. **The value is described as follows:** 0: Not Available 1: FC SSD 2: SAS SSD 3: NL-SAS SSD 4: SATA SSD 5: SATA2 SSD 6: SATA3 SSD
DISKFORM	Mandatory	string(enum)	Disk dimensions. **The value is described as follows:** 0: unknown 1: 5.25-inch 2: 3.5-inch 3: 2.5-inch 4: 1.8-inch

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Parameter	Mandatory/ Conditional	Type	Description
DISKPORTADDR	Mandatory	string	The value varies with the disk interface type. **The value is described as follows:** FC: WWN of a Fibre Channel port SAS: SAS address (a 16-digit hexadecimal number) SATA: The field is left empty
SMARTCACHEPOOLID	Mandatory	string	ID of the SmartCache pool where the disk resides (This parameter is configured for cache disks.).
ABRASIONRATE	Mandatory	string(int)	Wear (Wear is the percentage of used service life to total service life.). **Unit:**%
REMAINLIFE	Mandatory	string(int)	Remaining service life. **Unit:**days
formatProgress	Conditional	string(int)	Formatting progress. **Unit:**% **Note:**This field is returned only when the value of the formatting progress is valid.
formatRemainTime	Conditional	string(int)	Remaining formatting time. **Unit:**seconds **Note:**This field is returned only when the value of the formatting progress is valid.
AUTOLOCKSTATUS	Mandatory	string(bool)	Disk AK switch status. **The value is described as follows:** true:open false:close

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Parameter	Mandatory/ Conditional	Type	Description
ENCRYPTDISKTYPE	Mandatory	string(enum)	Encrypt type. **The value is described as follows:** 0: ordinary disk 1: encrypted disk
STORAGEENGINEID	Mandatory	string	Storage engine ID.
ITEM	Mandatory	string	Disk BOM.
ELABEL	Mandatory	string	Electronic label.

Example

- Querying basic information about the disk whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/disk/0

Response:
{
    "data": {
        "ABRASIONRATE": "0",
        "AUTOLOCKSTATUS": "false",
        "BANDWIDTH": "6000",
        "CAPACITYUSAGE": "0",
        "DISKFORM": "2",
        "DISKIFTYPE": "0",
        "DISKPORTADDR": "530D17EB4F761000",
        "DISKTYPE": "4",
        "ELABEL": "[Board Properties]\r\nBoardType=STLZ5S500\r
\nBarCode=210235G6BB1000000007\r\nItem=0235G6BB\r
\nDescription=PANGEA,STLZ5S500,500GB 7.2K RPM 3G SATA Disk
Unit&#40;2.5\"&#41;\r\nManufactured=2012-05-31\r\nVendorName=Huawei\r
\nIssueNumber=00\r\nCLEICode=\r\nBOM=\r\n",
        "ENCRYPTDISKTYPE": "0",
        "FIRMWAREVER": "0003",
        "HEALTHMARK": "255",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "ISCOFFERDISK": "true",
        "ITEM": "0235G6BB",
        "LIGHTSTATUS": "0",
        "LOCATION": "CTE0.0",
        "LOGICTYPE": "1",
        "MANUFACTURER": "Seagate",
        "MODEL": "ST2000NM0023",
        "MULTIPATH": "[\"A\",\"B\"]",
        "PARENTID": "0",
        "PARENTTYPE": 206,
        "POOLID": "",
        "POOLNAME": "",
        "POOLTIERID": "",
        "PROGRESS": "0",
        "REMAINLIFE": "0",
        "RUNNINGSTATUS": "27",
        "RUNTIME": "500",
        "SECTORS": "3812691536",
        "SECTORSIZE": "520",
        "SERIALNUMBER": "Z1X2F480000094381WYN",
        "SMARTCACHEPOOLID": "4294967295",
```

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```
        "SPEEDRPM": "7200",
        "STORAGEENGINEID": "0",
        "TEMPERATURE": "37",
        "TYPE": 10,
        "barcode": "210235G6BB1000000007",
        "formatProgress": "0",
        "formatRemainTime": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.5.2 Interface for Batch Querying Disk Information

Function

This interface is used to batch query basic information about disks.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/disk

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Optional	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Optional	string	ID of the parent object.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 10: disk
ID	Mandatory	string	ID.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 14: pre-copy 16: reconstruction 27: online 28: offline

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Parameter	Mandatory/ Conditional	Type	Description
DISKTYPE	Mandatory	string(enum)	Disk type. **The value is described as follows:** 0: FC 1: SAS 2: SATA 3: SSD 4: NL-SAS 5: SLC SSD 6: MLC SSD 7: FC SED 8: SAS SED 9: SATA SED 10: SSD SED 11: NL-SAS SED 12: SLC SSD SED 13: MLC SSD SED
SECTORS	Mandatory	string(uint64)	Number of sectors.
BANDWIDTH	Mandatory	string(uint64)	Interface bandwidth. **Unit:**Mbit/s
SECTORSIZE	Mandatory	string(uint32)	Sector size. **Unit:**bytes
SPEEDRPM	Mandatory	string(uint32)	Rotational speed. **Unit:**RPM
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**℃
MODEL	Mandatory	string	Model. **Note:**The format of models varies with providers. For example, the format of a Seagate disk model is as follows: ST+Disk size+Capacity +Primary label +Secondary label +Interface type.
FIRMWAREVER	Mandatory	string	Firmware version.
MANUFACTURER	Mandatory	string	Manufacturer.

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Parameter	Mandatory/ Conditional	Type	Description
SERIALNUMBER	Mandatory	string	SN.
LIGHTSTATUS	Mandatory	string(enum)	Indicator status. **The value is described as follows:** 0:off 1:location indicator is blinking 2:fault indicator is steady on
LOGICTYPE	Mandatory	string(enum)	Logical type. **The value is described as follows:** 1: free disk 2: member disk 3: hot spare disk 4: cache disk
POOLID	Mandatory	string	Pool ID.
POOLNAME	Mandatory	string	Pool name.
POOLTIERID	Mandatory	string	ID of the tier where the disk resides.
ISCOFFERDISK	Mandatory	string(bool)	Coffer disk or not. **The value is described as follows:** true:coffer false:not coffer
RUNTIME	Mandatory	string(uint32)	Number of operating days. **Unit:**day
PROGRESS	Mandatory	string(uint32)	Progresses of reconstruction, copyback, pre-copy, and destruction. **Unit:**%
barcode	Mandatory	string	Huawei 21 code.
CAPACITYUSAGE	Mandatory	string(uint32)	Capacity usage. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
MULTIPATH	Mandatory	string	Disk path information. **The value is described as follows:** A0 controller ID|B0 controller ID, A1 controller ID|B1 controller ID, and so on.
HEALTHMARK	Mandatory	string(uint32)	Health score of the disk.
DISKIFTYPE	Mandatory	string(enum)	Disk interface type. **The value is described as follows:** 0: Not Available 1: FC SSD 2: SAS SSD 3: NL-SAS SSD 4: SATA SSD 5: SATA2 SSD 6: SATA3 SSD
DISKFORM	Mandatory	string(enum)	Disk dimensions. **The value is described as follows:** 0: unknown 1: 5.25-inch 2: 3.5-inch 3: 2.5-inch 4: 1.8-inch
DISKPORTADDR	Mandatory	string	The value varies with the disk interface type. **The value is described as follows:** FC: WWN of a Fibre Channel port SAS: SAS address (a 16-digit hexadecimal number) SATA: The field is left empty

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Parameter	Mandatory/ Conditional	Type	Description
SMARTCACHEPOOLID	Mandatory	string	ID of the SmartCache pool where the disk resides (This parameter is configured for cache disks.).
ABRASIONRATE	Mandatory	string(int)	Wear (Wear is the percentage of used service life to total service life.). **Unit:**%
REMAINLIFE	Mandatory	string(int)	Remaining service life. **Unit:**days
formatProgress	Conditional	string(int)	Formatting progress. **Unit:**% **Note:**This field is returned only when the value of the formatting progress is valid.
formatRemainTime	Conditional	string(int)	Remaining formatting time. **Unit:**seconds **Note:**This field is returned only when the value of the formatting progress is valid.
AUTOLOCKSTATUS	Mandatory	string(bool)	Disk AK switch status. **The value is described as follows:** true:open false:close
ENCRYPTDISKTYPE	Mandatory	string(enum)	Encrypt type. **The value is described as follows:** 0: ordinary disk 1: encrypted disk
STORAGEENGINEID	Mandatory	string	Storage engine ID.
ITEM	Mandatory	string	Disk BOM.
ELABEL	Mandatory	string	Electronic label.

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Example

- Querying all disks of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/disk

Response:
{
    "data": [
        {
            "ABRASIONRATE": "0",
            "AUTOLOCKSTATUS": "false",
            "BANDWIDTH": "6000",
            "CAPACITYUSAGE": "0",
            "DISKFORM": "2",
            "DISKIFTYPE": "0",
            "DISKPORTADDR": "530D17EB4F761000",
            "DISKTYPE": "4",
            "ELABEL": "[Board Properties]\r\nBoardType=STLZ5S500\r
\nBarCode=210235G6BB1000000007\r\nItem=0235G6BB\r
\nDescription=PANGEA,STLZ5S500,500GB 7.2K RPM 3G SATA Disk
Unit&#40;2.5\"&#41;\r\nManufactured=2012-05-31\r\nVendorName=Huawei\r
\nIssueNumber=00\r\nCLEICode=\r\nBOM=\r\n",
            "ENCRYPTDISKTYPE": "0",
            "FIRMWAREVER": "0003",
            "HEALTHMARK": "255",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "ISCOFFERDISK": "true",
            "ITEM": "0235G6BB",
            "LIGHTSTATUS": "0",
            "LOCATION": "CTE0.0",
            "LOGICTYPE": "1",
            "MANUFACTURER": "Seagate",
            "MODEL": "ST2000NM0023",
            "MULTIPATH": "[\"A\",\"B\"]",
            "PARENTID": "0",
            "PARENTTYPE": 206,
            "POOLID": "",
            "POOLNAME": "",
            "POOLTIERID": "",
            "PROGRESS": "0",
            "REMAINLIFE": "0",
            "RUNNINGSTATUS": "27",
            "RUNTIME": "500",
            "SECTORS": "3812691536",
            "SECTORSIZE": "520",
            "SERIALNUMBER": "Z1X2F480000094381WYN",
            "SMARTCACHEPOOLID": "4294967295",
            "SPEEDRPM": "7200",
            "STORAGEENGINEID": "0",
            "TEMPERATURE": "37",
            "TYPE": 10,
            "barcode": "210235G6BB1000000007",
            "formatProgress": "0",
            "formatRemainTime": "0"
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.5.3 Interface for Turning On or Off the Disk Locating Indicator

Function

This interface is used to turn on or off the disk locating indicator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/disk/set_disk_lithtsw

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Disk ID.
LIGHTSTATUS	Mandatory	enum	Locating indicator status. **The value is described as follows:** 0:off 1:location indicator is blinking

Result

N/A

Example

- Turn on or off disk locating indicator.

```
Request: PUT /deviceManager/rest/210235843910E6000009/disk/set_disk_lithtsw
{
    "ID": "1",
    "LIGHTSTATUS": 1
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.8.5.4 Interface for Querying All Information of Disks

Function

This interface is used to query all information of disks.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/get_disk_info_summary

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
id	Mandatory	string	Object ID.
freeDiskNum	Mandatory	string(uint32)	Number of unused disks.
totalDiskNum	Mandatory	string(uint32)	Total number of disks.

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Parameter	Mandatory/ Conditional	Type	Description
diskInfoList	Mandatory	string(array)	All information of a disk. **The value is described as follows:** Example of returned values: [{ "diskType": 1, // disk type, DISK_TYPE_E "capacity": "549755813888", // disk capacity; unit: byte "totalCount": 15, // total number of disks "freeCount": 15 // number of free disks }, …] **Note:** Disk type: 0: FC 1: SAS 2: SATA 3: SSD 4: NL_SAS 5: SLC_SSD 6: MLC_SSD 7: FC_SED 8: SAS_SED 9: SATA_SED 10: SSD_SED 11: NL_SAS_SED 12: SLC_SSD_SED 13: MLC_SSD_SED

Example

- Querying all information of disks.

```
Request: GET /deviceManager/rest/210235843910E6000009/get_disk_info_summary

Response:
{
   "data": {
       "diskInfoList": "[{\n\t\t\"diskType\":\t1,\n\t\t\"capacity\":\t
\"292232923320\",\n\t\t\"totalCount\":\t4,\n\t\t\"freeCount\":\t1\n\t}, {\n\t
```

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```
\t\"diskType\":\t1,\n\t\t\"capacity\":\t\"297685518520\",\n\t\t\"totalCount\":
\t14,\n\t\t\"freeCount\":\t7\n\t}, {\n\t\t\"diskType\":\t1,\n\t\t\"capacity\":
\t\"595985518960\",\n\t\t\"totalCount\":\t1,\n\t\t\"freeCount\":\t1\n\t}, {\n
\t\t\"diskType\":\t3,\n\t\t\"capacity\":\t\"202560941440\",\n\t\t\"totalCount
\":\t3,\n\t\t\"freeCount\":\t3\n\t}, {\n\t\t\"diskType\":\t3,\n\t\t\"capacity
\":\t\"100978733440\",\n\t\t\"totalCount\":\t1,\n\t\t\"freeCount\":\t1\n\t}]",
        "freeDiskNum": "13",
        "id": "0",
        "totalDiskNum": "23"
    },
"error": {
    "code": 0,
    "description": "0"
    }
}
```


4.8.5.5 Interface for Destroying Data of a Single Disk

Function

This interface is used to destroy data of a single disk.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to erase the data in a specified encrypted disk list. This operation will erase the data of the encrypted disks in the list. The erased data cannot be recovered.

Suggestion: Before running the command, confirm that you need to erase the data in the encrypted disk list.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/disk/erase_autolock_disk_data

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Disk ID.

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Result

N/A

Example

- Destroying data of the disk whose ID is "20".

```
Request: PUT /deviceManager/rest/210235843910E6000009/disk/
erase_autolock_disk_data
{
    "ID": "20"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.6 power

4.8.6.1 Interface for Querying Power Information

Function

This interface is used to query basic information about a power module.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/power/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 23: power
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 9: inconsistent 11: no input
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 27: online 28: offline
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**°C
POWERTYPE	Mandatory	string(enum)	Type of the power supply. **The value is described as follows:** 0: DC 1: AC

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Parameter	Mandatory/ Conditional	Type	Description
INPUTVOLTAGE	Mandatory	string(uint32)	Input voltage. **Unit:**MV
OUTPUTVOLTAGE	Mandatory	string(uint32)	Output voltage. **Unit:**MV
MANUFACTURER	Mandatory	string	Manufacturer.
MODEL	Mandatory	string	Model.
VERSION	Mandatory	string	Version.
PRODUCEDATE	Mandatory	string	Production date.
SERIALNUMBER	Mandatory	string	SN.
BUNDLEID	Conditional	string	ID of the slot for integrated hardware. Non-integrated hardware is deployed if the field is left empty.
BOMCODE	Mandatory	string	BOM code.
elabel	Mandatory	string	Electronic label.

Example

- Querying basic information about the power module whose ID is 0.0A.0.

```
Request: GET /deviceManager/rest/210235843910E6000009/power/0.0A.0

Response:
{
    "data": {
        "BOMCODE": "02270132",
        "BUNDLEID": "0",
        "HEALTHSTATUS": "11",
        "ID": "0.0A.0",
        "INPUTVOLTAGE": "0",
        "LOCATION": "CTE0.PSU 0",
        "MANUFACTURER": "VAPEL",
        "MODEL": "HSP960-D1205D",
        "NAME": "PSU 0",
        "OUTPUTVOLTAGE": "0",
        "PARENTID": "0",
        "PARENTTYPE": 206,
        "POWERTYPE": "0",
        "PRODUCEDATE": "2014-05-03",
        "RUNNINGSTATUS": "28",
        "SERIALNUMBER": "21022701328NE5000004",
        "TEMPERATURE": "0",
        "TYPE": 23,
        "VERSION": "11",
        "elabel": "[Board Properties]\nBoardType=STLZA1PWR
\nBarCode=210235855110E5000120\nItem=02358551\nDescription=Assembling
Components,PANGEA,STLZA1PWR,Battery Backup
Unit,V2R1C00\nManufactured=2014-06-01\nVendorName=Huawei
```

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```
\nIssueNumber=00\nCLEICode=\nBOM=\n"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.6.2 Interface for Batch Querying Power Information

Function

This interface is used to batch query basic information about power modules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/power

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 23: power
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 9: inconsistent 11: no input
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 27: online 28: offline
TEMPERATURE	Mandatory	string(uint32)	Temperature. **Unit:**°C
POWERTYPE	Mandatory	string(enum)	Type of the power supply. **The value is described as follows:** 0: DC 1: AC
INPUTVOLTAGE	Mandatory	string(uint32)	Input voltage. **Unit:**MV
OUTPUTVOLTAGE	Mandatory	string(uint32)	Output voltage. **Unit:**MV
MANUFACTURER	Mandatory	string	Manufacturer.
MODEL	Mandatory	string	Model.
VERSION	Mandatory	string	Version.
PRODUCEDATE	Mandatory	string	Production date.
SERIALNUMBER	Mandatory	string	SN.

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Parameter	Mandatory/ Conditional	Type	Description
BUNDLEID	Conditional	string	ID of the slot for integrated hardware. Non-integrated hardware is deployed if the field is left empty.
BOMCODE	Mandatory	string	BOM code.
elabel	Mandatory	string	Electronic label.

Example

- Batch querying all power modules.

```
Request: GET /deviceManager/rest/210235843910E6000009/power

Response:
{
    "data": [
        {
            "BOMCODE": "02270132",
            "BUNDLEID": "0",
            "HEALTHSTATUS": "11",
            "ID": "0.0B.0",
            "INPUTVOLTAGE": "0",
            "LOCATION": "CTE0.PSU 0",
            "MANUFACTURER": "VAPEL",
            "MODEL": "HSP960-D1205D",
            "NAME": "PSU 0",
            "OUTPUTVOLTAGE": "0",
            "PARENTID": "0",
            "PARENTTYPE": 206,
            "POWERTYPE": "0",
            "PRODUCEDATE": "2014-05-03",
            "RUNNINGSTATUS": "28",
            "SERIALNUMBER": "21022701328NE5000004",
            "TEMPERATURE": "0",
            "TYPE": 23,
            "VERSION": "11",
            "elabel": "[Board Properties]\nBoardType=STLZA1PWR
\nBarCode=210235855110E5000120\nItem=02358551\nDescription=Assembling
Components,PANGEA,STLZA1PWR,Battery Backup
Unit,V2R1C00\nManufactured=2014-06-01\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n"
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.7 bbu

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4.8.7.1 Interface for Batch Querying Backup Power Module Information

Function

This interface is used to batch query basic information about backup power modules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/backup_power

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type of the managed object. **The value is described as follows:** 210: BBU
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 12: low battery
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 27: online 28: offline 48: charging 49: charging completed 50: discharging
BACKUPPOWERTYPE	Mandatory	string(enum)	Model. **The value is described as follows:** 0: backup battery unit (BBU)
VOLTAGE	Mandatory	string(uint32)	Current voltage (Actual voltage = Returned Voltage/10). **Unit:**V/10
REMAINLIFEDAYS	Mandatory	string(uint32)	Remaining service life. **Unit:**days
CHARGETIMES	Mandatory	string(uint32)	Discharge count.
FIRMWAREVER	Mandatory	string	Firmware version.
ELABEL	Mandatory	string	Electronic label.
MANUFACTUREDDATE	Mandatory	string	Data of production.
CONTROLLERID	Mandatory	string	Controller ID.

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Parameter	Mandatory/ Conditional	Type	Description
BUNDLEID	Mandatory	string	ID of the slot for integrated hardware. Non-integrated hardware is deployed if the field is left empty.

Example

- Batch querying all backup power modules of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/backup_power

Response:
{
    "data": [
        {
            "BACKUPPOWERTYPE": "0",
            "BUNDLEID": "0",
            "CHARGETIMES": "7",
            "CONTROLLERID": "0A",
            "ELABEL": "[Board Properties]\nBoardType=STLZA1PWR
\nBarCode=210235855110E5000120\nItem=02358551\nDescription=Assembling
Components,PANGEA,STLZA1PWR,Battery Backup
Unit,V2R1C00\nManufactured=2014-06-01\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n",
            "FIRMWAREVER": "20.06T4",
            "HEALTHSTATUS": "1",
            "ID": "0.0A.0",
            "LOCATION": "CTE0.PSU 0",
            "MANUFACTUREDDATE": "2014-3-25",
            "NAME": "PSU 0",
            "PARENTID": "0",
            "PARENTTYPE": 206,
            "REMAINLIFEDAYS": "1971",
            "RUNNINGSTATUS": "27",
            "TYPE": 210,
            "VOLTAGE": "161"
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.7.2 Interface for Querying Backup Power Module Information

Function

This interface is used to query basic information about a backup power module.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/backup_power/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID of a BBU.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 210: BBU.
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 12: low battery
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 27: online 28: offline 48: charging 49: charging completed 50: discharging
BACKUPPOWERTYPE	Mandatory	string(enum)	Model. **The value is described as follows:** 0: backup battery unit (BBU)
VOLTAGE	Mandatory	string(uint32)	Current voltage (Actual voltage = Returned Voltage/10). **Unit:**V/10
REMAINLIFEDAYS	Mandatory	string(uint32)	Remaining service life. **Unit:**days
CHARGETIMES	Mandatory	string(uint32)	Discharge count.
FIRMWAREVER	Mandatory	string	Firmware version.
ELABEL	Mandatory	string	Electronic label.
MANUFACTUREDDATE	Mandatory	string	Data of production.
CONTROLLERID	Mandatory	string	Controller ID.

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Parameter	Mandatory/ Conditional	Type	Description
BUNDLEID	Mandatory	string	ID of the slot for integrated hardware. Non-integrated hardware is deployed if the field is left empty.

Example

- Querying basic information about the backup power module whose ID is 0.0A.0.

```
Request: GET /deviceManager/rest/210235843910E6000009/backup_power/0.0A.0

Response:
{
    "data": {
        "BACKUPPOWERTYPE": "0",
        "BUNDLEID": "0",
        "CHARGETIMES": "7",
        "CONTROLLERID": "0A",
        "ELABEL": "[Board Properties]\nBoardType=STLZA1PWR
\nBarCode=210235855110E5000120\nItem=02358551\nDescription=Assembling
Components,PANGEA,STLZA1PWR,Battery Backup
Unit,V2R1C00\nManufactured=2014-06-01\nVendorName=Huawei
\nIssueNumber=00\nCLEICode=\nBOM=\n",
        "FIRMWAREVER": "20.06T4",
        "HEALTHSTATUS": "1",
        "ID": "0.0A.0",
        "LOCATION": "CTE0.PSU 0",
        "MANUFACTUREDDATE": "2014-3-25",
        "NAME": "PSU 0",
        "PARENTID": "0",
        "PARENTTYPE": 206,
        "REMAINLIFEDAYS": "1971",
        "RUNNINGSTATUS": "27",
        "TYPE": 210,
        "VOLTAGE": "161"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.8 fan

4.8.8.1 Interface for Querying Fan Information

Function

This interface is used to query basic information about a fan module.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fan/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Fan ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type of the managed object. **The value is described as follows:** 211: fan module
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure 207: controller
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 3: not running 8: spin down 27: online 28: offline
RUNLEVEL	Mandatory	string(enum)	Increment. **The value is described as follows:** 0: low 1: normal 2: high
ELABEL	Mandatory	string	Electronic label.
BUNDLEID	Conditional	string	ID of the slot for integrated hardware. Non-integrated hardware is deployed if the field is left empty.

Example

- Querying basic information about the fan module whose ID is 0.0B.0.

```
Request: GET /deviceManager/rest/210235843910E6000009/fan/0.0B.0

Response:
{
    "data": {
        "BUNDLEID": "0",
        "ELABEL": "",
        "HEALTHSTATUS": "1",
        "ID": "0.0B.0",
        "LOCATION": "CTE0.PSU 0",
        "NAME": "PSU 0",
        "PARENTID": "0",
        "PARENTTYPE": 206,
        "RUNLEVEL": "0",
        "RUNNINGSTATUS": "2",
        "TYPE": 211
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.8.2 Interface for Batch Querying Fan Information

Function

This interface is used to batch query basic information about fan modules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fan

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 211: fan module
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure 207: controller
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 3: not running 8: spin down 27: online 28: offline
RUNLEVEL	Mandatory	string(enum)	Increment. **The value is described as follows:** 0: low 1: normal 2: high
ELABEL	Mandatory	string	Electronic label.
BUNDLEID	Mandatory	string	ID of the slot for integrated hardware. Non-integrated hardware is deployed if the field is left empty.

Example

- Batch querying all fan modules of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/fan

Response:
{
    "data": [
        {
            "BUNDLEID": "0",
            "ELABEL": "",
            "HEALTHSTATUS": "1",
            "ID": "0.0B.0",
            "LOCATION": "CTE0.PSU 0",
            "NAME": "PSU 0",
            "PARENTID": "0",
```

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```
            "PARENTTYPE": 206,
            "RUNLEVEL": "0",
            "RUNNINGSTATUS": "2",
            "TYPE": 211
        }, ...
    ],
    "error": {
          "code": 0,
          "description": "0"
    }
}
```

4.8.8.3 Interface for Querying Fan Control Module Information

Function

This interface is used to query basic information about a fan control module.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fan_ctrl_module/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 306: fan control module
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 12: powering on 13: powered off 27: online 28: offline 103: power-on failed
ELABEL	Mandatory	string	Electronic label.
PCBVER	Mandatory	string	PCB version.

Example

- Querying basic information about the fan control module whose ID is CTE0.C.

```
Request: GET /deviceManager/rest/210235843910E6000009/fan_ctrl_module/CTE0.C

Response:
{
    "data": {
        "ELABEL": "--",
        "HEALTHSTATUS": "1",
        "ID": "CTE0.C",
        "LOCATION": "CTE0.C",
        "NAME": "ACU.C",
        "PARENTID": "0",
        "PARENTTYPE": 206,
```

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```
        "PCBVER": "VER.B",
        "RUNNINGSTATUS": "27",
        "TYPE": 306
    },
    "error": {
      "code": 0,
      "description": "0"
    }
}
```

4.8.8.4 Interface for Batch Querying Fan Control Module Information

Function

This interface is used to batch query basic information about fan control modules.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fan_ctrl_module

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 306: fan control module
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 12: powering on 13: powered off 27: online 28: offline 103: power-on failed
ELABEL	Mandatory	string	Electronic label.
PCBVER	Mandatory	string	PCB version.

Example

- Batch Querying all fan control modules of the storage array .

```
Request: GET /deviceManager/rest/210235843910E6000009/fan_ctrl_module

Response:
{
    "data": [
        {
            "ELABEL": "--",
            "HEALTHSTATUS": "1",
            "ID": "CTE0.C",
            "LOCATION": "CTE0.C",
            "NAME": "ACU.C",
            "PARENTID": "0",
            "PARENTTYPE": 206,
            "PCBVER": "VER.B",
```

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```
            "RUNNINGSTATUS": "27",
            "TYPE": 306
        },...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9 port

4.8.9.1 Interface for Batch Querying SVP Ethernet Port Information

Function

This interface is used to batch query basic information about SVP ethernet ports.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/SVP/eth_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 213: Ethernet Port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port 2: management port 3: internal port 4: maintenance port 5: management/service port 6: maintenance/service port
MACADDRESS	Mandatory	string	MAC address.

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Parameter	Mandatory/ Conditional	Type	Description
ETHDUPLEX	Mandatory	string(enum)	Duplex mode. **The value is described as follows:** 1: half duplex (HD) 2: full duplex (FD) 3: auto-negotiation
MTU	Mandatory	string(uint32)	Maximum transmission unit (MTU).
BONDNAME	Mandatory	string	Bond name.
IPV4ADDR	Mandatory	string	IPv4 address.
IPV4MASK	Mandatory	string	IPv4 mask.
IPV4GATEWAY	Mandatory	string	IPv4 gateway.
IPV6ADDR	Mandatory	string	IPv6 address.
IPV6MASK	Mandatory	string	IPv6 mask.
IPV6GATEWAY	Mandatory	string	IPv6 gateway.
SPEED	Mandatory	string(uint32)	Port working rate. **Unit:**Mbps

Example

- Batch querying all Ethernet ports of the storage SVP.

```
Request: GET /deviceManager/rest/SVP/eth_port

Response:
{
    "data": [
        {
            "BONDNAME": "bond0",
            "ETHDUPLEX": "2",
            "HEALTHSTATUS": "1",
            "ID": "P1",
            "IPV4ADDR": "8.46.75.87",
            "IPV4GATEWAY": "8.46.64.1",
            "IPV4MASK": "255.255.224.0",
            "IPV6ADDR": "",
            "IPV6GATEWAY": "",
            "IPV6MASK": "",
            "LOCATION": "SVP.P1",
            "LOGICTYPE": "2",
            "MACADDRESS": "64:3e:8c:b7:7e:13",
            "MTU": "1500",
            "NAME": "Manager Port",
            "PARENTID": "SVP",
            "PARENTTYPE": 206,
            "RUNNINGSTATUS": "10",
            "SPEED": "1000",
            "TYPE": 213
```

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```
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.2 Interface for Implementing Associated Query of Fibre Channel Port Information

Function

This interface is used to implement associated query of basic information about Fibre Channel ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_port/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 257: port group
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 212: fibre channel port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port

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Parameter	Mandatory/ Conditional	Type	Description
RUNSPEED	Mandatory	string(uint32)	Operating speed. **The value is described as follows:** "-1" is returned if the port works incorrectly. **Unit:**Mbit/s
CONFSPEED	Mandatory	string(uint32)	Configured speed. **The value is described as follows:** 0 indicates auto-negotiation. The current speed can be 1 Mbit/s, 2 Mbit/s, 4 Mbit/s, 8 Mbit/s, and 16 Mbit/s. The conversion unit is 1000. The device returns the value by default. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
SFPSTATUS	Mandatory	string(enum)	Optical module status. **The value is described as follows:** 0: absent 1: offline 2: online
FCCONFMODE	Mandatory	string(enum)	Configured mode. **The value is described as follows:** 0: fabric 1: FC-AL 2: P2P 3: auto -1 is returned if the port works incorrectly.

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Parameter	Mandatory/ Conditional	Type	Description
FCRUNMODE	Mandatory	string(enum)	Operating mode. **The value is described as follows:** 0: fabric 1: FC-AL 2: P2P 3: auto -1 is returned if the port works incorrectly.
LOSTSIGNALS	Mandatory	string(uint32)	Number of errors (the Loss of Signal type).
BADCHARNUMBER	Mandatory	string(uint32)	Number of errors (the Bad RX Char type).
LOSTSYNC	Mandatory	string(uint32)	Number of errors (the Loss of Sync type).
LINKFAIL	Mandatory	string(uint32)	Number of errors (the Link Fail type).
STARTTIME	Mandatory	string(uint32)	Time when statistics starts.
FLOGINDELAYTIMES	Mandatory	string(uint32)	Latency of running the flogin command.
MAXSUPPORTSPEED	Mandatory	string(uint32)	Maximum port speed. **The value is described as follows:** 1000 2000 4000 8000 16000 **Unit:**Mbit/s
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true: off false: on

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Parameter	Mandatory/ Conditional	Type	Description
lightStatus	Mandatory	string(enum)	Locating light switch status. **The value is described as follows:** 0: off 1: on
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s
BADCRCNUM	Mandatory	string(uint32)	Number of CRC errors.
endOfFrameErrors	Mandatory	string(uint32)	Number of frame end sign errors.
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Implementing associated query of basic information about Fibre Channel ports in the port group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/fc_port/associate?
ASSOCIATEOBJTYPE=257&ASSOCIATEOBJID=0

Response:
{
    "data": [
        {
            "BADCHARNUMBER": "24",
            "BADCRCNUM": "0",
            "CONFSPEED": "0",
            "FCCONFMODE": "3",
            "FCRUNMODE": "1",
            "FLOGINDELAYTIMES": "0",
            "HEALTHSTATUS": "1",
            "ID": "1114368",
            "INIORTGT": "4",
            "LINKFAIL": "0",
            "LOCATION": "CTE0.A.IOM1.P0",
            "LOGICTYPE": "0",
            "LOSTSIGNALS": "0",
            "LOSTSYNC": "0",
            "MAXSPEED": "16000",
            "MAXSUPPORTSPEED": "16000",
            "NAME": "P0",
            "PARENTID": "0A.1",
            "PARENTTYPE": 209,
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "10",
            "RUNSPEED": "8000",
            "SFPSTATUS": "2",
            "STARTTIME": "1456152959",
            "TYPE": 212,
            "WWN": "20081051720c8a61",
            "endOfFrameErrors": "0",
            "lightStatus": "0",
            "numberOfInitiators": "1"
```

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```
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.3 Interface for Batch Querying Fibre Channel Port Information

Function

This interface is used to batch query basic information about Fibre Channel ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 212: Fibre Channel Port.

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **The value is described as follows:** "-1" is returned if the port works incorrectly. **Unit:**Mbit/s

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Parameter	Mandatory/ Conditional	Type	Description
CONFSPEED	Mandatory	string(uint32)	Configured speed. **The value is described as follows:** 0 indicates auto-negotiation. The current speed can be 1 Mbit/s, 2 Mbit/s, 4 Mbit/s, 8 Mbit/s, and 16 Mbit/s. The conversion unit is 1000. The device returns the value by default. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
SFPSTATUS	Mandatory	string(enum)	Optical module status. **The value is described as follows:** 0: absent 1: offline 2: online
FCCONFMODE	Mandatory	string(enum)	Configured mode. **The value is described as follows:** 0: fabric 1: FC-AL 2: P2P 3: auto -1 is returned if the port works incorrectly.

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Parameter	Mandatory/ Conditional	Type	Description
FCRUNMODE	Mandatory	string(enum)	Operating mode. **The value is described as follows:** 0: fabric 1: FC-AL 2: P2P 3: auto -1 is returned if the port works incorrectly.
LOSTSIGNALS	Mandatory	string(uint32)	Number of errors (the Loss of Signal type).
BADCHARNUMBER	Mandatory	string(uint32)	Number of errors (the Bad RX Char type).
LOSTSYNC	Mandatory	string(uint32)	Number of errors (the Loss of Sync type).
LINKFAIL	Mandatory	string(uint32)	Number of errors (the Link Fail type).
STARTTIME	Mandatory	string(uint32)	Time when statistics starts.
FLOGINDELAYTIMES	Mandatory	string(uint32)	Latency of running the flogin command.
MAXSUPPORTSPEED	Mandatory	string(uint32)	Maximum port speed. **The value is described as follows:** 1000 2000 4000 8000 16000 **Unit:**Mbit/s
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** false: off true: on

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Parameter	Mandatory/ Conditional	Type	Description
lightStatus	Mandatory	string(enum)	Locating light switch status. **The value is described as follows:** 0: off 1: on
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s
BADCRCNUM	Mandatory	string(uint32)	Number of CRC errors.
endOfFrameErrors	Mandatory	string(uint32)	Number of frame end sign errors.
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Batch querying basic information about all Fibre Channel ports of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/fc_port

Response:
{
    "data": [
        {
            "BADCHARNUMBER": "0",
            "BADCRCNUM": "0",
            "CONFSPEED": "0",
            "FCCONFMODE": "3",
            "FCRUNMODE": "-1",
            "FLOGINDELAYTIMES": "0",
            "HEALTHSTATUS": "1",
            "ID": "549773705216",
            "INIORTGT": "4",
            "LINKFAIL": "0",
            "LOCATION": "CTE0.B.IOM0.P0",
            "LOGICTYPE": "0",
            "LOSTSIGNALS": "0",
            "LOSTSYNC": "0",
            "MAXSPEED":"16000",
            "MAXSUPPORTSPEED": "16000",
            "NAME": "P0",
            "PARENTID": "0B.0",
            "PARENTTYPE": 209,
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "11",
            "RUNSPEED": "-1",
            "SFPSTATUS": "1",
            "STARTTIME": "1474200499",
            "TYPE": 212,
            "WWN": "201030d17eb4f761",
            "endOfFrameErrors": "0",
            "lightStatus": "0",
            "numberOfInitiators": "1"
        }, ...
    ],
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.4 Interface for Implementing Associated Query of Ethernet Port Information

Function

This interface is used to implement associated query of Ethernet port information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 257: port group
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 213: Ethernet Port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down

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Parameter	Mandatory/ Conditional	Type	Description
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port 2: management port 3: inner port 4: maintenance port 5: management/service port 6: maintenance/service port 11: IP Scale-out interconnect port
MACADDRESS	Mandatory	string	MAC address.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
ETHDUPLEX	Mandatory	string(enum)	Duplex mode. **The value is described as follows:** 1: half duplex (HD) 2: full duplex (FD) 3: auto-negotiation
ETHNEGOTIATE	Mandatory	string(enum)	Negotiation mode. **The value is described as follows:** 1: HD 2: FD 3: auto-negotiation
MTU	Mandatory	string(uint32)	Maximum transmission unit (MTU).
BONDNAME	Mandatory	string	Bond name.
IPV4ADDR	Mandatory	string	IPv4 address.
IPV4MASK	Mandatory	string	IPv4 mask.
IPV4GATEWAY	Mandatory	string	IPv4 gateway.

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Parameter	Mandatory/ Conditional	Type	Description
IPV6ADDR	Mandatory	string	IPv6 address.
IPV6MASK	Mandatory	string	IPv6 mask.
IPV6GATEWAY	Mandatory	string	IPv6 gateway.
ISCSITCPPORT	Mandatory	string	iSCSI port ID.
ISCSINAME	Mandatory	string	iSCSI name.
ERRORPACKETS	Mandatory	string(uint32)	Number of error packets.
LOSTPACKETS	Mandatory	string(uint32)	Number of lost packets.
OVERFLOWEDPACKETS	Mandatory	string(uint32)	Number of overflowed packets.
STARTTIME	Mandatory	string(uint32)	Time when statistics starts.
SPEED	Mandatory	string(uint32)	Port working rate.
vlan	Conditional	string	VLAN ID. **Note:**This field is returned after a VLAN is created.
selectType	Mandatory	string(enum)	Queries the specified type of the current port when the storage system has multiple controllers. **The value is described as follows:** 0: host port/service port 2: management port 4: maintenance port
zoneId	Mandatory	string	ID of the switching plane connecting to the port in Scale-out. **Note:**This field is valid only when logicType is IP_SCALE_OUT.
dswId	Mandatory	string	ID of the switch (virtual) connecting to the switch in Scale-out. **Note:**This field is valid only when logicType is IP_SCALE_OUT.

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Parameter	Mandatory/ Conditional	Type	Description
dswLinkRight	Mandatory	string	Status of the connection between the specified port and switch. **The value is described as follows:** 0: wrong 1: right **Note:**This field is valid only when logicType is IP_SCALE_OUT.
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true: on false: off
BONDID	Conditional	string	Bond ID. **Note:**This field is valid only after port bonding.
DEVICENAME	Conditional	string	Device name. **Note:**This field is returned for VM emulation environments.
lightStatus	Mandatory	string(enum)	Locating light status. **The value is described as follows:** 0: off 1: on
USEDTYPE	Mandatory	string(enum)	Port usage type. **The value is described as follows:** 1: applicable to the storage OS 2: applicable to the VM system **Note:**This field is returned for VM emulation environments.

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Parameter	Mandatory/ Conditional	Type	Description
portUsage	Conditional	string(enum)	Port usage. **The value is described as follows:** 1: service 2: management 3: maintenance **Note:**This field is returned for VM emulation environments.
OWNINGCONTROLLER	Mandatory	string	Owning controller of the port.
crcErrors	Mandatory	string(uint32)	Number of CRC errors.
frameErrors	Mandatory	string(uint32)	Number of frame Errors.
frameLengthErrors	Mandatory	string(uint32)	Number of frame length errors.
totalReceivedPackets	Conditional	string(uint64)	Total number of received packets. **Note:**The value is returned when the port is a service port.
totalTransmittedPackets	Conditional	string(uint64)	Total number of transmitted packets. **Note:**The value is returned when the port is a service port.
totalReceivedBytes	Conditional	string(uint64)	Total number of received bytes. **Unit:**bytes **Note:**The value is returned when the port is a service port.
totalTransmittedBytes	Conditional	string(uint64)	Total number of transmitted bytes. **Unit:**bytes **Note:**The value is returned when the port is a service port.

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Parameter	Mandatory/ Conditional	Type	Description
receivedPacketsPerSec	Conditional	string(uint64)	Average number of packets received per second within the last statistical period. **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
transmittedPacketsPerSec	Conditional	string(uint64)	Average number of packets transmitted per second within the last statistical period. **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
receivedBytesPerSec	Conditional	string(uint64)	Average number of bytes received per second within the last statistical period. **Unit:**bytes/s **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
transmittedBytesPerSec	Conditional	string(uint64)	Average number of bytes transmitted per second within the last statistical period. **Unit:**bytes/s **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.

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Parameter	Mandatory/ Conditional	Type	Description
maxSpeed	Mandatory	string(uint64)	Max working rate. **Unit:**Mbit/s
portFilter	Mandatory	string(enum)	Port function filter. **The value is described as follows:** 0: Used to configured IP addresses 1: Used to create LIF 2: Used to created VLANs 3: Used to create binding 4: Port added to a customized failover group 5: Port added to a VM 6: Port added to an arbitration link
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying all Ethernet ports belonging to the port group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/eth_port/associate?
ASSOCIATEOBJTYPE=257&ASSOCIATEOBJID=0

Response:
{
    "data": [
        {
            "BONDID": "18446744073709551615",
            "BONDNAME": "",
            "DEVICENAME": "eth6",
            "ERRORPACKETS": "0",
            "ETHDUPLEX": "-1",
            "ETHNEGOTIATE": "3",
            "HEALTHSTATUS": "1",
            "ID": "131328",
            "INIORTGT": "4",
            "IPV4ADDR": "",
            "IPV4GATEWAY": "",
            "IPV4MASK": "",
            "IPV6ADDR": "",
            "IPV6GATEWAY": "",
            "IPV6MASK": "",
            "ISCSINAME": "",
            "ISCSITCPPORT": "0",
            "LOCATION": "CTE0.A.IOM1.P0",
            "LOGICTYPE": "0",
            "LOSTPACKETS": "0",
            "MACADDRESS": "04:f9:38:95:88:f1",
            "MTU": "1500",
            "NAME": "P0",
```

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```
            "OVERFLOWEDPACKETS": "0",
            "PARENTID": "0A.1",
            "PARENTTYPE": 209,
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "11",
            "SPEED": "-1",
            "STARTTIME": "1474289326",
            "TYPE": 213,
            "crcErrors": "0",
            "frameErrors": "0",
            "frameLengthErrors": "0",
            "dswId": "4294967295",
            "dswLinkRight": "4294967295",
            "lightStatus": "0",
            "maxSpeed": "1000",
            "portFilter": "0",
            "portUsage": "1",
            "receivedBytesPerSec": "296"
            "receivedPacketsPerSec": "68"
            "selectType": "0",
            "totalReceivedPackets": "7035891",
            "totalReceivedBytes": "2832445",
            "totalTransmittedBytes": "744073707883",
            "totalTransmittedPackets": "922337203686",
            "transmittedBytesPerSec": "3071",
            "transmittedPacketsPerSec": "61",
            "zoneId": "4294967295",
            "numberOfInitiators": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.9.5 Interface for Batch Querying Ethernet Port Information

Function

This interface is used to batch query basic information about Ethernet ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Optional	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Optional	string	ID of the parent object.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 213: Ethernet Port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port 2: management port 3: inner port 4: maintenance port 5: management/service port 6: maintenance/service port 11: IP Scale-out interconnect port
MACADDRESS	Mandatory	string	MAC address.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target

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Parameter	Mandatory/ Conditional	Type	Description
ETHDUPLEX	Mandatory	string(enum)	Duplex mode. **The value is described as follows:** 1: half duplex (HD) 2: full duplex (FD) 3: auto-negotiation
ETHNEGOTIATE	Mandatory	string(enum)	Negotiation mode. **The value is described as follows:** 1: HD 2: FD 3: auto-negotiation
MTU	Mandatory	string(uint32)	Maximum transmission unit (MTU).
BONDNAME	Mandatory	string	Bond name.
IPV4ADDR	Mandatory	string	IPv4 address.
IPV4MASK	Mandatory	string	IPv4 mask.
IPV4GATEWAY	Mandatory	string	IPv4 gateway.
IPV6ADDR	Mandatory	string	IPv6 address.
IPV6MASK	Mandatory	string	IPv6 mask.
IPV6GATEWAY	Mandatory	string	IPv6 gateway.
ISCSITCPPORT	Mandatory	string	iSCSI port ID.
ISCSINAME	Mandatory	string	iSCSI name.
ERRORPACKETS	Mandatory	string(uint32)	Number of error packets.
LOSTPACKETS	Mandatory	string(uint32)	Number of lost packets.
OVERFLOWEDPACKETS	Mandatory	string(uint32)	Number of overflowed packets.
STARTTIME	Mandatory	string(uint32)	Time when statistics starts.
SPEED	Mandatory	string(uint32)	Port working rate.
vlan	Conditional	string	VLAN ID. **Note:**This field is returned after a VLAN is created.

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Parameter	Mandatory/ Conditional	Type	Description
selectType	Mandatory	string(enum)	Queries the specified type of the current port when the storage system has multiple controllers. **The value is described as follows:** 0: host port/service port 2: management port 4: maintenance port
zoneId	Mandatory	string	ID of the switching plane connecting to the port in Scale-out. **Note:**This field is valid only when logicType is IP_SCALE_OUT.
dswId	Mandatory	string	ID of the switch (virtual) connecting to the switch in Scale-out. **Note:**This field is valid only when logicType is IP_SCALE_OUT.
dswLinkRight	Mandatory	string	Status of the connection between the specified port and switch. **The value is described as follows:** 0: wrong 1: right **Note:**This field is valid only when logicType is IP_SCALE_OUT.
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true:on false:off
BONDID	Conditional	string	Bond ID. **Note:**This field is valid only after port bonding.

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Parameter	Mandatory/ Conditional	Type	Description
DEVICENAME	Conditional	string	Device name. **Note:**This field is returned for VM emulation environments.
lightStatus	Mandatory	string(enum)	Locating light status. **The value is described as follows:** 0: off 1: on
USEDTYPE	Mandatory	string(enum)	Port usage type. **The value is described as follows:** 1: applicable to the storage OS 2: applicable to the VM system **Note:**This field is returned for VM emulation environments.
portUsage	Conditional	string(enum)	Port usage. **The value is described as follows:** 1: service 2: management 3: maintenance **Note:**This field is returned for VM emulation environments.
OWNINGCONTROLLER	Mandatory	string	Owning controller of the port.
crcErrors	Mandatory	string(uint32)	Number of CRC errors.
frameErrors	Mandatory	string(uint32)	Number of frame Errors.
frameLengthErrors	Mandatory	string(uint32)	Number of frame length errors.
totalReceivedPackets	Conditional	string(uint64)	Total number of received packets. **Note:**The value is returned when the port is a service port.

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Parameter	Mandatory/ Conditional	Type	Description
totalTransmittedPackets	Conditional	string(uint64)	Total number of transmitted packets. **Note:**The value is returned when the port is a service port.
totalReceivedBytes	Conditional	string(uint64)	Total number of received bytes. **Unit:**bytes **Note:**The value is returned when the port is a service port.
totalTransmittedBytes	Conditional	string(uint64)	Total number of transmitted bytes. **Unit:**bytes **Note:**The value is returned when the port is a service port.
receivedPacketsPerSec	Conditional	string(uint64)	Average number of packets received per second within the last statistical period. **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
transmittedPacketsPerSec	Conditional	string(uint64)	Average number of packets transmitted per second within the last statistical period. **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.

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Parameter	Mandatory/ Conditional	Type	Description
receivedBytesPerSec	Conditional	string(uint64)	Average number of bytes received per second within the last statistical period. **Unit:**bytes/s **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
transmittedBytesPerSec	Conditional	string(uint64)	Average number of bytes transmitted per second within the last statistical period. **Unit:**bytes/s **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
maxSpeed	Mandatory	string(uint64)	Max working rate. **Unit:**Mbit/s
portFilter	Mandatory	string(enum)	Port function filter. **The value is described as follows:** 0: Used to configured IP addresses 1: Used to create LIF 2: Used to created VLANs 3: Used to create binding 4: Port added to a customized failover group 5: Port added to a VM 6: Port added to an arbitration lin
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

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Example

- Batch querying all Ethernet ports of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/eth_port

Response:
{
    "data": [
        {
            "BONDID": "18446744073709551615",
            "BONDNAME": "",
            "DEVICENAME": "eth2",
            "ERRORPACKETS": "0",
            "ETHDUPLEX": "2",
            "ETHNEGOTIATE": "3",
            "HEALTHSTATUS": "1",
            "ID": "139264",
            "INIORTGT": "-1",
            "IPV4ADDR": "100.136.52.56",
            "IPV4GATEWAY": "0.0.0.0",
            "IPV4MASK": "255.255.0.0",
            "IPV6ADDR": "",
            "IPV6GATEWAY": "",
            "IPV6MASK": "",
            "ISCSINAME": "",
            "ISCSITCPPORT": "0",
            "LOCATION": "CTE0.A.MGMT",
            "LOGICTYPE": "2",
            "LOSTPACKETS": "0",
            "MACADDRESS": "30:d1:7e:b2:cb:f5",
            "MTU": "1500",
            "NAME": "MGMT",
            "OVERFLOWEDPACKETS": "0",
            "PARENTID": "0A",
            "PARENTTYPE": 207,
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "10",
            "SPEED": "1000",
            "STARTTIME": "1474200497",
            "TYPE": 213,
            "crcErrors": "0",
            "frameErrors": "0",
            "frameLengthErrors": "0",
            "dswId": "4294967295",
            "dswLinkRight": "4294967295",
            "lightStatus": "0",
            "maxSpeed": "1000",
            "portFilter": "0",
            "portUsage": "2",
            "receivedBytesPerSec": "296",
            "receivedPacketsPerSec": "68",
            "selectType": "2",
            "totalReceivedPackets": "7035891",
            "totalReceivedBytes": "2832445",
            "totalTransmittedBytes": "744073707883",
            "totalTransmittedPackets": "922337203686",
            "transmittedBytesPerSec": "3071",
            "transmittedPacketsPerSec": "61",
            "zoneId": "4294967295",
            "numberOfInitiators": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.9.6 Interface for Querying Bond Port Information

Function

This interface is used to query basic information about a bond port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Bond port ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 235: bond port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 4: partially damaged
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
PORTIDLIST	Mandatory	string(array)	List of Ethernet ports.
MTU	Mandatory	string(uint32)	Maximum transmission unit.
USEDTYPE	Conditional	string(enum)	Operating system (OS) type of port service. The port is used by the storage system OS by default. **The value is described as follows:** 1: used for storage 2: used for vm **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

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Parameter	Mandatory/ Conditional	Type	Description
DEVICENAME	Conditional	string	Device name of the port. **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

Example

- Querying basic information about the bond port whose ID is 549772730113.

```
Request: GET /deviceManager/rest/210235843910E6000009/bond_port/549772730113

Response:
{
    "data": {
        "DEVICENAME": "bond1",
        "HEALTHSTATUS": "1",
        "ID": "549772730113",
        "MTU": "1500",
        "NAME": "bond0",
        "PORTIDLIST": "[\"549772722432\",\"549772722433\"]",
        "RUNNINGSTATUS": "10",
        "TYPE": 235,
        "USEDTYPE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.7 Interface for Creating a Bond Port

Function

This interface is used to create a bond port.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to bond Ethernet ports.

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This operation will disconnect all links to the Ethernet port, and the IP address and route configurations will be lost. Services are switched to the newly bonded port. The mode of all switch ports connected to the Ethernet port must be configured to 802.3AD LACP.

Suggestion:

1. Before performing this operation, stop all services on the Ethernet port.

2. Configure the mode of all switch ports connected to the Ethernet port to 802.3AD LACP.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, periods (.), underscores (_) and hyphens (-). **Length:**1~31
PORTIDLIST	Mandatory	array	ID of the Ethernet port. Use commas (,) to separate multiple IDs from one other.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 235: bond port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 4: partially damaged
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
PORTIDLIST	Mandatory	string(array)	List of Ethernet ports.
MTU	Mandatory	string(uint32)	Maximum transmission unit.
USEDTYPE	Conditional	string(enum)	Operating system (OS) type of port service. The port is used by the storage system OS by default. **The value is described as follows:** 1: used for storage 2: used for vm **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

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Parameter	Mandatory/ Conditional	Type	Description
DEVICENAME	Conditional	string	Device name of the port. **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

Example

- Creating a bond port.

```
Request: POST /deviceManager/rest/210235843910E6000009/bond_port
{
    "PORTIDLIST": ["139269", "139270"],
    "NAME": "bond"
}

Response:
{
    "data": {
        "HEALTHSTATUS": "0",
        "ID": "1376678",
        "MTU": "0",
        "NAME": "bond",
        "PORTIDLIST": "["139269", "139270"]",
        "RUNNINGSTATUS": "0",
        "TYPE": 235
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.8 Interface for Querying SAS Port Information

Function

This interface is used to query basic information about a SAS port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/sas_port/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SAS port ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 214:SAS port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 208: expansion board 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 1: expansion port
RUNSPEED	Mandatory	string(uint32)	Operating rate. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
PORTSWITCH	Mandatory	string(bool)	Port switch. **The value is described as follows:** true: open false: close
INVALIDDWORD	Mandatory	string(uint32)	Number of invalid DWORD.
DISPARITYERROR	Mandatory	string(uint32)	Number of inconsistency errors.
LOSSDWORD	Mandatory	string(uint32)	Number of lost DWORDs.
PHYRESETERRORS	Mandatory	string(uint32)	Number of failed PHY resets.
STARTTIME	Mandatory	string	Time when statistics collection starts.
CURRENT_PEER_PORT_ID	Mandatory	string	ID of the current peer port.

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Parameter	Mandatory/ Conditional	Type	Description
SUGGEST_PEER_PORT_ID	Mandatory	string	ID of the peer port that needs to be connected.
LIGHTSTATUS	Mandatory	string(enum)	Locating indicator. **The value is described as follows:** 0: off 1: on
ISMINISAS	Mandatory	string(bool)	Whether it is mini SAS. **The value is described as follows:** true: yes false: no
ENCLOSURE_WWN_LIST	Mandatory	string	List of WWNs of disk enclosures connected to the specific SAS port.
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s

Example

- Querying basic information about the SAS port whose ID is 2039809.

```
Request: GET /deviceManager/rest/210235843910E6000009/sas_port/2039809

Response:
{
    "data": {
        "CURRENT_PEER_PORT_ID": "8867962880",
        "DISPARITYERROR": "0",
        "ENCLOSURE_WWN_LIST": "0x504f93883898a03f,",
        "HEALTHSTATUS": "1",
        "ID": "2039809",
        "INIORTGT": "2",
        "INVALIDDWORD": "0",
        "ISMINISAS": "false",
        "LIGHTSTATUS": "0",
        "LOCATION": "CTE0.A.EXP0",
        "LOGICTYPE": "1",
        "LOSSDWORD": "0",
        "MAXSPEED": "12000",
        "NAME": "EXP0",
        "PARENTID": "0A",
        "PARENTTYPE": 207,
        "PHYRESETERRORS": "0",
        "PORTSWITCH": "true",
        "RUNNINGSTATUS": "10",
        "RUNSPEED": "12000",
        "STARTTIME": "1474200497",
        "SUGGEST_PEER_PORT_ID": "8867962880",
        "TYPE": 214,
        "WWN": "50022a1060708000"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.9 Interface for Querying Ethernet Port Information

Function

This interface is used to query basic information about an Ethernet port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Ethernet port ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 213: Ethernet Port

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port 2: management port 3: inner port 4: maintenance port 5: management/service port 6: maintenance/service port 11: IP Scale-out interconnect port

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Parameter	Mandatory/ Conditional	Type	Description
MACADDRESS	Mandatory	string	MAC address.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
ETHDUPLEX	Mandatory	string(enum)	Duplex mode. **The value is described as follows:** 1: half duplex (HD) 2: full duplex (FD) 3: auto-negotiation
ETHNEGOTIATE	Mandatory	string(enum)	Negotiation mode. **The value is described as follows:** 1: HD 2: FD 3: auto-negotiation
MTU	Mandatory	string(uint32)	Maximum transmission unit (MTU).
BONDNAME	Mandatory	string	Bond name.
IPV4ADDR	Mandatory	string	IPv4 address.
IPV4MASK	Mandatory	string	IPv4 mask.
IPV4GATEWAY	Mandatory	string	IPv4 gateway.
IPV6ADDR	Mandatory	string	IPv6 address.
IPV6MASK	Mandatory	string	IPv6 mask.
IPV6GATEWAY	Mandatory	string	IPv6 gateway.
ISCSITCPPORT	Mandatory	string	iSCSI port ID.
ISCSINAME	Mandatory	string	iSCSI name.
ERRORPACKETS	Mandatory	string(uint32)	Number of error packets.
LOSTPACKETS	Mandatory	string(uint32)	Number of lost packets.
OVERFLOWEDPACKETS	Mandatory	string(uint32)	Number of overflowed packets.

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string(uint32)	Time when statistics starts.
SPEED	Mandatory	string(uint32)	Port working rate.
vlan	Conditional	string	VLAN ID. **Note:**This field is returned after a VLAN is created.
selectType	Mandatory	string(enum)	Queries the specified type of the current port when the storage system has multiple controllers. **The value is described as follows:** 0: host port/service port 2: management port 4: maintenance port
zoneId	Mandatory	string	ID of the switching plane connecting to the port in Scale-out. **Note:**This field is valid only when logicType is IP_SCALE_OUT.
dswId	Mandatory	string	ID of the switch (virtual) connecting to the switch in Scale-out. **Note:**This field is valid only when logicType is IP_SCALE_OUT.
dswLinkRight	Mandatory	string	Status of the connection between the specified port and switch. **The value is described as follows:** 0: wrong 1: right **Note:**This field is valid only when logicType is IP_SCALE_OUT.

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Parameter	Mandatory/ Conditional	Type	Description
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true: on false: off
BONDID	Conditional	string	Bond ID. **Note:**This field is valid only after port bonding.
DEVICENAME	Conditional	string	Device name. **Note:**This field is returned for VM emulation environments.
lightStatus	Mandatory	string(enum)	Locating light status. **The value is described as follows:** 0: off 1: on
USEDTYPE	Mandatory	string(enum)	Port usage type. **The value is described as follows:** 1: applicable to the storage OS 2: applicable to the VM system **Note:**This field is returned for VM emulation environments.
portUsage	Conditional	string(enum)	Port usage. **The value is described as follows:** 1: service 2: management 3: maintenance **Note:**This field is returned for VM emulation environments.
OWNINGCONTROLLER	Mandatory	string	Owning controller of the port.
crcErrors	Mandatory	string(uint32)	Number of CRC errors.
frameErrors	Mandatory	string(uint32)	Number of frame Errors.

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Parameter	Mandatory/ Conditional	Type	Description
frameLengthErrors	Mandatory	string(uint32)	Number of frame length errors.
totalReceivedPackets	Conditional	string(uint64)	Total number of received packets. **Note:**The value is returned when the port is a service port.
totalTransmittedPackets	Conditional	string(uint64)	Total number of transmitted packets. **Note:**The value is returned when the port is a service port.
totalReceivedBytes	Conditional	string(uint64)	Total number of received bytes. **Unit:**bytes **Note:**The value is returned when the port is a service port.
totalTransmittedBytes	Conditional	string(uint64)	Total number of transmitted bytes. **Unit:**bytes **Note:**The value is returned when the port is a service port.
receivedPacketsPerSec	Conditional	string(uint64)	Average number of packets received per second within the last statistical period. **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.

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Parameter	Mandatory/ Conditional	Type	Description
transmittedPacketsPerSec	Conditional	string(uint64)	Average number of packets transmitted per second within the last statistical period. **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
receivedBytesPerSec	Conditional	string(uint64)	Average number of bytes received per second within the last statistical period. **Unit:**bytes/s **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
transmittedBytesPerSec	Conditional	string(uint64)	Average number of bytes transmitted per second within the last statistical period. **Unit:**bytes/s **Note:** The value is returned when the port is a service port. The statistical period is 5 seconds.
maxSpeed	Mandatory	string(uint64)	Max working rate. **Unit:**Mbit/s

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Parameter	Mandatory/ Conditional	Type	Description
portFilter	Mandatory	string(enum)	Port function filter. **The value is described as follows:** 0: Used to configured IP addresses 1: Used to create LIF 2: Used to created VLANs 3: Used to create binding 4: Port added to a customized failover group 5: Port added to a VM 6: Port added to an arbitration link
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying basic information about the Ethernet port whose ID is 139264.

```
Request: GET /deviceManager/rest/210235843910E6000009/eth_port/139264

Response:
{
    "data": {
        "BONDID": "18446744073709551615",
        "BONDNAME": "",
        "DEVICENAME": "eth2",
        "ERRORPACKETS": "0",
        "ETHDUPLEX": "2",
        "ETHNEGOTIATE": "3",
        "HEALTHSTATUS": "1",
        "ID": "139264",
        "INIORTGT": "-1",
        "IPV4ADDR": "100.136.52.56",
        "IPV4GATEWAY": "0.0.0.0",
        "IPV4MASK": "255.255.0.0",
        "IPV6ADDR": "",
        "IPV6GATEWAY": "",
        "IPV6MASK": "",
        "ISCSINAME": "",
        "ISCSITCPPORT": "0",
        "LOCATION": "CTE0.A.MGMT",
        "LOGICTYPE": "2",
        "LOSTPACKETS": "0",
        "MACADDRESS": "30:d1:7e:b2:cb:f5",
        "MTU": "1500",
        "NAME": "MGMT",
        "OVERFLOWEDPACKETS": "0",
        "PARENTID": "0A",
        "PARENTTYPE": 207,
        "PORTSWITCH": "true",
        "RUNNINGSTATUS": "10",
        "SPEED": "1000",
```

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```
        "STARTTIME": "1474200497",
        "TYPE": 213,
        "crcErrors": "0",
        "frameErrors": "0",
        "frameLengthErrors": "0",
        "dswId": "4294967295",
        "dswLinkRight": "4294967295",
        "lightStatus": "0",
        "maxSpeed": "1000",
        "portFilter": "0",
        "portUsage": "2",
        "receivedBytesPerSec": "296",
        "receivedPacketsPerSec": "68",
        "selectType": "2",
        "totalReceivedPackets": "7035891",
        "totalReceivedBytes": "2832445",
        "totalTransmittedBytes": "744073707883",
        "totalTransmittedPackets": "922337203686",
        "transmittedBytesPerSec": "3071",
        "transmittedPacketsPerSec": "61",
        "zoneId": "4294967295",
        "numberOfInitiators": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.9.10 Interface for Querying InfiniBand Port Information

Function

This interface is used to query basic information about an InfiniBand port.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_port/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16500: IB_PORT
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
PORTSWITCH	Mandatory	string(bool)	Port switch. **The value is described as follows:** true:open false:close
SYMBOLERRORCOUNTER	Mandatory	string(uint32)	Count of symbol errors.
LINKERRORRECOVERYCOUNTER	Mandatory	string(uint32)	Count of restored connections.
PORTRCVERRORS	Mandatory	string(uint32)	Port receiving error.
PORTRCVREMOTEPHYSICALERRORS	Mandatory	string(uint32)	Port remote receiving error.
PORTRCVSWITCHRE-LAYERRORS	Mandatory	string(uint32)	Port receiving and forwarding error.
PORTXMITCONSTRAINTERRORS	Mandatory	string(uint32)	Count of packets that are not sent by the switch port.

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Parameter	Mandatory/ Conditional	Type	Description
PORTRCVCONSTRAINTERRORS	Mandatory	string(uint32)	Port forcible receiving error.
LOCALLINKINTEGRITYERRORS	Mandatory	string(uint32)	Local connection error.
STARTTIME	Mandatory	string(uint32)	Start time.
EXCESSIVEBUFFEROVERRUNERRORS	Mandatory	string(uint32)	Count of overrunning excessive buffer errors.
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying basic information about the InfiniBand port whose ID is 720896.

```
Request: GET /deviceManager/rest/210235843910E6000009/ib_port/720896

Response:
{
    "data": {
        "EXCESSIVEBUFFEROVERRUNERROR": "0",
        "HEALTHSTATUS": "1",
        "ID": "720896",
        "INIORTGT": "3",
        "LINKERRORRECOVERYCOUNTER": "0",
        "LOCALLINKINTEGRITYERRORS": "0",
        "LOCATION": "CTE0.R0.IOM0.P0",
        "LOGICTYPE": "0",
        "MAXSPEED": "16000",
        "NAME": "P0",
        "PARENTID": "0A.0",
        "PARENTTYPE": 209,
        "PORTRCVCONSTRAINTERRORS": "0",
        "PORTRCVERRORS": "0",
        "PORTRCVREMOTEPHYSICALERRORS": "0",
        "PORTRCVSWITCHRELAYERRORS": "0",
        "PORTSWITCH": "true",
        "PORTXMITCONSTRAINTERRORS": "0",
        "RUNNINGSTATUS": "11",
        "RUNSPEED": "-1",
        "STARTTIME": "1452244398",
        "SYMBOLERRORCOUNTER": "0",
        "TYPE": 16500,
        "WWN": "e0247f8888e1b2ec",
        "numberOfInitiators": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.9.11 Interface for Querying the Number of Bond Port

Function

This interface is used to query the number of bond ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter NAME is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	uint32	Number of bond ports.

Example

- Querying the number of bond ports whose names contain 1.

```
Request: GET /deviceManager/rest/210235843710E7000007/bond_port/count?
filter=NAME:1

Response:
{
    "data": {
        "COUNT": "1"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.12 Interface for Querying FCoE Port Information

Function

This interface is used to query basic information about a Fibre Channel over Ethernet (FCoE) port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fcoe_port/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FCoE port ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 252:FCoE port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207:controller 209:interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port

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Parameter	Mandatory/ Conditional	Type	Description
RUNSPEED	Mandatory	string(uint32)	Operating speed. **The value is described as follows:** "-1" is returned if the port works incorrectly. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
SFPSTATUS	Mandatory	string(enum)	Optical module status. **The value is described as follows:** 0: absent 1: offline 2: online
ERRORPACKETS	Mandatory	string(uint32)	Number of error packets.
LOSTPACKETS	Mandatory	string(uint32)	Number of lost packets.
OVERFLOWEDPACKETS	Mandatory	string(uint32)	Number of overflowed packets.
STARTTIME	Mandatory	string(uint32)	Statistics start time, expressed in seconds.
VLANID	Mandatory	string(int32)	VLAN ID. **The value is described as follows:** 0: The VLAN ID is not set -1 indicates the earlier FCoE port and the VLAN ID is not set.
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true: on false: off

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Parameter	Mandatory/ Conditional	Type	Description
MAXSPEED	Mandatory	string(int32)	Maximum speed. **Unit:**Mbit/s
crcErrors	Mandatory	string(uint32)	Number of CRC errors.
frameErrors	Mandatory	string(uint32)	Number of frame Errors.
frameLengthErrors	Mandatory	string(uint32)	Number of frame length errors.
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying basic information about the FCoE port whose ID is 549773050368.

```
Request: GET /deviceManager/rest/210235843910E6000009/fcoe_port/549773050368

Response:
{
    "data": {
        "ERRORPACKETS": "0",
        "HEALTHSTATUS": "1",
        "ID": "549773050368",
        "INIORTGT": "3",
        "LOCATION": "CTE0.L2.IOM0.P0",
        "LOGICTYPE": "0",
        "LOSTPACKETS": "0",
        "NAME": "P0",
        "MAXSPEED": "12000",
        "OVERFLOWEDPACKETS": "0",
        "PARENTID": "0B.2",
        "PARENTTYPE": 209,
        "PORTSWITCH": "true",
        "RUNNINGSTATUS": "11",
        "RUNSPEED": "-1",
        "SFPSTATUS": "0",
        "STARTTIME": "1452272760",
        "TYPE": 252,
        "VLANID": "0",
        "WWN": "2210111545326912",
        "crcErrors": "0",
        "frameErrors": "0",
        "frameLengthErrors": "0",
        "numberOfInitiators": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.13 Interface for Adding a Route

Function

This interface is used to add a route.

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Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add the route of port. If the route is unavailable, this operation will disconnect the storage system from hosts.

Suggestion: Before performing this operation, ensure that the entered route is available.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port_route

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PORTID	Mandatory	string	Port ID.
DESTINATION	Mandatory	string	Destination address.
MASK	Mandatory	string	Destination mask. IPv4 and IPv6 are supported.
GATEWAY	Mandatory	string	IPv4 or IPv6 gateway.
TYPE	Mandatory	enum	Type. **The value is described as follows:** 0: network segment route 1: host route 2: default route **Note:**The management network port supports only the network segment route and host route.

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Result

Parameter	Mandatory/ Conditional	Type	Description
PORTID	Mandatory	string	Port ID.
DESTINATION	Mandatory	string	Destination address.
MASK	Mandatory	string	Destination mask. **Note:**When type is host, the default IPv4 address is 255.255.255.255, and the default IPv6 address prefix is 128. When type is default, the IPv4 address is 0.0.0.0, and the IPv6 address is 0.
GATEWAY	Mandatory	string	IPv4 or IPv6 gateway.
TYPE	Mandatory	string(enum)	Route type. **The value is described as follows:** 0: network segment route 1: host route 2: default route **Note:**The management network port supports only the network segment route and host route.
TABLETYPE	Mandatory	string(enum)	Route table type. **The value is described as follows:** 1: default route table and strategy route table 2: strategy route table 3: default route table

Example

- Adding a default route.

```
Request: POST /deviceManager/rest/210235843710E7000007/eth_port_route
{
    "DESTINATION": "0.0.0.0",
    "GATEWAY": "1.0.0.1",
    "MASK": "0.0.0.0",
    "PORTID": "4278321154",
    "TYPE": 2
}

Response: {
```

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```
    "data": {
        "DESTINATION": "0.0.0.0",
        "GATEWAY": "1.0.0.1",
        "MASK": "0.0.0.0",
        "PORTID": "4278321154",
        "TABLETYPE": "2",
        "TYPE": "2"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Adding a network segment route.

```
Request: POST /deviceManager/rest/210235843710E7000007/eth_port_route
{
    "DESTINATION": "8.47.0.0",
    "GATEWAY": "8.47.64.1",
    "MASK": "255.255.224.0",
    "PORTID": "4278321154",
    "TYPE": 0
}

Response: {
    "data": {
        "DESTINATION": "8.47.0.0",
        "GATEWAY": "8.47.64.1",
        "MASK": "255.255.224.0",
        "PORTID": "4278321154",
        "TABLETYPE": "2",
        "TYPE": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Adding a host route.

```
Request: POST /deviceManager/rest/210235843710E7000007/eth_port_route
{
    "DESTINATION": "1.0.0.2",
    "GATEWAY": "1.0.0.1",
    "MASK": "255.255.255.255",
    "PORTID": "4278321154",
    "TYPE": 1
}

Response: {
    "data": {
        "DESTINATION": "1.0.0.2",
        "GATEWAY": "1.0.0.1",
        "MASK": "255.255.255.255",
        "PORTID": "4278321154",
        "TABLETYPE": "2",
        "TYPE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.9.14 Interface for Removing a Route

Function

This interface is used to remove a route.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to remove the route of logical port. This operation will interrupt the connection between the storage system and host. Suggestion: Before you perform this operation, ensure that you have stopped the business on the route.
You are about to remove the route of port. This operation will interrupt the connection between the storage system and host. Suggestion: Before you perform this operation, ensure that you have stopped the service on the route.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port_route/delete

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PORTID	Mandatory	string	Port ID.
DESTINATION	Mandatory	string	Destination address.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MASK	Conditional	string	Destination mask. IPv4 and IPv6 are supported. **Note:** Parameters MASK and GATEWAY must be delivered at the same time, or neither of them are delivered. If MASK and GETEWAY are not delivered, all routes on the destination address specified by DESTINATION will be batch deleted.
GATEWAY	Conditional	string	IPv4 or IPv6 gateway. **Note:** Parameters MASK and GATEWAY must be delivered at the same time, or neither of them are delivered. If MASK and GETEWAY are not delivered, all routes on the destination address specified by DESTINATION will be batch deleted.

Result

N/A

Example

- Removing a route.

```
Request: POST /deviceManager/rest/210235843910E6000009/eth_port_route/delete
{
    "DESTINATION": "0.0.0.0",
    "MASK": "0.0.0.0",
    "GATEWAY": "100.137.1.1",
    "PORTID": "549772722433"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.8.9.15 Interface for Modifying a Bond Port

Function

This interface is used to modify a bond port.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to modify the MTU settings for the bond port. This operation may interrupt services or cause service exceptions.

Suggestion: Before performing this operation, ensure that the modification is necessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Bond port ID.
MTU	Optional	uint32	Maximum transmission rate. **The value is described as follows:** [1280,9000]

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Parameter	Mandatory/Optional/Conditional	Type	Description
USEDTYPE	Optional	enum	OS type of port service. The port is used by the storage system OS by default. **The value is described as follows:** 1: used for storage 2: used for vm **Note:** This parameter is delivered only in VM scenarios. This parameter is not supported by V3 all-flash array series. This parameter is not supported by 2200 V3,2600 V3,2600 V3 for Video.
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

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Result

N/A

Example

- Changing MTU of a bond port to 1502 and USEDTYPE to VM.

```
Request: PUT /deviceManager/rest/210235843910E6000009/bond_port/549772730113
{
    "MTU": 1502,
    "USEDTYPE": 2
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.16 Interface for Batch Querying Bond Port Information

Function

This interface is used to batch query basic information about bond ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
sortby	Optional	string	Sorting criteria. **Note:** The bond ports can be sorted in descending or ascending order. If you want to sort the bond ports in ascending order, set the parameter to "sortby=NAME,a". If you want to sort the bond ports in descending order, set the parameter to "sortby=NAME,d".
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter NAME is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type of the managed object. **The value is described as follows:** 235: bond port
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 4: partially damaged
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
PORTIDLIST	Mandatory	string(array)	List of Ethernet ports.
MTU	Mandatory	string(uint32)	Maximum transmission unit.
USEDTYPE	Conditional	string(enum)	Operating system (OS) type of port service. The port is used by the storage system OS by default. **The value is described as follows:** 1: used for storage 2: used for vm **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

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Parameter	Mandatory/ Conditional	Type	Description
DEVICENAME	Conditional	string	Device name of the port. **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

Example

- Querying basic information about the first 100 bond ports whose names contain 0 and showing the queried bond ports in ascending order by name.

```
Request: GET /deviceManager/rest/210235843910E6000009/bond_port?filter=NAME:
0&range=[0-100]&sortby=NAME,a

Response:
{
    "data": [
        {
            "DEVICENAME": "bond1",
            "HEALTHSTATUS": "1",
            "ID": "549772730113",
            "MTU": "1500",
            "NAME": "bond0",
            "PORTIDLIST": "[\"549772722432\",\"549772722433\"]",
            "RUNNINGSTATUS": "10",
            "TYPE": 235,
            "USEDTYPE": "1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.17 Interface for Querying Fibre Channel Port Information

Function

This interface is used to query basic information about a Fibre Channel port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_port/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FC port ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 212: Fibre Channel Port.
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller. 209: interface module.
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **The value is described as follows:** "-1" is returned if the port works incorrectly. **Unit:**Mbit/s
CONFSPEED	Mandatory	string(uint32)	Configured speed. **The value is described as follows:** 0 indicates auto-negotiation. The current speed can be 1 Gbit/s, 2 Gbit/s, 4 Gbit/s, 8 Gbit/s, and 16 Gbit/s. The conversion unit is 1000. The device returns the value by default. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.

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Parameter	Mandatory/ Conditional	Type	Description
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
SFPSTATUS	Mandatory	string(enum)	Optical module status. **The value is described as follows:** 0: absent 1: offline 2: online
FCCONFMODE	Mandatory	string(enum)	Configured mode. **The value is described as follows:** 0: fabric 1: FC-AL 2: P2P 3: auto -1 is returned if the port works incorrectly.
FCRUNMODE	Mandatory	string(enum)	Operating mode. **The value is described as follows:** 0: fabric 1: FC-AL 2: P2P 3: auto -1 is returned if the port works incorrectly.
LOSTSIGNALS	Mandatory	string(uint32)	Number of errors (the Loss of Signal type).
BADCHARNUMBER	Mandatory	string(uint32)	Number of errors (the Bad RX Char type).
LOSTSYNC	Mandatory	string(uint32)	Number of errors (the Loss of Sync type).
LINKFAIL	Mandatory	string(uint32)	Number of errors (the Link Fail type).

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string(uint32)	Time when statistics starts.
FLOGINDELAYTIMES	Mandatory	string(uint32)	Latency of running the flogin command.
MAXSUPPORTSPEED	Mandatory	string(uint32)	Maximum port speed. **The value is described as follows:** The maximum port speed can be 1 Gbit/s, 2 Gbit/s, 4 Gbit/s, 8 Gbit/s, and 16 Gbit/s. The conversion unit is 1000. **Unit:**Mbit/s
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** false: off true: on
lightStatus	Mandatory	string(enum)	Locating light switch status. **The value is described as follows:** 0: off 1: on
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s
BADCRCNUM	Mandatory	string(uint32)	Number of CRC errors.
endOfFrameErrors	Mandatory	string(uint32)	Number of frame end sign errors.
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying basic information about the Fibre Channel port whose ID is 549773705216.

```
Request: GET /deviceManager/rest/210235843910E6000009/fc_port/549773705216

Response:
{
    "data": {
        "BADCHARNUMBER": "0",
        "BADCRCNUM": "0",
        "CONFSPEED": "0",
        "FCCONFMODE": "3",
```

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```
        "FCRUNMODE": "-1",
        "FLOGINDELAYTIMES": "0",
        "HEALTHSTATUS": "1",
        "ID": "549773705216",
        "INIORTGT": "4",
        "LINKFAIL": "0",
        "LOCATION": "CTE0.B.IOM0.P0",
        "LOGICTYPE": "0",
        "LOSTSIGNALS": "0",
        "LOSTSYNC": "0",
        "MAXSPEED": "16000",
        "MAXSUPPORTSPEED": "16000",
        "NAME": "P0",
        "PARENTID": "0B.0",
        "PARENTTYPE": 209,
        "PORTSWITCH": "true",
        "RUNNINGSTATUS": "11",
        "RUNSPEED": "-1",
        "SFPSTATUS": "1",
        "STARTTIME": "1474289336",
        "TYPE": 212,
        "WWN": "201030d17eb4f761",
        "endOfFrameErrors": "0",
        "lightStatus": "0",
        "numberOfInitiators": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.9.18 Interface for Implementing Associated Query of Bond Port Information

Function

This interface is used to implement associated query of basic information about bond ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
sortby	Optional	string	Sorting criteria. **Note:** The bond ports can be sorted in descending or ascending order. If you want to sort the bond ports in ascending order, set the parameter to "sortby=NAME,a". If you want to sort the bond ports in descending order, set the parameter to "sortby=NAME,d".
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter NAME is supported.
ASSOCIATEOBJTYPE	Mandatory	enum	Type of the associated object. **The value is described as follows:** 402: VM 15365: quorum server link 289: failover group **Note:** Only the following values are supported by V3 all-flash array series: 15365: quorum server link 289: failover group Only the following values are supported by 2200 V3,2600 V3,2600 V3 for Video: 15365: quorum server link 289: failover group

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	ID of the associated object.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type of the managed object. **The value is described as follows:** 235: bond port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 4: partially damaged

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
PORTIDLIST	Mandatory	string(array)	List of Ethernet ports.
MTU	Mandatory	string(uint32)	Maximum transmission unit.
USEDTYPE	Conditional	string(enum)	Operating system (OS) type of port service. The port is used by the storage system OS by default. **The value is described as follows:** 1: used for storage 2: used for vm **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.
DEVICENAME	Conditional	string	Device name of the port. **Note:** This field is returned for VMs only. This field is not supported by V3 all-flash array series. This field is not supported by 2200 V3,2600 V3,2600 V3 for Video.

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Example

- Querying basic information about the first 100 bond ports whose names contain bond in the failover group whose ID is 0 and showing the queried bond ports in ascending order by name.

```
Request: GET /deviceManager/rest/210235843910E6000009/bond_port/associate?
ASSOCIATEOBJTYPE=289&ASSOCIATEOBJID=0&filter=NAME:bond&range=[0-100]&sortby=NA
ME,a

Response:
{
    "data": [
        {
            "DEVICENAME": "bond1",
            "HEALTHSTATUS": "1",
            "ID": "549772730113",
            "MTU": "1500",
            "NAME": "bond0",
            "PORTIDLIST": "[\"549772722432\",\"549772722433\"]",
            "RUNNINGSTATUS": "10",
            "TYPE": 235,
            "USEDTYPE": "1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.19 Interface for Implementing Associated Query of FCoE Port Information

Function

This interface is used to implement associated query of basic information about FCoE ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fcoe_port/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 257: port group
ASSOCIATEOBJID	Mandatory	string	ID of the associated object.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 252: FCoE port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **The value is described as follows:** "-1" is returned if the port works incorrectly. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
SFPSTATUS	Mandatory	string(enum)	Optical module status. **The value is described as follows:** 0: absent 1: offline 2: online

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Parameter	Mandatory/ Conditional	Type	Description
ERRORPACKETS	Mandatory	string(uint32)	Number of error packets.
LOSTPACKETS	Mandatory	string(uint32)	Number of lost packets.
OVERFLOWEDPACKETS	Mandatory	string(uint32)	Number of overflowed packets.
STARTTIME	Mandatory	string(uint32)	Statistics start time, expressed in seconds.
VLANID	Mandatory	string(int32)	VLAN ID. **The value is described as follows:** 0: The VLAN ID is not set, -1 indicates the earlier FCoE port and the VLAN ID is not set.
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true: on false: off
MAXSPEED	Mandatory	string(int32)	Maximum speed. **Unit:**Mbit/s
crcErrors	Mandatory	string(uint32)	Number of CRC errors.
frameErrors	Mandatory	string(uint32)	Number of frame Errors.
frameLengthErrors	Mandatory	string(uint32)	Number of frame length errors.
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying basic information about FCoE ports in the port group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/fcoe_port/associate?
ASSOCIATEOBJTYPE=257&ASSOCIATEOBJID=0

Response:
{
    "data": [
        {
            "ERRORPACKETS": "0",
            "HEALTHSTATUS": "1",
            "ID": "549773050368",
            "INIORTGT": "3",
            "LOCATION": "CTE0.L2.IOM0.P0",
            "LOGICTYPE": "0",
```

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```
            "LOSTPACKETS": "0",
            "NAME": "P0",
            "MAXSPEED": "12000",
            "OVERFLOWEDPACKETS": "0",
            "PARENTID": "0B.2",
            "PARENTTYPE": 209,
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "11",
            "RUNSPEED": "-1",
            "SFPSTATUS": "0",
            "STARTTIME": "1452272760",
            "TYPE": 252,
            "VLANID": "0",
            "WWN": "2210111545326912",
            "crcErrors": "0",
            "frameErrors": "0",
            "frameLengthErrors": "0",
            "numberOfInitiators": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.9.20 Interface for Deleting a Bond Port

Function

This interface is used to delete a bond port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bond_port/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Bond port ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

N/A

Example

- Deleting the bond port whose ID is 549772730113.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/bond_port/
549772730113

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.21 Interface for Batch Querying InfiniBand Port Information

Function

This interface is used to batch query basic information about InfiniBand ports.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LOGICTYPE	Optional	enum	Port type. **The value is described as follows:** 0: host port/service port
INIORTGT	Optional	enum	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
SYMBOLERRORCOUNTER	Optional	uint32	Count of symbol errors.
PORTRCVSWITCHRE-LAYERRORS	Optional	uint32	Port receiving and forwarding error.
PORTRCVERRORS	Optional	uint32	Port receiving error.
PORTRCVREMOTEPHYSICALERRORS	Optional	uint32	Port remote receiving error.
LINKERRORRECOVERYCOUNTER	Optional	uint32	Count of restored connections.
PORTXMITCONSTRAINTERRORS	Optional	uint32	Count of packets that are not sent by the switch port.
PORTRCVCONSTRAINTERRORS	Optional	uint32	Port forcible receiving error.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LOCALLINKINTEGRITYERRORS	Optional	uint32	Local connection error.
EXCESSIVEBUFFEROVERRUNERROR	Optional	uint32	Count of overrunning excessive buffer errors.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16500: IB_PORT
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
PORTSWITCH	Mandatory	string(bool)	Port switch. **The value is described as follows:** true:open false:close
SYMBOLERRORCOUNTER	Mandatory	string(uint32)	Count of symbol errors.
LINKERRORRECOVERYCOUNTER	Mandatory	string(uint32)	Count of restored connections.
PORTRCVERRORS	Mandatory	string(uint32)	Port receiving error.
PORTRCVREMOTEPHYSICALERRORS	Mandatory	string(uint32)	Port remote receiving error.
PORTRCVSWITCHRE-LAYERRORS	Mandatory	string(uint32)	Port receiving and forwarding error.
PORTXMITCONSTRAINTERRORS	Mandatory	string(uint32)	Count of packets that are not sent by the switch port.

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Parameter	Mandatory/ Conditional	Type	Description
PORTRCVCONSTRAINTERRORS	Mandatory	string(uint32)	Port forcible receiving error.
LOCALLINKINTEGRITYERRORS	Mandatory	string(uint32)	Local connection error.
STARTTIME	Mandatory	string(uint32)	Start time.
EXCESSIVEBUFFEROVERRUNERRORS	Mandatory	string(uint32)	Count of overrunning excessive buffer errors.
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Batch querying all InfiniBand ports of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/ib_port

Response:
{
    "data": [
        {
            "EXCESSIVEBUFFEROVERRUNERROR": "0",
            "HEALTHSTATUS": "1",
            "ID": "720896",
            "INIORTGT": "3",
            "LINKERRORRECOVERYCOUNTER": "0",
            "LOCALLINKINTEGRITYERRORS": "0",
            "LOCATION": "CTE0.R0.IOM0.P0",
            "LOGICTYPE": "0",
            "MAXSPEED":"16000",
            "NAME": "P0",
            "PARENTID": "0A.0",
            "PARENTTYPE": 209,
            "PORTRCVCONSTRAINTERRORS": "0",
            "PORTRCVERRORS": "0",
            "PORTRCVREMOTEPHYSICALERRORS": "0",
            "PORTRCVSWITCHRELAYERRORS": "0",
            "PORTSWITCH": "true",
            "PORTXMITCONSTRAINTERRORS": "0",
            "RUNNINGSTATUS": "11",
            "RUNSPEED": "-1",
            "STARTTIME": "1452244398",
            "SYMBOLERRORCOUNTER": "0",
            "TYPE": 16500,
            "WWN": "e0247f8888e1b2ec",
            "numberOfInitiators": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.9.22 Interface for Implementing Associated Query of InfiniBand Port Information

Function

This interface is used to implement associated query of basic information about InfiniBand ports.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_port/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 257:Port group
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16500: IB_PORT
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **Unit:**Mbit/s

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Parameter	Mandatory/ Conditional	Type	Description
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
PORTSWITCH	Mandatory	string(bool)	Port switch. **The value is described as follows:** true:open false:close
SYMBOLERRORCOUNTER	Mandatory	string(uint32)	Count of symbol errors.
LINKERRORRECOVERYCOUNTER	Mandatory	string(uint32)	Count of restored connections.
PORTRCVERRORS	Mandatory	string(uint32)	Port receiving error.
PORTRCVREMOTEPHYSICALERRORS	Mandatory	string(uint32)	Port remote receiving error.
PORTRCVSWITCHRE-LAYERRORS	Mandatory	string(uint32)	Port receiving and forwarding error.
PORTXMITCONSTRAINTERRORS	Mandatory	string(uint32)	Count of packets that are not sent by the switch port.
PORTRCVCONSTRAINTERRORS	Mandatory	string(uint32)	Port forcible receiving error.
LOCALLINKINTEGRI-TYERRORS	Mandatory	string(uint32)	Local connection error.
STARTTIME	Mandatory	string(uint32)	Start time.
EXCESSIVEBUFFERO-VERRUNERRORS	Mandatory	string(uint32)	Count of overrunning excessive buffer errors.
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

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Example

- Querying basic information about InfiniBand ports in the port group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/ib_port/associate?
ASSOCIATEOBJTYPE=257&ASSOCIATEOBJID=0

Response:
{
    "data": [
        {
            "EXCESSIVEBUFFEROVERRUNERROR": "0",
            "HEALTHSTATUS": "1",
            "ID": "720896",
            "INIORTGT": "3",
            "LINKERRORRECOVERYCOUNTER": "0",
            "LOCALLINKINTEGRITYERRORS": "0",
            "LOCATION": "CTE0.R0.IOM0.P0",
            "LOGICTYPE": "0",
            "MAXSPEED":"16000",
            "NAME": "P0",
            "PARENTID": "0A.0",
            "PARENTTYPE": 209,
            "PORTRCVCONSTRAINTERRORS": "0",
            "PORTRCVERRORS": "0",
            "PORTRCVREMOTEPHYSICALERRORS": "0",
            "PORTRCVSWITCHRELAYERRORS": "0",
            "PORTSWITCH": "true",
            "PORTXMITCONSTRAINTERRORS": "0",
            "RUNNINGSTATUS": "11",
            "RUNSPEED": "-1",
            "STARTTIME": "1452244398",
            "SYMBOLERRORCOUNTER": "0",
            "TYPE": 16500,
            "WWN": "e0247f8888e1b2ec",
            "numberOfInitiators": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.23 Interface for Batch Querying SAS Port Information

Function

This interface is used to batch query basic information about SAS ports.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/sas_port

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 214: SAS port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 208: expansion board 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 1: expansion port
RUNSPEED	Mandatory	string(uint32)	Operating rate. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target
PORTSWITCH	Mandatory	string(bool)	Port switch. **The value is described as follows:** true: open false: close
INVALIDDWORD	Mandatory	string(uint32)	Number of invalid DWORD.
DISPARITYERROR	Mandatory	string(uint32)	Number of inconsistency errors.
LOSSDWORD	Mandatory	string(uint32)	Number of lost DWORDs.
PHYRESETERRORS	Mandatory	string(uint32)	Number of failed PHY resets.
STARTTIME	Mandatory	string	Time when statistics collection starts.
CURRENT_PEER_PORT_ID	Mandatory	string	ID of the current peer port.

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Parameter	Mandatory/ Conditional	Type	Description
SUGGEST_PEER_PORT_ID	Mandatory	string	ID of the peer port that needs to be connected.
LIGHTSTATUS	Mandatory	string(enum)	Locating indicator. **The value is described as follows:** 1: on 2: off
ISMINISAS	Mandatory	string(bool)	Whether it is mini SAS. **The value is described as follows:** true: yes false: no
ENCLOSURE_WWN_LIST	Mandatory	string	List of WWNs of disk enclosures connected to the specific SAS port.
MAXSPEED	Mandatory	string(uint32)	Maximum speed. **Unit:**Mbit/s

Example

- Batch querying all SAS ports of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/sas_port

Response:
{
    "data": [
        {
            "CURRENT_PEER_PORT_ID": "8867962880",
            "DISPARITYERROR": "0",
            "ENCLOSURE_WWN_LIST": "0x504f93883898a03f,",
            "HEALTHSTATUS": "1",
            "ID": "2039809",
            "INIORTGT": "2",
            "INVALIDDWORD": "0",
            "ISMINISAS": "false",
            "LIGHTSTATUS": "0",
            "LOCATION": "CTE0.A.EXP0",
            "LOGICTYPE": "1",
            "LOSSDWORD": "0",
            "MAXSPEED": "12000",
            "NAME": "EXP0",
            "PARENTID": "0A",
            "PARENTTYPE": 207,
            "PHYRESETERRORS": "0",
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "10",
            "RUNSPEED": "12000",
            "STARTTIME": "1474200497",
            "SUGGEST_PEER_PORT_ID": "8867962880",
            "TYPE": 214,
            "WWN": "50022a1060708000"
```

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```
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.24 Interface for Batch Querying Route Information

Function

This interface is used to batch query information about routes.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port_route

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PORTID	Mandatory	string	Port ID.

Result

Parameter	Mandatory/Conditional	Type	Description
PORTID	Mandatory	string	Port ID.
DESTINATION	Mandatory	string	Destination address.
MASK	Mandatory	string	Destination mask.
GATEWAY	Mandatory	string	IPv4 or IPv6 gateway.

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Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string(enum)	Route type. **The value is described as follows:** 0: network segment route 1: host route 2: default route **Note:**The management network port supports only the network segment route and host route.
TABLETYPE	Mandatory	string(enum)	Route table type. **The value is described as follows:** 1: default route table and strategy route table 2: strategy route table 3: default route table

Example

- Batch querying information about all routes of the port whose ID is 549772722433.

```
Request: GET /deviceManager/rest/210235843910E6000009/eth_port_route?
PORTID=549772722433

Response:
{
    "data": [
        {
            "DESTINATION": "0.0.0.0",
            "GATEWAY": "100.137.1.1",
            "MASK": "0.0.0.0",
            "PORTID": "549772722433",
            "TABLETYPE": "2",
            "TYPE": "2"
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.25 Interface for Batch Querying FCoE Port Information

Function

This interface is used to batch query basic information about FCoE ports.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fcoe_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 252: FCoE port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.

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Parameter	Mandatory/ Conditional	Type	Description
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 0: host port/service port
RUNSPEED	Mandatory	string(uint32)	Operating speed. **The value is described as follows:** "-1" is returned if the port works incorrectly. **Unit:**Mbit/s
WWN	Mandatory	string	WWN.
INIORTGT	Mandatory	string(enum)	Initiator or target. **The value is described as follows:** 2: initiator 3: target 4: initiator and target

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Parameter	Mandatory/ Conditional	Type	Description
SFPSTATUS	Mandatory	string(enum)	Optical module status. **The value is described as follows:** 0: absent 1: offline 2: online
ERRORPACKETS	Mandatory	string(uint32)	Number of error packets.
LOSTPACKETS	Mandatory	string(uint32)	Number of lost packets.
OVERFLOWEDPACKETS	Mandatory	string(uint32)	Number of overflowed packets.
STARTTIME	Mandatory	string(uint32)	Statistics start time, expressed in seconds.
VLANID	Mandatory	string(int32)	VLAN ID. **The value is described as follows:** 0: The VLAN ID is not set. -1 indicates the earlier FCoE port and the VLAN ID is not set.
PORTSWITCH	Mandatory	string(bool)	Switch status of port. **The value is described as follows:** true: on false: off
MAXSPEED	Mandatory	string(int32)	Maximum speed. **Unit:**Mbit/s
crcErrors	Mandatory	string(uint32)	Number of CRC errors.
frameErrors	Mandatory	string(uint32)	Number of frame Errors.
frameLengthErrors	Mandatory	string(uint32)	Number of frame length errors.
numberOfInitiators	Mandatory	string(uint32)	Host Initiator Quantity.

Example

- Querying all FCoE ports of the storage array.

```
Request: GET /deviceManager/rest/210235843910E6000009/fcoe_port

Response:
```

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```
{
    "data": [
        {
            "ERRORPACKETS": "0",
            "HEALTHSTATUS": "1",
            "ID": "549773050368",
            "INIORTGT": "3",
            "LOCATION": "CTE0.L2.IOM0.P0",
            "LOGICTYPE": "0",
            "LOSTPACKETS": "0",
            "NAME": "P0",
            "MAXSPEED": "12000",
            "OVERFLOWEDPACKETS": "0",
            "PARENTID": "0B.2",
            "PARENTTYPE": 209,
            "PORTSWITCH": "true",
            "RUNNINGSTATUS": "11",
            "RUNSPEED": "-1",
            "SFPSTATUS": "0",
            "STARTTIME": "1452272760",
            "TYPE": 252,
            "VLANID": "0",
            "WWN": "2210111545326912",
            "crcErrors": "0",
            "frameErrors": "0",
            "frameLengthErrors": "0",
            "numberOfInitiators": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.9.26 Interface for Querying PCIe Port Information

Function

This interface is used to query PCIe port information.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/pcie_port/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 233: PCIe port
ID	Mandatory	string	ID.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
PCIESPEED	Mandatory	string(uint32)	Data transmission rate of PCIe links. **Unit:**Gbit/s
LOSTSIGNALS	Mandatory	string(uint32)	Number of bit errors on a PCIe port.
ECRCERROR	Mandatory	string(uint32)	Number of ECRC errors.
BADTLP	Mandatory	string(uint32)	Number of bad TLPs.
BADDLLP	Mandatory	string(uint32)	Number of bad DLLPs.
RECVERROR	Mandatory	string(uint32)	Number of receiver errors.
CHIPECCERROR	Mandatory	string(uint32)	Number of ECC errors on chips.
STARTTIME	Mandatory	string(uint32)	Time when statistics collection starts.
replayTimerTimeout	Mandatory	string(uint32)	Replay Timer Timeout Status. **Note:**This field will be returned for 18500 V5, 18500F V5, 18800 V5, and 18800F V5.
rollOver	Mandatory	string(uint32)	Replay Number Rollover Status. **Note:**This field will be returned for 18500 V5, 18500F V5, 18800 V5, and 18800F V5.

Example

- Querying information about the PCIe port whose ID is 143833718478757892.

```
Request: GET /deviceManager/rest/1016964156/pcie_port/143833718478757892
```

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```
Response:
{
    "data": {
        "BADDLLP": "0",
        "BADTLP": "0",
        "CHIPECCERROR": "0",
        "ECRCERROR": "0",
        "HEALTHSTATUS": "1",
        "ID": "143833718478757892",
        "LOCATION": "DSW1.P4",
        "LOSTSIGNALS": "0",
        "PARENTID": "1090519040",
        "PARENTTYPE": 206,
        "PCIESPEED": "5000",
        "RECVERROR": "0",
        "RUNNINGSTATUS": "10",
        "STARTTIME": "1452855750",
        "TYPE": 233,
        "replayTimerTimeout": "0",
         "rollOver": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.27 Interface for Batch Querying PCIe Port Information

Function

This interface is used to batch query PCIe port information.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/pcie_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 233: PCIe port
ID	Mandatory	string	ID
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 206: enclosure 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
PCIESPEED	Mandatory	string(uint32)	Data transmission rate of PCIe links. **Unit:**Gbit/s
LOSTSIGNALS	Mandatory	string(uint32)	Number of bit errors on a PCIe port.
ECRCERROR	Mandatory	string(uint32)	Number of ECRC errors.
BADTLP	Mandatory	string(uint32)	Number of bad TLPs.
BADDLLP	Mandatory	string(uint32)	Number of bad DLLPs.
RECVERROR	Mandatory	string(uint32)	Number of receiver errors.
CHIPECCERROR	Mandatory	string(uint32)	Number of ECC errors on chips.
STARTTIME	Mandatory	string(uint32)	Time when statistics collection starts.
replayTimerTimeout	Mandatory	string(uint32)	Replay Timer Timeout Status. **Note:**This field will be returned for 18500 V5, 18500F V5, 18800 V5, and 18800F V5.
rollOver	Mandatory	string(uint32)	Replay Number Rollover Status. **Note:**This field will be returned for 18500 V5, 18500F V5, 18800 V5, and 18800F V5.

Example

- Querying information about all PCIe ports.

```
Request: GET /deviceManager/rest/1016964156/pcie_port
```

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```
Response:
{
    "data": [
        {
            "BADDLLP": "0",
            "BADTLP": "0",
            "CHIPECCERROR": "0",
            "ECRCERROR": "0",
            "HEALTHSTATUS": "1",
            "ID": "143833718478757892",
            "LOCATION": "DSW1.P4",
            "LOSTSIGNALS": "0",
            "PARENTID": "1090519040",
            "PARENTTYPE": 206,
            "PCIESPEED": "5000",
            "RECVERROR": "0",
            "RUNNINGSTATUS": "10",
            "STARTTIME": "1452855750",
            "TYPE": 233,
            "replayTimerTimeout": "0",
             "rollOver": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.28 Interface for Querying Serial Port Information

Function

This interface is used to query basic information about a serial port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/serial_port/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Serial port ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 215: serial port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down

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Parameter	Mandatory/ Conditional	Type	Description
LOGICTYPE	Mandatory	string(enum)	Logic type. **The value is described as follows:** 0: host port 1: expansion port 2: management port 3: internal port 4: maintenance port 5: management/service port 6: maintenance/service port 11: cluster port

Example

- Querying basic information about the serial port whose ID is 1889869824.

```
Request: GET /deviceManager/rest/210235843910E6000009/serial_port/1889869824

Response:
{
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "1889869824",
        "LOCATION": "CTE0.A.SERIAL",
        "LOGICTYPE": "2",
        "NAME": "SERIAL",
        "PARENTID": "0A",
        "PARENTTYPE": 207,
        "RUNNINGSTATUS": "10",
        "TYPE": 215
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.29 Interface for Querying Serial Port Information in Batches

Function

This interface is used to query basic information about serial ports in batches.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/serial_port

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 215: serial port
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 207: controller 209: interface module
PARENTID	Mandatory	string	ID of the parent object.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty 3: about to fail 9: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down
LOGICTYPE	Mandatory	string(enum)	Logic type. **The value is described as follows:** 0: host port 1: expansion port 2: management port 3: internal port 4: maintenance port 5: management/service port 6: maintenance/service port 11: cluster port

Example

- Querying basic information about all serial ports of the storage array in batches.

```
Request: GET /deviceManager/rest/210235843910E6000009/serial_port

Response:
{
    "data": [
        {
            "HEALTHSTATUS": "1",
            "ID": "1889869824",
            "LOCATION": "CTE0.A.SERIAL",
            "LOGICTYPE": "2",
            "NAME": "SERIAL",
            "PARENTID": "0A",
            "PARENTTYPE": 207,
            "RUNNINGSTATUS": "10",
            "TYPE": 215
        },...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.9.30 Interface for Modifying SVP Ethernet Port Information

Function

This interface is used to modify SVP ethernet management port information.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

HighRisk

You are about to modify the IP address of the management network port on the SVP. This operation may disconnect you from the SVP.

Suggestion: Ensure that the entered IP address is available.

URI

https://${ip}:${port}/deviceManager/rest/SVP/eth_port/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SVP ethernet port ID.
IPV4ADDR	Optional	string	IPv4 address. **Note:** The IPv4 address must be configured. When one request is sent, the configuration of only one IP version is modified. If both IPv4 and IPv6 configurations are modified, only the change of the IPv4 configuration takes effect.

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Parameter	Mandatory/Optional/Conditional	Type	Description
IPV4MASK	Optional	string	IPv4 mask. **Note:** The IPv4 mask must be configured. When one request is sent, the configuration of only one IP version is modified. If both IPv4 and IPv6 configurations are modified, only the change of the IPv4 configuration takes effect.
IPV4GATEWAY	Optional	string	IPv4 gateway. **Note:** The IPv4 gateway must be configured. When one request is sent, the configuration of only one IP version is modified. If both IPv4 and IPv6 configurations are modified, only the change of the IPv4 configuration takes effect.
IPV6ADDR	Optional	string	IPv6 address. **Note:** If an empty string is delivered, the configuration is cleared. When one request is sent, the configuration of only one IP version is modified. If both IPv4 and IPv6 configurations are modified, only the change of the IPv4 configuration takes effect.

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Parameter	Mandatory/Optional/Conditional	Type	Description
IPV6MASK	Optional	string	IPv6 prefix. **Note:** If an empty string is delivered, the configuration is cleared. When one request is sent, the configuration of only one IP version is modified. If both IPv4 and IPv6 configurations are modified, only the change of the IPv4 configuration takes effect.
IPV6GATEWAY	Optional	string	IPv6 gateway. **Note:** If an empty string is delivered, the configuration is cleared. If the IPv6 address and prefix do not exist, an IPv6 gateway cannot be configured. When one request is sent, the configuration of only one IP version is modified. If both IPv4 and IPv6 configurations are modified, only the change of the IPv4 configuration takes effect.

Result

N/A

Example

- Changing SVP ethernet management port information whose ID is 1.

```
Request: PUT /deviceManager/rest/SVP/eth_port/1

{
    "IPV4ADDR":"23.23.23.23",
    "IPV4MASK":"255.255.0.0",
    "IPV4GATEWAY":"23.23.0.1"
}
Response:
{
    "data" : {},
    "error" : {
```

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```
        "code" : 0,
        "description" : "0"
    }
}
```

4.8.9.31 Interface for Modifying Ethernet Port Information

Function

This interface is used to modify a ethernet port information.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to modify the MTU of the Ethernet port. This operation may interrupt services or cause service exceptions. Suggestion: Before performing this operation, determine whether the modification is necessary.
You are about to change the IP address of management network port ({0}) whose IP address is ({1}) and gateway address is ({2}). If you enter an unavailable IP address, the DeviceManager will become inaccessible. This operation will clear the configured routes on the IP address that is modified on this management port. Suggestion：Before performing this operation, ensure that the entered IP address is available.
You are about to change the IP address of port. This operation will disconnect the storage system from hosts. This operation will also clear the configured routes on the IP address that is modified on this port. Suggestion: 1. Check whether there are redundant connections to hosts. If there are no redundant connections, stop host services. 2. Ensure that the entered IP address is available.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/eth_port/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.
MTU	Optional	uint32	Maximum transmission unit (MTU). **The value is described as follows:** [1280,9000]
IPV4ADDR	Optional	string	IPv4 address.
IPV4MASK	Optional	string	IPv4 mask.
IPV6ADDR	Optional	string	IPv6 address.
IPV6MASK	Optional	string	IPv6 mask.
PORTSWITCH	Optional	bool	Switch status of port. **The value is described as follows:** true: on false: off

Result

N/A

Example

- For the Ethernet port whose ID is "133537", change its MTU to "1502", IPv4 address to "26.66.12.32", IPv4 mask to "255.255.0.0".

```
Request: PUT /deviceManager/rest/210235843910E6000009/eth_port/133537
{
    "MTU": 1502,
    "IPV4ADDR": "26.66.12.32",
    "IPV4MASK": "255.255.0.0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.9.32 Interface for Modifying a Fibre Channel Port

Function

This interface is used to modify a Fibre Channel port.

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Applicable Model

Applicable to V3 all series.

HighRisk

You are about to modify the rate of FC host port. If its rate is different from that of the peer FC host port, the host will be disconnected from the storage system.

Suggestion: Before performing this operation, determine the rate supported by the peer FC port.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_port/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FC port ID.
CONFSPEED	Mandatory	uint32	Configured speed. **The value is described as follows:** 0 indicates auto-negotiation. The configured speed can be 1000Mbit/s, 2000Mbit/s, 4000Mbit/s, 8000Mbit/s, and 16000Mbit/s. **Unit:**Mbit/s

Result

N/A

Example

- Changing configured rate of a Fibre Channel port to 4 Gbit/s whose ID is 549773705216.

```
Request: PUT /deviceManager/rest/210235843910E6000009/fc_port/549773705216
{
```

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```
    "CONFSPEED": 4000
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10 support

4.8.10.1 Interface for Querying Information about the Bitmap of the Unshared Blocks of LUNs

Function

This interface is used to query information about the bitmap of the non-shared blocks of LUNs.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun_bitmap/get_unshared

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LUNID	Mandatory	string	ID of the requested LUN or snapshot. **Note:**Must belong to the same source volume as BASELUNID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
BASELUNID	Mandatory	uint64	ID of the LUN or snapshot that is compared with the requested LUN or snapshot. **Note:**Must belong to the same source volume as LUNID.
SEGMENTSTARTOFF-SETBYTES	Mandatory	uint64	Starting position of a segment. **Unit:**bytes **Note:** 1.Cannot be greater than the size of the requested LUN or snapshot. 2.Integer multiple of 512 bytes.
SEGMENTLENGTHBYTES	Mandatory	uint64	Segment length. **Unit:**bytes **Note:** 1.Cannot be greater than the size of the requested LUN or snapshot. 2.Integer multiple of the size of a local unit bitmap.
BITMAPCHUNKSIZE	Mandatory	uint64	Block size. **Unit:**bytes **Note:** 1.The value is greater than or equal to the size of a local unit bitmap. 2.Integer multiple of 512 bytes.

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Result

Parameter	Mandatory/ Conditional	Type	Description
CHUNKBITMAP	Mandatory	string	Bitmap information, represented by a hexadecimal character string of the memory buffer.
LUNID	Mandatory	string	Requests the LUN ID.

Example

- Querying information about the bitmap of the non-shared blocks of LUNs.

```
Request:GET /deviceManager/rest/210235843710E7000007/lun_bitmap/get_unshared?
BASELUNID=1&LUNID=2&BITMAPCHUNKSIZE=65536&SEGMENTLENGTHBYTES=536870912&SEGMENT
STARTOFFSETBYTES=0

Response:
{
    "data": {
        "CHUNKBITMAP": "0000...",
        "LUNID": "19"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.2 Interface for Viewing Batch Configuration Progress

Function

This interface is used to view batch configuration progress.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/buildrun

Access Method

GET

User Privilege

Super administrator

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Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
isUser	Mandatory	bool	Indicates whether the user is the current user. **The value is described as follows:** true: The current user false: Not the current user **Note:**The field is invalid if a user does not upload the configuration file.
state	Mandatory	string(enum)	State. **The value is described as follows:** 0: Initial status. File import is allowed 1: The file is being imported 2: File check failed. File import is allowed 3: Unexecuted 4: Executing
completed	Mandatory	uint32	Overall progress.
number	Mandatory	string(int)	The count of each CLI command execution information.
user	Mandatory	string	User name for logging in to the device.
ip	Mandatory	string	Client IP address.

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Parameter	Mandatory/ Conditional	Type	Description

result	Mandatory	string(json)	CLI command list. cliecho indicates the execution information of each CLI command.
			The value is described as follows:
			[{cliecho:"xxxx"
			},{
			Command: "xxx",
			errorLine: xxx
			}, {
			}].

Example

- Viewing the batch configuration progress.

```
Request:GET /deviceManager/rest/210235843710E7000007/buildrun

Response:
{
    "data": {
        "completed": 0,
        "ip": "100.133.189.97",
        "isUser": true,
        "number": 0,
        "result": [],
        "state": 3,
        "user": "admin"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.3 Interface for Downloading the File Template

Function

This interface is used to download the batch configuration file template.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/buildrun/example

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Access Method

GET

User Privilege

Super administrator

Parameters

N/A

Result

N/A

Usage Guidelines

File streams are returned. The default file name is Example.conf.

Example

N/A

4.8.10.4 Interface for Uploading the Batch Configuration File

Function

This interface is used to upload the batch configuration file.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/file/buildrun/upload

Access Method

POST

User Privilege

Super administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
iBaseToken	Mandatory	string	Random code for preventing cross-site request forgery (CSRF). A random code is generated after each successful authentication. **Length:**64

Result

N/A

Usage Guidelines

1. In the message header, Content-Type must be set to multipart/form-data.
2. iBaseToken must be delivered in the message body.

Example

- Uploading the batch configuration file.

```
Request: POST /deviceManager/rest/210235843710E7000007/file/buildrun/upload

------WebKitFormBoundaryCgHgf0btwSBSCCnA
Content-Disposition: form-data; name="UPLOAD_FILE"; filename="Example.conf"
Content-Type: application/octet-stream


------WebKitFormBoundaryCgHgf0btwSBSCCnA
Content-Disposition: form-data; name="iBaseToken"

128F32F9A789326A88D95D8EB1F55EE43B56B2FEEDFFD61402007661A3771AC4
------WebKitFormBoundaryCgHgf0btwSBSCCnA--

Response:
none
```

4.8.10.5 Interface for Stopping Batch Configuration

Function

This interface is used to stop a batch configuration.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/buildrun

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Access Method

POST

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
Operatortype	Mandatory	int	Operation type. **The value is described as follows:** 1: stop

Result

N/A

Example

- Stopping a batch configuration.

```
Request:POST /deviceManager/rest/210235843910E6000009/buildrun
{
    "Operatortype": 1
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.6 Interface for Querying Information about the Size of a LUN Unit Bitmap

Function

This interface is used to query information about the size of a LUN Unit Bitmap.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun_bitmap/get_bitmap_chks

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LUNID	Mandatory	string	Requests the LUN ID to obtain its bitmap information.

Result

Parameter	Mandatory/Conditional	Type	Description
BITMAPCHUNKSIZE	Mandatory	string(uint64)	Size of a local unit bitmap. **Unit:**bytes
LUNID	Mandatory	string	Requests the LUN ID.

Example

- Querying information about the size of a LUN Unit Bitmap.

```
Request: GET /deviceManager/rest/210235843710E7000007/lun_bitmap/
get_bitmap_chks?LUNID=1

Response:
{
    "data": {
        "BITMAPCHUNKSIZE": "65536",
        "LUNID": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.7 Interface for Querying Information about the Bitmap of the Physical Space Allocated to LUNs

Function

This interface is used to query information about the bitmap of the physical space allocated to LUNs.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun_bitmap/get_alloc

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LUNID	Mandatory	string	Requests the LUN ID to obtain its bitmap information.
SEGMENTSTARTOFF-SETBYTES	Mandatory	uint64	Starting position of a segment. **Unit:**bytes **Note:** 1.Cannot be greater than the size of the requested LUN or snapshot. 2.Integer multiple of 512 bytes.
SEGMENTLENGTHBYTES	Mandatory	uint64	Segment length. **Unit:**bytes **Note:** 1.Cannot be greater than the size of the requested LUN or snapshot. 2.Integer multiple of 512 bytes.

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Parameter	Mandatory/Optional/Conditional	Type	Description
BITMAPCHUNKSIZE	Mandatory	uint64	Block size. **Unit:**bytes **Note:** 1.Larger than or equal to 64 KB. 2.Integer multiple of the size of a local unit bitmap.

Result

Parameter	Mandatory/Conditional	Type	Description
CHUNKBITMAP	Mandatory	string	Bitmap information, represented by a hexadecimal character string of the memory buffer.
LUNID	Mandatory	string	Requests the LUN ID.

Example

- Querying information about the bitmap of the physical space allocated to LUNs.

```
Request: GET /deviceManager/rest/210235843710E7000007/lun_bitmap/get_alloc?
BITMAPCHUNKSIZE=65536&LUNID=1&SEGMENTLENGTHBYTES=4294967296&SEGMENTSTARTOFFSET
BYTES=0

Response:
{
    "data": {
        "CHUNKBITMAP": "fffffff...",
        "LUNID": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.8 Interface for Executing a Batch Configuration

Function

This interface is used to execute a batch configuration.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/buildrun

Access Method

POST

User Privilege

Super administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
Operatortype	Mandatory	int	Operation type. **The value is described as follows:** 0: Start executing

Result

N/A

Example

- Executing a batch configuration.

```
Request:POST /deviceManager/rest/210235843910E6000009/buildrun
{
   "Operatortype": 0
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.9 Interface for Migrating Reserved Information

Function

This interface is used to migrate reserved information.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/PROTOCOL_SERVICE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
OPERATIONCODE	Mandatory	enum	Operation code. **The value is described as follows:** 0: migration
OPERATIONTYPE	Mandatory	enum	Operation type. **The value is described as follows:** 11: LUN
OPERATIONID	Mandatory	uint32	ID of the associated operation object.

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Migrating reserved information.

```
Request: PUT/deviceManager/rest/210235843710E7000007/PROTOCOL_SERVICE
{
    "OPERATIONCODE": "0",
    "OPERATIONTYPE": "11",
    "OPERATIONID": "0"
}
Response: {
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.10 Interface for Querying the Equipment Time

Function

This interface is used to query the equipment time.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/server/time

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
time	Mandatory	string(uint)	Equipment time. **Unit:**seconds
utcTimeWithTimeZoneOffset	Mandatory	string(uint64)	Equipment UTC time. **Unit:**seconds

Example

- Querying the equipment time.

```
Request: GET /deviceManager/rest/210235843710E7000007/server/time

Response:
 {
    "data": {
        "time": "1478192452",
        "utcTimeWithTimeZoneOffset": "1478192452"
```

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```
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.11 Interface for Clearing Bit Errors on All Ports

Function

This interface is used to clear bit errors on all ports.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to clear bit errors of all the ports.

Suggestion: Before performing this operation, ensure that the bit errors of all the ports can be cleared.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cmd_only

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

N/A

Result

N/A

Example

- Clearing bit errors on all ports.

```
Request: GET/deviceManager/rest/210235843910E6000009/cmd_only

Response:
{
    data: [],
    error: {
        code: 0,
        description: "0"
    }
}
```

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4.8.10.12 Interface for Modifying DNS Load Balance Information

Function

This interface is used to enable or disable the DNS load balancing function and configure the load balancing strategy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

HighRisk

You are about to enable the DNS load balancing function. When enabling the DNS load balancing function, you are advised to disable the global namespace forwarding function. This function affects the DNS load balancing effect. Suggestion: Before performing this operation, confirm that you want to enable the function.
You are about to disable the DNS load balancing function. After the operation, you cannot use the domain name resolution service, and file systems cannot use the DNS load balancing function. Suggestion: Before performing this operation, confirm that you want to disable the function.
You are about to modify the DNS load balancing strategy. This operation will affect DNS load balancing effect. Suggestion: Before performing this operation, ensure that the modified strategy is more suitable for the current service configuration.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/dns_load_balance/

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
dnsLoadBalanceStrategy	Optional	enum	Built-in DNS load balancing strategy. **The value is described as follows:** 1: WEIGHT_ROUND_ROBIN 2: CPU_USAGE 3: BANDWIDTH_USAGE 4: OPEN_CONNECTIONS 5: OVERALL_LOAD
builtInDnsServerEnabled	Optional	enum	Built-in DNS server switch. **The value is described as follows:** 0: NO 1: YES

Result

N/A

Example

- Enable the DNS load balancing function.

```
Request: PUT/deviceManager/rest/210235843710E7000007/dns_load_balance/
{
    "builtInDnsServerEnabled": 1
}
Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Disable the DNS load balancing function.

```
Request: PUT/deviceManager/rest/210235843710E7000007/dns_load_balance/
{
    "builtInDnsServerEnabled": 0
}
Response: {
    "data": {},
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
```

- Configure the load balancing policy as "open_connections".

```
Request: PUT /deviceManager/rest/210235843710E7000007/dns_load_balance/
{
    "dnsLoadBalanceStrategy": 4
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.10.13 Interface for Querying DNS Load Balance Information

Function

This interface is used to query information about DNS load balancing.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/dns_load_balance/

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 439
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
dnsLoadBalanceStrategy	Mandatory	enum	Built-in DNS load balancing strategy. **The value is described as follows:** 1: WEIGHT_ROUND_ROBIN 2: CPU_USAGE 3: BANDWIDTH_USAGE 4: OPEN_CONNECTIONS 5: OVERALL_LOAD
builtInDnsServerEnabled	Mandatory	enum	Built-in DNS server switch. **The value is described as follows:** 0: NO 1: YES

Example

- Query information about DNS load balancing.

```
Request: GET/deviceManager/rest/210235843910E6000009/dns_load_balance/

Response:
{
    "data":{
        "ID": "0",
        "TYPE": 439,
        "builtInDnsServerEnabled": "1",
        "dnsLoadBalanceStrategy": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.11 cabinet

4.8.11.1 Interface for Querying Rack Information

Function

This interface is used to query rack information.

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Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bay/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 205: bay
ID	Mandatory	string	ID.
LOCATION	Mandatory	string	Rack location. **The value is described as follows:** "" is returned if the rack cannot be located
NAME	Mandatory	string	Rack name.

Example

- Querying information about the rack whose ID is SMB0.

```
Request: GET /deviceManager/rest/210235843910E6000009/bay/SMB0

Response:
{
```

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```
    "data": {
        "ID": "SMB0",
        "LOCATION": "",
        "NAME": "SMB0",
        "TYPE": 205
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.11.2 Interface for Batch Querying Rack Information

Function

This interface is used to batch query rack information.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/bay

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 205: bay
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
LOCATION	Mandatory	string	Rack location. **The value is described as follows:** "" is returned if the rack cannot be located
NAME	Mandatory	string	Rack name.

Example

- Querying information about all racks.

```
Request: GET /deviceManager/rest/210235843910E6000009/bay

Response:
{
    "data": [
        {
            "ID": "SMB0",
            "LOCATION": "",
            "NAME": "SMB0",
            "TYPE": 205
        }, ...
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.12 logical_port

4.8.12.1 Interface for Querying Logical Port Information

Function

This interface is used to query basic information about a logical port.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lif/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Logical port ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 279: LIF
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: initializing
IPV4ADDR	Mandatory	string	Logical port IPv4 address.
IPV4MASK	Mandatory	string	Logical port IPv4 mask.
IPV4GATEWAY	Mandatory	string	Logical port IPv4 gateway.
IPV6ADDR	Mandatory	string	Logical port IPv6 address.

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Parameter	Mandatory/ Conditional	Type	Description
IPV6MASK	Mandatory	string	Logical port IPv6 prefix.
IPV6GATEWAY	Mandatory	string	Logical port IPv6 gateway.
ROLE	Mandatory	string(enum)	Role of a logical port. **The value is described as follows:** 1: management 2: service 3: management and service
SUPPORTPROTOCOL	Mandatory	string(uint32)	Supported protocol. **The value is described as follows:** 0: NONE 1: NFS(bit 0 for the NFS switch) 2: CIFS(bit 1 for the CIFS switch) 3: NFS + CIFS 4: iSCSI(bit 2 for the iSCSI switch) 8: FC/FCoE(bit 3 for the FC/FCoE switch) If the bit switch is 0, the protocol is not supported. If the bit switch is 1, the protocol is supported. Convenient for expanding subsequent protocols. **Note:**Currently, this field is not supported.
HOMEPORTTYPE	Mandatory	string(enum)	Type of the parent port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN
HOMEPORTID	Mandatory	string	ID of the parent port.
HOMEPORTNAME	Mandatory	string	Name of the parent port.
HOMENODEID	Mandatory	string	ID of the parent node.

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Parameter	Mandatory/ Conditional	Type	Description
CURRENTPORTTYPE	Mandatory	string(enum)	Type of the current port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN
CURRENTPORTID	Mandatory	string	ID of the current port.
CURRENTPORTNAME	Mandatory	string	Name of the current port.
CURRENTNODEID	Mandatory	string	ID of the current node.
OPERATIONALSTATUS	Mandatory	string(bool)	Whether actived. **The value is described as follows:** true: activated false: not activated
ADDRESSFAMILY	Mandatory	string(enum)	TCP/IP version. **The value is described as follows:** 0: IPv4 1: IPv6
FAILOVERGROUPID	Mandatory	string	ID of the owning failover group.
FAILOVERGROUPNAME	Mandatory	string	Name of the owning failover group.
CANFAILOVER	Mandatory	string(bool)	Indicates whether failover is enabled. The default value is true. **The value is described as follows:** true: enabled false: disabled
FAILBACKMODE	Mandatory	string(enum)	Failback mode. **The value is described as follows:** 1: manual 2: auto

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Parameter	Mandatory/ Conditional	Type	Description
ISPRIVATE	Mandatory	string(bool)	Whether it is configurable. **The value is described as follows:** true: not configurable false: configurable
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
MANAGEMENTACCESS	Mandatory	string	Manage access mode.
ddnsStatus	Mandatory	string(enum)	Dynamic DNS. **The value is described as follows:** 0: INVALID 1: Enable 2: Disabled **Note:**The dynamic DNS is supported when the role of a logical port is "service" or "management and service".
dnsZoneName	Mandatory	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start with a letter or a digit.

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Parameter	Mandatory/ Conditional	Type	Description
listenDnsQueryEnabled	Mandatory	string(enum)	Whether to listen for DNS query requests. **The value is described as follows:** 0: NO 1: YES

Example

- Querying basic information about the logical port whose ID is 4278321152.

```
Request: GET /deviceManager/rest/210235843910E6000009/lif/4278321152

Response:
 {
    "data": {
        "ADDRESSFAMILY": "0",
        "CANFAILOVER": "true",
        "CURRENTNODEID": "0A",
        "CURRENTPORTID": "131328",
        "CURRENTPORTNAME": "CTE0.A.IOM1.P0",
        "CURRENTPORTTYPE": "1",
        "FAILBACKMODE": "2",
        "FAILOVERGROUPID": "0",
        "FAILOVERGROUPNAME": "System-defined",
        "HOMENODEID": "0A",
        "HOMEPORTID": "131328",
        "HOMEPORTNAME": "CTE0.A.IOM1.P0",
        "HOMEPORTTYPE": "1",
        "ID": "4278321152",
        "IPV4ADDR": "172.1.1.1",
        "IPV4GATEWAY": "",
        "IPV4MASK": "255.255.0.0",
        "IPV6ADDR": "",
        "IPV6GATEWAY": "",
        "IPV6MASK": "",
        "ISPRIVATE": "false",
        "MANAGEMENTACCESS": "--",
        "NAME": "lif1",
        "OPERATIONALSTATUS": "true",
        "ROLE": "2",
        "RUNNINGSTATUS": "11",
        "SUPPORTPROTOCOL": "3",
        "TYPE": 279,
        "ddnsStatus": 1,
        "dnsZoneName": "test.nas.com",
        "listenDnsQueryEnabled": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.12.2 Interface for Creating a Logical Port

Function

This interface is used to create a logical port.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lif

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **Length:**1~31
IPV4ADDR	Conditional	string	Logical port IPv4 address. **Note:**This parameter must be delivered if a new IPv4 address is added.
IPV4MASK	Conditional	string	Logical port IPv4 mask. **Note:**This parameter must be delivered if a new IPv4 address is added.
IPV4GATEWAY	Optional	string	Logical port IPv4 gateway.
IPV6ADDR	Conditional	string	Logical port IPv6 address. **Note:**This parameter must be delivered if a new IPv6 address is added.
IPV6MASK	Conditional	string	Logical port IPv6 prefix. **Note:**This parameter must be delivered if a new IPv6 address is added.

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Parameter	Mandatory/Optional/Conditional	Type	Description
IPV6GATEWAY	Optional	string	Logical port IPv6 gateway.
ROLE	Optional	enum	Role of a logical port. **The value is described as follows:** 1: management 2: service 3: management and service **Default:**2: service
SUPPORTPROTOCOL	Optional	enum	Supported protocol. **The value is described as follows:** 0: NONE 1: NFS(bit 0 for the NFS switch) 2: CIFS(bit 1 for the CIFS switch) 3: NFS + CIFS 4: iSCSI(bit 2 for the iSCSI switch) 8: FC/FCoE(bit 3 for the FC/FCoE switch) If the bit switch is 0, the protocol is not supported. If the bit switch is 1, the protocol is supported. Convenient for expanding subsequent protocols. **Note:**Currently, this field is not supported.
HOMEPORTTYPE	Mandatory	enum	Type of the parent port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN
HOMEPORTID	Mandatory	string	ID of the parent port.

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Parameter	Mandatory/Optional/Conditional	Type	Description
OPERATIONALSTATUS	Optional	bool	Activated. **The value is described as follows:** true:activated false:not activated
ADDRESSFAMILY	Mandatory	enum	Internet protocol version. **The value is described as follows:** 0: IPv4 1: IPv6
ISPRIVATE	Optional	bool	Whether it is configurable. **The value is described as follows:** true: not configurable false: configurable **Default:**false: configurable
FAILOVERGROUPID	Optional	string	ID of the owning failover group.
CANFAILOVER	Optional	bool	Indicates whether failover is enabled. **The value is described as follows:** true: enable false: disable **Default:**true: enable
FAILBACKMODE	Optional	enum	Failback mode. **The value is described as follows:** 1: manual 2: auto **Default:**2: auto
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ddnsStatus	Optional	enum	Dynamic DNS. **The value is described as follows:** 0: INVALID 1: Enable 2: Disabled **Default:**1:Enable **Note:**The dynamic DNS is supported when the role of a logical port is "service" or "management and service".
dnsZoneName	Optional	string	DNS zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start with a letter or a digit. **Length:**255
listenDnsQueryEnabled	Optional	enum	Whether to listen for DNS query requests. **The value is described as follows:** 0: NO 1: YES **Default:**0:NO

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 279: LIF
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: initializing
IPV4ADDR	Mandatory	string	Logical port IPv4 address.
IPV4MASK	Mandatory	string	Logical port IPv4 mask.
IPV4GATEWAY	Mandatory	string	Logical port IPv4 gateway.
IPV6MASK	Mandatory	string	Logical port IPv6 prefix.
IPV6ADDR	Mandatory	string	Logical port IPv6 address.
IPV6GATEWAY	Mandatory	string	Logical port IPv6 gateway.
ROLE	Mandatory	string(enum)	Role of a logical port. **The value is described as follows:** 1: management 2: service 3: management and service

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Parameter	Mandatory/ Conditional	Type	Description
SUPPORTPROTOCOL	Mandatory	string(uint32)	Supported protocol. **The value is described as follows:** 0: NONE 1: NFS(bit 0 for the NFS switch) 2: CIFS(bit 1 for the CIFS switch) 3: NFS + CIFS 4: iSCSI(bit 2 for the iSCSI switch) 8: FC/FCoE(bit 3 for the FC/FCoE switch) If the bit switch is 0, the protocol is not supported. If the bit switch is 1, the protocol is supported. Convenient for expanding subsequent protocols. **Note:**Currently, this field is not supported.
HOMEPORTTYPE	Mandatory	string(enum)	Type of the parent port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN
HOMEPORTID	Mandatory	string	ID of the parent port.
HOMEPORTNAME	Mandatory	string	Name of the parent port.
HOMENODEID	Mandatory	string	ID of the parent node.
CURRENTPORTID	Mandatory	string	ID of the current port.
CURRENTPORTNAME	Mandatory	string	Name of the current port.
CURRENTNODEID	Mandatory	string	ID of the current node.
CURRENTPORTTYPE	Mandatory	string(enum)	Type of the current port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONALSTATUS	Mandatory	string(bool)	Whether actived. **The value is described as follows:** true: activated false: not activated
ADDRESSFAMILY	Mandatory	string(enum)	TCP/IP version. **The value is described as follows:** 0: IPv4 1: IPv6
CANFAILOVER	Mandatory	string(bool)	Indicates whether failover is enabled. The default value is true. **The value is described as follows:** true: enabled false: disabled
FAILBACKMODE	Mandatory	enum	Failback mode. **The value is described as follows:** 1: manual 2: auto
FAILOVERGROUPID	Mandatory	string	ID of the owning failover group.
FAILOVERGROUPNAME	Mandatory	string	Name of the owning failover group.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
ISPRIVATE	Mandatory	string(bool)	Whether it is configurable. **The value is described as follows:** true: not configurable false: configurable
MANAGEMENTACCESS	Mandatory	string	Manage access mode.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ddnsStatus	Mandatory	string(enum)	Dynamic DNS. **The value is described as follows:** 0: INVALID 1: Enable 2: Disabled **Note:**The dynamic DNS is supported when the role of a logical port is "service" or "management and service".
dnsZoneName	Mandatory	string	DNS zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start with a letter or a digit.
listenDnsQueryEnabled	Mandatory	string(enum)	Whether to listen for DNS query requests. **The value is described as follows:** 0: NO 1: YES

Example

- Configuring an IPv4 logical port.

```
Request: POST /deviceManager/rest/210235843910E6000009/lif
{
    "ADDRESSFAMILY": 0,
    "CANFAILOVER": true,
    "FAILBACKMODE": 2,
```

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```
    "HOMEPORTID": "131330",
    "HOMEPORTTYPE": 1,
    "IPV4ADDR": "2.2.2.2",
    "IPV4GATEWAY": "",
    "IPV4MASK": "255.0.0.0",
    "ISPRIVATE": false,
    "NAME": "LIF01",
    "OPERATIONALSTATUS": true,
    "ROLE": 2,
    "ddnsStatus": 1
}

Response:
 {
    "data": {
        "ADDRESSFAMILY": "0",
        "CANFAILOVER": "true",
        "CURRENTNODEID": "0A",
        "CURRENTPORTID": "131330",
        "CURRENTPORTNAME": "CTE0.A.IOM1.P2",
        "CURRENTPORTTYPE": "1",
        "FAILBACKMODE": "2",
        "FAILOVERGROUPID": "0",
        "FAILOVERGROUPNAME": "System-defined",
        "HOMENODEID": "0A",
        "HOMEPORTID": "131330",
        "HOMEPORTNAME": "CTE0.A.IOM1.P2",
        "HOMEPORTTYPE": "1",
        "ID": "4278321153",
        "IPV4ADDR": "1.1.1.1",
        "IPV4GATEWAY": "",
        "IPV4MASK": "255.0.0.0",
        "IPV6ADDR": "",
        "IPV6GATEWAY": "",
        "IPV6MASK": "",
        "ISPRIVATE": "false",
        "MANAGEMENTACCESS": "--",
        "NAME": "LIF01",
        "OPERATIONALSTATUS": "true",
        "ROLE": "2",
        "RUNNINGSTATUS": "53",
        "SUPPORTPROTOCOL": "3",
        "TYPE": 279,
        "ddnsStatus": "1",
        "dnsZoneName": "",
        "listenDnsQueryEnabled": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Configuring an IPv6 logical port.

```
Request: POST /deviceManager/rest/210235843910E6000009/lif
{
    "ADDRESSFAMILY": 1,
    "CANFAILOVER": true,
    "FAILBACKMODE": 1,
    "HOMEPORTID": "549772730113",
    "HOMEPORTTYPE": 7,
    "IPV6ADDR": "abc::1",
    "IPV6GATEWAY": "ab::1",
    "IPV6MASK": "1",
    "ISPRIVATE": false,
    "NAME": "LIF_OF_IPV6",
    "OPERATIONALSTATUS": true,
    "ROLE": 2,
    "ddnsStatus": 1
}
```

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```
Response:
{
    "data": {
        "ADDRESSFAMILY": "1",
        "CANFAILOVER": "true",
        "CURRENTNODEID": "0B",
        "CURRENTPORTID": "549772730113",
        "CURRENTPORTNAME": "bond0",
        "CURRENTPORTTYPE": "7",
        "FAILBACKMODE": "1",
        "FAILOVERGROUPID": "0",
        "FAILOVERGROUPNAME": "System-defined",
        "HOMENODEID": "0B",
        "HOMEPORTID": "549772730113",
        "HOMEPORTNAME": "bond0",
        "HOMEPORTTYPE": "7",
        "ID": "4278321154",
        "IPV4ADDR": "",
        "IPV4GATEWAY": "",
        "IPV4MASK": "",
        "IPV6ADDR": "abc::1",
        "IPV6GATEWAY": "",
        "IPV6MASK": "1",
        "ISPRIVATE": "false",
        "MANAGEMENTACCESS": "--",
        "NAME": "LIF_OF_IPV6",
        "OPERATIONALSTATUS": "true",
        "ROLE": "2",
        "RUNNINGSTATUS": "53",
        "SUPPORTPROTOCOL": "3",
        "TYPE": 279,
        "ddnsStatus": "1",
        "dnsZoneName": "",
        "listenDnsQueryEnabled": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.12.3 Interface for Modifying a Logical Port

Function

This interface is used to modify a logical port.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

HighRisk

You are about to change the failover group of the logical port.

This operation may interrupt services running on the logical port because no port is available for the failover of the logical port in the new failover group.

Before performing this operation, ensure that services on the logical port will not be interrupted upon the failover of the logical port in the new failover group.

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You are about to modify the properties of the logical port. This operation may interrupt services or cause service exceptions. If this operation also modifies the IP address of this logical port, the configured routes on the IP address that is modified on this logical port will also be cleared. If this operation involves modifying the primary port, the logical port failover group will be restored to the default failover group or VLAN failover group.

Suggestion:

1. Before you perform this operation, determine whether the modification is necessary.

2. If this operation involves modifying the primary port and the modified failover group is an unexpected failover group, modify the configurations of the failover group again.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lif/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Logical port ID.
NAME	Optional	string	Name. **Length:**1~31
IPV4ADDR	Conditional	string	Logical port IPv4 address. **Note:**This parameter must be delivered if a new IPv4 address is added.
IPV4MASK	Conditional	string	Logical port IPv4 mask. **Note:**This parameter must be delivered if a new IPv4 address is added.
IPV4GATEWAY	Optional	string	Logical port IPv4 gateway.

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Parameter	Mandatory/Optional/Conditional	Type	Description
IPV6ADDR	Conditional	string	Logical port IPv6 address. **Note:**This parameter must be delivered if a new IPv6 address is added.
IPV6MASK	Conditional	string	Logical port IPv6 prefix. **Note:**This parameter must be delivered if a new IPv6address is added.
IPV6GATEWAY	Optional	string	Logical port IPv6 gateway.
HOMEPORTTYPE	Conditional	enum	Type of the parent port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN **Note:**This field must be delivered if you want to change the primary port.
HOMEPORTID	Conditional	string	ID of the parent port. **Note:**This field must be delivered if you want to change the type of the parent port
CURRENTPORTID	Optional	string	ID of the current port. **Note:** This field is used to modify the current port for the failback of the logical port, that is, to modify the current port as consistent as the primary port. Only the HOMEPORTID value of the current logical port can be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
OPERATIONALSTATUS	Optional	bool	Activated. **The value is described as follows:** true: activated false: not activated
ADDRESSFAMILY	Conditional	enum	Internet protocol version. **The value is described as follows:** 0: IPv4 1: IPv6 **Note:** Must be the same as the configured IP address. This parameter must be delivered when you set any field in the IPv4 or IPv6 address, subnet mask, prefix, or gateway.
ISPRIVATE	Optional	bool	Whether it is configurable. **The value is described as follows:** true: not configurable false: configurable
FAILOVERGROUPID	Optional	string	ID of the owning failover group.
CANFAILOVER	Optional	bool	Indicates whether failover is enabled. **The value is described as follows:** true: enable false: disable
FAILBACKMODE	Optional	enum	Failback mode. **The value is described as follows:** 1: manual 2: auto
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ddnsStatus	Optional	enum	Dynamic DNS. **The value is described as follows:** 0: INVALID 1: Enable 2: Disabled **Note:**The dynamic DNS is supported when the role of a logical port is "service" or "management and service".
dnsZoneName	Optional	string	DNS zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start with a letter or a digit. **Length:**255
listenDnsQueryEnabled	Optional	enum	Whether to listen for DNS query requests. **The value is described as follows:** 0: NO 1: YES

Result

N/A

Example

- Changing an IPv4 logical port to an IPv6 logical port.

```
Request: PUT /deviceManager/rest/210235843910E6000009/lif/4278321153
{
    "ADDRESSFAMILY": 1,
    "IPV6ADDR": "abc::1",
```

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```
    "IPV6GATEWAY": "",
    "IPV6MASK": "1"
}

Response:
{
    "data": {

    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Activating a logical port.

```
Request: PUT /deviceManager/rest/210235843910E6000009/lif/4278321152
{
    "OPERATIONALSTATUS": true
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.12.4 Interface for Querying the Number of Logical Port

Function

This interface is used to query the number of logical ports.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lif/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters HOMEPORTTYPE, HOMEPORTID, IPV4ADDR, and IPV6ADDR are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	uint32	Number of logical ports.

Example

- Querying the number of logical ports whose IPv4 addresses contain 12.

```
Request: GET /deviceManager/rest/210235843710E7000007/lif/count?
filter=IPV4ADDR:12

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.12.5 Interface for Deleting a Logical Port

Function

This interface is used to delete a logical port.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lif/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Logical port ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting the logical port whose ID is 4278321152.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/lif/4278321152

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.12.6 Interface for Batch Querying Logical Port Information

Function

This interface is used to batch query basic information about logical ports.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lif

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, IPV4ADDR, and IPV6ADDR is supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 279: LIF
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: initializing
IPV4ADDR	Mandatory	string	Logical port IPv4 address.
IPV4MASK	Mandatory	string	Logical port IPv4 mask.
IPV4GATEWAY	Mandatory	string	Logical port IPv4 gateway.
IPV6ADDR	Mandatory	string	Logical port IPv6 address.
IPV6MASK	Mandatory	string	Logical port IPv6 prefix.
IPV6GATEWAY	Mandatory	string	Logical port IPv6 gateway.
ROLE	Mandatory	string(enum)	Role of a logical port. **The value is described as follows:** 1: management 2: service 3: management and service

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Parameter	Mandatory/ Conditional	Type	Description
SUPPORTPROTOCOL	Mandatory	string(uint32)	Supported protocol. **The value is described as follows:** 0: NONE 1: NFS(bit 0 for the NFS switch) 2: CIFS(bit 1 for the CIFS switch) 3: NFS + CIFS 4: iSCSI(bit 2 for the iSCSI switch) 8: FC/FCoE(bit 3 for the FC/FCoE switch) If the bit switch is 0, the protocol is not supported. If the bit switch is 1, the protocol is supported. Convenient for expanding subsequent protocols.
HOMEPORTTYPE	Mandatory	string(enum)	Type of the parent port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN
HOMEPORTID	Mandatory	string	ID of the parent port.
HOMEPORTNAME	Mandatory	string	Name of the parent port.
HOMENODEID	Mandatory	string	ID of the parent node.
CURRENTPORTTYPE	Mandatory	string(enum)	Type of the current port. **The value is described as follows:** 1: Ethernet port 7: bond 8: VLAN
CURRENTPORTID	Mandatory	string	ID of the current port.
CURRENTPORTNAME	Mandatory	string	Name of the current port.
CURRENTNODEID	Mandatory	string	ID of the current node.

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONALSTATUS	Mandatory	string(bool)	Whether actived. **The value is described as follows:** true: activated false: not activated
ADDRESSFAMILY	Mandatory	string(enum)	TCP/IP version. **The value is described as follows:** 0: IPv4 1: IPv6
FAILOVERGROUPID	Mandatory	string	ID of the owning failover group.
FAILOVERGROUPNAME	Mandatory	string	Name of the owning failover group.
CANFAILOVER	Mandatory	string(bool)	Indicates whether failover is enabled. The default value is true. **The value is described as follows:** true: enabled false: disabled
ISPRIVATE	Mandatory	string(bool)	Whether it is configurable. **The value is described as follows:** true: not configurable false: configurable
FAILBACKMODE	Mandatory	string(enum)	Failback mode. **The value is described as follows:** 1: manual 2: auto
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Parameter	Mandatory/ Conditional	Type	Description
MANAGEMENTACCESS	Mandatory	string	Manage access mode.
ddnsStatus	Mandatory	string(enum)	Dynamic DNS. **The value is described as follows:** 0: INVALID 1: Enable 2: Disabled **Note:**The dynamic DNS is supported when the role of a logical port is "service" or "management and service".
dnsZoneName	Mandatory	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start with a letter or a digit.
listenDnsQueryEnabled	Mandatory	string(enum)	Whether to listen for DNS query requests. **The value is described as follows:** 0: NO 1: YES

Example

- Batch querying the first 100 logical ports whose IP addresses contain 172.

```
Request: GET /deviceManager/rest/210235843910E6000009/lif?filter=IPV4ADDR:
172&range=[0-100]

Response:
 {
    "data": [
        {
            "ADDRESSFAMILY": "0",
```

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```
            "CANFAILOVER": "true",
            "CURRENTNODEID": "0A",
            "CURRENTPORTID": "131328",
            "CURRENTPORTNAME": "CTE0.A.IOM1.P0",
            "CURRENTPORTTYPE": "1",
            "FAILBACKMODE": "2",
            "FAILOVERGROUPID": "0",
            "FAILOVERGROUPNAME": "System-defined",
            "HOMENODEID": "0A",
            "HOMEPORTID": "131328",
            "HOMEPORTNAME": "CTE0.A.IOM1.P0",
            "HOMEPORTTYPE": "1",
            "ID": "4278321152",
            "IPV4ADDR": "172.1.1.1",
            "IPV4GATEWAY": "",
            "IPV4MASK": "255.255.0.0",
            "IPV6ADDR": "",
            "IPV6GATEWAY": "",
            "IPV6MASK": "",
            "ISPRIVATE": "false",
            "MANAGEMENTACCESS": "--",
            "NAME": "lif1",
            "OPERATIONALSTATUS": "true",
            "ROLE": "2",
            "RUNNINGSTATUS": "11",
            "SUPPORTPROTOCOL": "3",
            "TYPE": 279,
            "ddnsStatus": "1",
            "dnsZoneName": "test.nas.com",
            "listenDnsQueryEnabled": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.8.13 vlan

4.8.13.1 Interface for Modifying VLAN Information

Function

This interface is used to modify a VLAN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

HighRisk

You are about to modify the MTU settings for VLAN ({0}). This operation may interrupt services or cause service exceptions.

Suggestion: Before performing this operation, determine whether the modification is necessary.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	VLAN ID.
MTU	Mandatory	uint32	Maximum transfer unit. **The value is described as follows:** [1280,9000] and cannot be greater than the MTU of the parent port.

Result

N/A

Example

- Changing MTU of the VLAN whose ID is 4261543937 to 1502.

```
Request: PUT /deviceManager/rest/210235843910E6000009/vlan/4261543937
{
    "MTU": 1502
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.13.2 Interface for Implementing Associated Query of VLAN Information

Function

This interface is used to implement associated query of basic information about VLANs.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Type of the associated object, for example, FAILOVERGROUP. **The value is described as follows:** 289: FAILOVERGROUP
ASSOCIATEOBJID	Mandatory	string	ID of the associated object.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter NAME is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 280: VLAN
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: initializing
TAG	Mandatory	string(uint32)	VLAN tag. **The value is described as follows:** [1,4094]
MTU	Mandatory	string(uint32)	Maximum transfer unit.
PORTTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 1: ETH port 7: bond port
PORTID	Mandatory	string	Port ID.

Example

- Querying basic information about VLANs in the failover group whose ID is 4219.

```
Request: GET /deviceManager/rest/210235843910E6000009/vlan/associate?
ASSOCIATEOBJTYPE=289&ASSOCIATEOBJID=4219&range=[0-100]

Response:
{
    "data": [
        {
            "ID": "4261543936",
            "MTU": "1500",
            "NAME": "CTE0.A.IOM1.P0.123",
```

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```
            "PORTID": "131328",
            "PORTTYPE": "1",
            "RUNNINGSTATUS": "11",
            "TAG": "123",
            "TYPE": 280
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.13.3 Interface for Querying VLAN Information

Function

This interface is used to query basic information about a VLAN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	VLAN ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 280: VLAN

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: initializing
TAG	Mandatory	string(uint32)	VLAN tag.
MTU	Mandatory	string(uint32)	Maximum transfer unit.
PORTTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 1: ETH port 7: bond port
PORTID	Mandatory	string	Port ID.

Example

- Querying basic information about the VLAN whose ID is 4261543936.

```
Request: GET /deviceManager/rest/210235843910E6000009/vlan/4261543936

Response:
{
    "data": {
        "ID": "4261543936",
        "MTU": "1500",
        "NAME": "CTE0.A.IOM1.P0.123",
        "PORTID": "131328",
        "PORTTYPE": "1",
        "RUNNINGSTATUS": "11",
        "TAG": "123",
        "TYPE": 280
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.13.4 Interface for Batch Querying VLAN Information

Function

This interface is used to batch query basic information about VLANs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, TAG is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 280: VLAN
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: initializing
TAG	Mandatory	string(uint32)	VLAN tag. **The value is described as follows:** [1,4094]
MTU	Mandatory	string(uint32)	Maximum transfer unit.
PORTTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 1: ETH port 7: bond port
PORTID	Mandatory	string	Port ID.

Example

- Batch querying basic information about the first 100 VLANs whose IDs contain 1.

```
Request: GET /deviceManager/rest/210235843910E6000009/vlan?filter=TAG:
1&range=[0-100]

Response:
{
    "data": [
        {
            "ID": "4261543936",
            "MTU": "1500",
            "NAME": "CTE0.A.IOM1.P0.123",
```

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```
            "PORTID": "131328",
            "PORTTYPE": "1",
            "RUNNINGSTATUS": "11",
            "TAG": "123",
            "TYPE": 280
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.13.5 Interface for Querying the Number of VLAN

Function

This interface is used to query the number of VLANs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, TAG are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of VLANs.

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Example

- Querying the number of VLANs whose names contain 1.

```
Request: GET /deviceManager/rest/210235843710E7000007/vlan/count?filter=NAME:1

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.13.6 Interface for Creating a VLAN

Function

This interface is used to create a VLAN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
TAG	Mandatory	uint32	VLAN tag. **The value is described as follows:** [1, 4094]

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Parameter	Mandatory/Optional/Conditional	Type	Description
PORTTYPE	Mandatory	enum	Port type. **The value is described as follows:** 1: ETH port 7: bond port
PORTID	Mandatory	string	Port ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 280: VLAN
ID	Mandatory	string	VLAN ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 2: running 10: link up 11: link down 53: Initializing
TAG	Mandatory	string(uint32)	VLAN tag. **The value is described as follows:** [1,4094]

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Parameter	Mandatory/ Conditional	Type	Description
MTU	Mandatory	string(uint32)	Maximum transfer unit. **The value is described as follows:** The value of an MTU cannot exceed that of the MTU on the corresponding physical port, and must be in a range from 1500 to 9000.
PORTTYPE	Mandatory	string(enum)	Port type. **The value is described as follows:** 1: ETH port 7: bond port
PORTID	Mandatory	string	Port ID.

Example

- Creating a VLAN based on Ethernet ports.

```
Request: POST /deviceManager/rest/210235843910E6000009/vlan
{
    "TAG": "123",
    "PORTTYPE": 1,
    "PORTID": "131328"
}

Response:
{
    "data": {
        "ID": "4261543936",
        "MTU": "1500",
        "NAME": "CTE0.A.IOM1.P0.123",
        "PORTID": "131328",
        "PORTTYPE": "1",
        "RUNNINGSTATUS": "53",
        "TAG": "123",
        "TYPE": 280
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.13.7 Interface for Deleting VLAN Information

Function

This interface is used to delete a VLAN.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/vlan/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	VLAN ID.

Result

N/A

Example

- Deleting the VLAN whose ID is 4261543937.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/vlan/4261543937

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14 failover_group

4.8.14.1 Interface for Deleting Member association from Failover Group

Function

This interface is used to delete member from Failover Group.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup/associate

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID of FAILOVERGROUP
ASSOCIATEOBJTYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 213: Ethernet Port 235: bond port 280: VLAN
ASSOCIATEOBJID	Mandatory	string	ID of the associated object.

Result

N/A

Example

- Deleting the member of Failover Group whose ID is 1

```
Request: DELETE /deviceManager/rest/210235843710E7000007/failovergroup/
associate?ID=1&ASSOCIATEOBJTYPE=213&ASSOCIATEOBJID=131074
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.8.14.2 Interface for Querying Failover Group Information

Function

This interface is used to query basic information about Failover Group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID of Failover Group.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 289: Failover Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
FAILOVERGROUPTYPE	Mandatory	string(enum)	Type of Failover Group. **The value is described as follows:** 1:system 2:VLAN 3:customized

Example

- Querying basic information about the Failover Group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/failovergroup/0

Response:
{
    "data": {
        "ID": "0",
        "NAME": "System-defined",
        "FAILOVERGROUPTYPE": "1",
        "DESCRIPTION": "System-FailoverGroup",
        "TYPE": 289
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14.3 Interface for Creating a Failover Group

Function

This interface is used to create a Failover Group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
FAILOVERGROUPTYPE	Mandatory	enum	Type of Failover Group. **The value is described as follows:** 3:customized
NAME	Mandatory	string	Name. **The value is described as follows:** Contain only letters, digits, periods (.), underscores (_), and hyphens (-). **Length:**1~63
DESCRIPTION	Optional	string	Description. **Length:**0~127 **Note:**If this parameter is not delivered, the default value is Customized-FailoverGroup.
MSGRETURNTYPE	Optional	enum	**The value is described as follows:** 0:asynchronize 1:synchronize **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 289: Failover Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
FAILOVERGROUPTYPE	Mandatory	string(enum)	Type of Failover Group. **The value is described as follows:** 1:system 2:VLAN 3:customized

Example

- Creating a Failover Group.

```
Request: POST /deviceManager/rest/210235843910E6000009/failovergroup
{
    "DESCRIPTION": "description",
    "FAILOVERGROUPTYPE": 3,
    "NAME": "FAILOVERGROUP002"
}
Response:
{
    "data": {
        "ID": "1",
        "DESCRIPTION": "description",
        "FAILOVERGROUPTYPE": 3,
        "NAME": "FAILOVERGROUP002",
        "TYPE":289
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14.4 Interface for Modifying Failover Group Information

Function

This interface is used to modify a Failover Group.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Failover Group ID.
NAME	Optional	string	Name. **The value is described as follows:** Contain only letters, digits, periods (.), underscores (_), and hyphens (-). **Length:**1~63
DESCRIPTION	Optional	string	Description. **Length:**0~127

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Parameter	Mandatory/Optional/Conditional	Type	Description
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0:asynchronize 1:synchronize **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 289: Failover Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
FAILOVERGROUPTYPE	Mandatory	string(enum)	Type of Failover Group. **The value is described as follows:** 1:system 2:VLAN 3:customized

Example

- Changing DESCRIPTION of the Failover Group whose ID is 1 to Customized-FailoverGroups.

```
Request: PUT /deviceManager/rest/210235843910E6000009/failovergroup/1
{
    "DESCRIPTION": "Customized-FailoverGroups"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14.5 Interface for Batch Querying Failover Group Information

Function

This interface is used to batch query basic information about Failover Group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter NAME is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 289: Failover Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
FAILOVERGROUPTYPE	Mandatory	string(enum)	Type of Failover Group. **The value is described as follows:** 1:system 2:VLAN 3:customized

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Example

- Batch querying basic information about the first 100 Failover Groups whose NAMEs contain sys.

```
Request: GET /deviceManager/rest/210235843910E6000009/failovergroup?
filter=NAME:sys&range=[0-100]

Response:
{
    "data": [
        {
            "ID": "0",
            "NAME": "System-defined",
            "FAILOVERGROUPTYPE": "1",
            "DESCRIPTION": "System-FailoverGroup",
            "TYPE": 289
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14.6 Interface for Querying the Number of Failover Group

Function

This interface is used to query the number of Failover Groups.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter NAME is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of Failover Groups.

Example

- Querying the number of Failover Groups whose names contain sys.

```
Request: GET /deviceManager/rest/210235843710E7000007/failovergroup/count?
filter=NAME:sys

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14.7 Interface for Deleting Failover Group Information

Function

This interface is used to delete a Failover Group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup/${id}

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Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Failover Group ID.
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0:asynchronize 1:synchronize **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

N/A

Example

- Deleting the Failover Group whose ID is 3.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/failovergroup/3

Response:
```

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```
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.14.8 Interface for Adding Member association from Failover Group

Function

This interface is used to add member from Failover Group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/failovergroup/associate

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID of Failover Group.
ASSOCIATEOBJTYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 213: Ethernet Port 235: bond port 280: VLAN
ASSOCIATEOBJID	Mandatory	string	ID of the associated object.

Result

N/A

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Example

- Adding the member of Failover Group whose ID is 4.

```
Request: POST /deviceManager/rest/210235843710E7000007/failovergroup/associate
{
    "ID":"4",
    "ASSOCIATEOBJTYPE":213,
    "ASSOCIATEOBJID":"549772722432"
}


Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.15 dns_zone

4.8.15.1 Interface for Deleting a DNS Zone

Function

This interface is used to delete a specified Zone.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/dns_zone/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Conditional	string	ID. **Note:**One of ID and NAME must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Conditional	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start and end with a letter or a digit. **Length:**255 **Note:**One of ID and NAME must be delivered.

Result

N/A

Example

- Delete a specified Zone.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/dns_zone/1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.15.2 Interface for Creating a DNS Zone

Function

This interface is used to create a Zone about the DNS.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/dns_zone

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start and end with a letter or a digit. **Length:**255
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 57489
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start and end with a letter or a digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Create a DNS Zone named "zone1.nas.com".

```
Request: POST /deviceManager/rest/210235843710E7000007/dns_zone
{
    "NAME": "zone1.nas.com"
}

Response:
{
    "data": {
        "ID": "0",
        "NAME": "zone1.nas.com",
        "TYPE": 57489
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.15.3 Interface for Batch Querying DNS Zone Information

Function

This interface is used to batch query Zone information about DNS.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/dns_zone

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 57489
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start with a letter or a digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Query the DNS Zone.

```
Request: GET/deviceManager/rest/210235843910E6000009/dns_zone

Response:
{
    "data": [
        {
            "ID": 0,
            "NAME": "test.nas.com",
            "TYPE": 57489
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.8.15.4 Interface for Modifying a DNS Zone Name

Function

This interface is used to modify the name a DNS Zone.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

HighRisk

You are about to modify properties of a DNS Zone. This operation may cause you to fail to access services by using the Zone name before modification.

Suggestion: Before performing this operation, confirm that the modification is necessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/DNS_ZONE/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Conditional	string	ID. **Note:**One of ID and NAME must be delivered.
NAME	Conditional	string	DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start and end with a letter or a digit. **Length:**255 **Note:**One of ID and NAME must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
newDnsZoneName	Mandatory	string	New DNS Zone name. **The value is described as follows:** A name contains 1 to 255 characters and consists of labels separated by periods (.). A label contains 1 to 63 characters including letters (case-insensitive), digits, hyphens (-), and underscores (_), and must start and end with a letter or a digit. **Length:**255 **Note:**The new Zone name cannot be duplicated with the original Zone name.

Result

N/A

Example

- Change the name of a DNS Zone.

```
Request: PUT /deviceManager/rest/210235843710E7000007/dns_zone
{
    "ID": "0",
    "newDnsZoneName": "test.nas.com"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9 Block storage service management

4.9.1 initiator

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4.9.1.1 Interface for Querying Fibre Channel Initiator Information (Host Port)

Function

This interface is used to query Fibre Channel initiator information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Saving the port WWN. The value is a 16-bit hexadecimal number.
ISFREE	Optional	bool	Free or not.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 223: FC initiator
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This field is returned if the initiator is not a free initiator.
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. For details. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not.

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Parameter	Mandatory/ Conditional	Type	Description
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Querying Fibre Channel initiator information.

```
Request: GET /deviceManager/rest/210235843910E6000009/fc_initiator/
a000000000000000

Response:
{
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "a000000000000000",
        "ISFREE": "true",
        "MULTIPATHTYPE": "1",
        "NAME": "12",
        "OPERATIONSYSTEM": "1",
        "PARENTID": "",
        "PARENTTYPE": 0,
        "PARENTNAME":"Host001",
        "RUNNINGSTATUS": "27",
        "TYPE": 223,
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.1.2 Interface for Querying iSCSI Initiator Information (Host Port)

Function

This interface is used to query basic information about an iSCSI initiator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	iSCSI initiator IQN. **The value is described as follows:** The value consists of visible ASCII characters, starting with a letter or digit. **Length:**1~223

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 222: iSCSI Initiator
ID	Mandatory	string	Object ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Conditional	string	Name. **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: Host **Note:**This field is returned if the initiator is not a free initiator.
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not.
USECHAP	Mandatory	string(bool)	CHAP enabled or not.
CHAPNAME	Conditional	string	CHAP name. **Note:**This field is returned if CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
DISCOVERYVERMODE	Conditional	string(enum)	Authentication mode in discovery stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.
NORMALVERMODE	Conditional	string(enum)	Authentication mode in normal stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	string(enum)	Operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
CHAPNAMEINITATOR VERTARGET	Conditional	string	CHAP name for the initiator to authenticate the target. **Note:**This field is returned If bidirectional CHAP authentication is enabled for the initiator.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Querying iSCSI initiator information.

```
Request: GET /deviceManager/rest/210235843710E7000007/iscsi_initiator/
111111111111111111

Response:
{
    "data": [{
        "HEALTHSTATUS": "1",
        "ID": "111111111111111111",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "OPERATIONSYSTEM": "255",
        "PARENTID": "0",
        "PARENTNAME": "Host001",
        "PARENTTYPE": 21,
        "RUNNINGSTATUS": "28",
        "TYPE": 222,
        "USECHAP": "false",
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.1.3 Interface for Modifying iSCSI Initiator Information (Host Port)

Function

This interface is used to modify iSCSI initiators.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add initiator to host.

Suggestion: Before performing this operation, determine whether the initiator that you have selected belongs to the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	iSCSI initiator IQN. **The value is described as follows:** The value consists of visible ASCII characters, starting with a letter or digit. **Length:**1~223
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**0~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
USECHAP	Optional	bool	CHAP enabled or not. **The value is described as follows:** false: disabled true: enbaled
CHAPNAME	Conditional	string	CHAP name. **Length:**4~223 **Note:**This parameter is mandatory when CHAP authentication is enabled.
CHAPPASSWORD	Conditional	string	CHAP password. **Length:**12~16 **Note:** 1.This parameter is mandatory when CHAP authentication is enabled. 2.This parameter is mandatory for changing passwords.
CHAPNAMEINITATOR VERTARGET	Conditional	string	Initatorvertarget CHAP name. **Length:**4~223 **Note:**This parameter is mandatory when bi-directional authentication is enabled for DISCOVERYVERMODE or NORMALVERMODE.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CHAPPASSWORDINI-TATORVERTARGET	Conditional	string	Initatorvertarget CHAP password. **Length:**12~16 **Note:** 1. This parameter is mandatory when bi-directional authentication is enabled for DISCOVERYVERMODE or NORMALVERMODE. 2.This parameter is mandatory when you want to change the CHAP password of the target.
CHAPOLDPASSWORDINITATORVERTARGET	Conditional	string	Initatorvertarget CHAP old password. **Length:**1~16 **Note:**This parameter is mandatory when you want to change the CHAP password of the target.
CHAPOLDPASSWORD	Conditional	string	CHAP password. This parameter is mandatory for password change. **Length:**1~16 **Note:**This parameter is mandatory for changing passwords.
MULTIPATHTYPE	Optional	enum	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
DISCOVERYVERMODE	Optional	enum	Authentication mode in discovery stage. **The value is described as follows:** 0: none 1: oneway 2: both

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Parameter	Mandatory/Optional/Conditional	Type	Description
NORMALVERMODE	Optional	enum	Authentication mode in normal stage. **The value is described as follows:** 0: none 1: oneway 2: both
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 21: Host **Note:**This parameter is delivered when an iSCSI initiator is associated with a host.
PARENTID	Optional	string	ID of the parent object. **Note:**This parameter is delivered when an iSCSI initiator is associated with a host.
FAILOVERMODE	Optional	enum	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SPECIALMODETYPE	Optional	enum	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter needs to be delivered only when initiator switchover mode is special ALUA.
PATHTYPE	Optional	enum	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled.

Result

N/A

Example

- Modifying iSCSI initiators.

```
Request: PUT /deviceManager/rest/210235843710E7000007/iscsi_initiator/
111111111111111111
{
    "MULTIPATHTYPE": "1",
    "NAME": "defr",
    "FAILOVERMODE": "3",
    "SPECIALMODETYPE": "2",
    "PATHTYPE": "1"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.1.4 Interface for Creating an iSCSI Initiator (Host Port)

Function

This interface is used to create an iSCSI initiator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	iSCSI initiator IQN. **The value is described as follows:** The value consists of visible ASCII characters, starting with a letter or digit. **Length:**1~223
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
USECHAP	Optional	bool	CHAP enabled or not. **The value is described as follows:** false: disabled true: enbaled **Default:**false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
CHAPNAME	Conditional	string	CHAP name. **Length:**4~223 **Note:**This parameter is mandatory for enabling CHAP authentication.
CHAPPASSWORD	Conditional	string	CHAP password. **Length:**12~16 **Note:**This parameter is mandatory for enabling CHAP authentication.
CHAPNAMEINITATOR VERTARGET	Conditional	string	Initatorvertarget CHAP name. **Length:**4~223 **Note:**This parameter is mandatory if DISCOVERYVERMODE is set to bidirectional authentication.
CHAPPASSWORDINI-TATORVERTARGET	Conditional	string	Initatorvertarget CHAP password. **Length:**12~16 **Note:**This parameter is mandatory if DISCOVERYVERMODE is set to bidirectional authentication.
DISCOVERYVERMODE	Optional	enum	Authentication mode in discovery stage. **The value is described as follows:** 0: none 1: oneway 2: both **Default:**0: none

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Parameter	Mandatory/Optional/Conditional	Type	Description
NORMALVERMODE	Optional	enum	Authentication mode in normal stage. **The value is described as follows:** 0: none 1: oneway 2: both **Default:**0: none
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This parameter is delivered when an iSCSI initiator is associated with a host.
PARENTID	Optional	string	ID of the parent object. **Note:**This parameter is delivered when an iSCSI initiator is associated with a host.
FAILOVERMODE	Optional	enum	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SPECIALMODETYPE	Optional	enum	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter needs to be delivered only when initiator switchover mode is special ALUA.
PATHTYPE	Optional	enum	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled.
MULTIPATHTYPE	Optional	enum	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 222: iSCSI Initiator
ID	Mandatory	string	iSCSI initiator IQN.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Conditional	string	Name. **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This field is returned if the initiator is not a free initiator.
PARENTID	Conditional	string	ID of the parent object. **The value is described as follows:** ID of the Host **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **The value is described as follows:** Name of the Host **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. For details. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. For details. **The value is described as follows:** 0: unknown 27: online 28: offline

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Parameter	Mandatory/ Conditional	Type	Description
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** false: added to a host true: not added to a host
USECHAP	Mandatory	string(bool)	CHAP enabled or not.
CHAPNAME	Conditional	string	CHAP name. **Note:**This field is returned if CHAP authentication is enabled for the initiator.
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
DISCOVERYVERMODE	Conditional	string(enum)	Authentication mode in discovery stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.
NORMALVERMODE	Conditional	string(enum)	Authentication mode in normal stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	string(enum)	Operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
CHAPNAMEINITATOR VERTARGET	Conditional	string	CHAP name for the initiator to authenticate the target. **Note:**This field is returned If bidirectional CHAP authentication is enabled for the initiator.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Creating an iSCSI initiator.

```
Request: POST /deviceManager/rest/210235843710E7000007/iscsi_initiator
{
    "ID": "cvcxvcxb",
    "USECHAP": false,
    "MULTIPATHTYPE": "1",
    "FAILOVERMODE": "3",
    "SPECIALMODETYPE": "2",
    "PATHTYPE": "1"
}

Response:
{
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "cvcxvcxb",
        "ISFREE": "true",
        "MULTIPATHTYPE": "1",
        "OPERATIONSYSTEM": "255",
        "RUNNINGSTATUS": "28",
        "TYPE": 222,
        "USECHAP": "false",
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    },
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.9.1.5 Interface for Modifying Fibre Channel Initiator Information (Host Port)

Function

This interface is used to modify Fibre Channel initiators.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add initiator to host.

Suggestion: Before performing this operation, determine whether the initiator that you have selected belongs to the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Fibre Channel initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

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Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**0~31
MULTIPATHTYPE	Optional	enum	Multipathing type, which can be changed only after multipathing is allocated to the host. **The value is described as follows:** 0: default 1: uses third-party multipathing software
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This parameter is delivered when a Fibre Channel initiator is associated with a host.
PARENTID	Optional	string	ID of the parent object. **Note:**This parameter is delivered when a Fibre Channel initiator is associated with a host.

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Parameter	Mandatory/Optional/Conditional	Type	Description
FAILOVERMODE	Optional	enum	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Optional	enum	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter needs to be delivered only when initiator switchover mode is special ALUA.
PATHTYPE	Optional	enum	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled.

Result

N/A

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Example

- Modifying Fibre Channel initiators.

```
Request: PUT /deviceManager/rest/210235843910E6000009/fc_initiator/
a000000000000000
{
    "NAME": "1234563333",
    "MULTIPATHTYPE": "1",
    "FAILOVERMODE": "3",
    "SPECIALMODETYPE": "2",
    "PATHTYPE": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.6 Interface for Batch Querying Fibre Channel Initiator Information (Host Port)

Function

This interface is used to batch query basic information about Fibre Channel initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
ISFREE	Optional	bool	Free or not.
PARENTID	Optional	string	ID of the Host.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 223: FC Initiator
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: Host **Note:**This field is returned if the initiator is not a free initiator.
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. For details. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not.

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Parameter	Mandatory/ Conditional	Type	Description
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
OPERATIONSYSTEM	Mandatory	string(enum)	Operation System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Batch querying basic information about Fibre Channel initiators.

```
Request: GET/deviceManager/rest/210235843910E6000009/fc_initiator?PARENTID=0
Response: {
    "data": [
        {
            "HEALTHSTATUS": "1",
            "ID": "1212121212121212",
            "ISFREE": "true",
            "MULTIPATHTYPE": "1",
            "NAME": "12",
            "OPERATIONSYSTEM": "1",
            "PARENTID": "0",
            "PARENTTYPE": 0,
            "PARENTNAME": "Host001",
            "RUNNINGSTATUS": "27",
            "TYPE": 223,
            "FAILOVERMODE": "3",
            "SPECIALMODETYPE": "2",
            "PATHTYPE": "1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.1.7 Interface for Querying the Number of iSCSI Initiators(Host Port)

Function

This interface is used to query the number of iSCSI initiators (host ports).

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.
ISFREE	Optional	bool	Free or not. **The value is described as follows:** false: No. The initiator has been added to a host. true: Yes. The initiator has not been added to a host.
PARENTID	Optional	string	ID of the Host. **Note:**This field is delivered when the value of ISFREE is "false" or this field of ISFREE is not delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 213: Ethernet port
ASSOCIATEOBJID	Optional	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried iSCSI initiators (host ports).

Example

- Querying the number of iSCSI initiators (host ports).

```
Request: GET /deviceManager/rest/210235843910E6000009/iscsi_initiator/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.8 Interface for Deleting a Fibre Channel Initiator (Host Port)

Function

This interface is used to delete a free Fibre Channel initiator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator/${id}

Access Method

DELETE

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Fibre Channel initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

Result

N/A

Example

- Deleting a free Fibre Channel initiator.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/fc_initiator/
a000000000000000

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.9 Interface for Implementing Associated Query of Fibre Channel Initiator Information (Host Port)

Function

This interface is used to implement associated query of Fibre Channel initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator/associate

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 212: FC port
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 223: FC Initiator

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This field is returned if the initiator is not a free initiator.
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline

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Parameter	Mandatory/ Conditional	Type	Description
ISFREE	Mandatory	string(bool)	Free or not.
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Implementing associated query of Fibre Channel initiators.

```
Request: GET /deviceManager/rest/210235843910E6000009/fc_initiator/associate?
ASSOCIATEOBJTYPE=212&ASSOCIATEOBJID=1114368&range=[0-100]

Response
{
    "data": [{
        "HEALTHSTATUS": "1",
        "ID": "1212121212121212",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "NAME": "12",
        "OPERATIONSYSTEM": "1",
        "PARENTID": "1",
        "PARENTTYPE": 21,
        "PARENTNAME":"Host001",
        "RUNNINGSTATUS": "27",
        "TYPE": 223,
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }, {
        "HEALTHSTATUS": "1",
        "ID": "1313131313131313",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "NAME": "13",
        "OPERATIONSYSTEM": "1",
```

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```
        "PARENTID": "10",
        "PARENTTYPE": 21,
        "PARENTNAME":"Host001",
        "RUNNINGSTATUS": "27",
        "TYPE": 223,
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.10 Interface for Deleting an InfiniBand Initiator from a Host (Host Port)

Function

This interface is used to delete a InfiniBand initiator from a host.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3,2800 V3.

HighRisk

You are about to remove initiator ({1}) from host ({0}). This operation will interrupt related ongoing services. Before performing this operation, ensure that the selected host and initiators are correct and stop services on the host.
You are about to remove initiator ({1}) from host ({0}). This operation will interrupt related ongoing services. Suggestion: Before performing this operation, ensure that the selected host and initiators are correct and stop services on the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/remove_associate

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host ID.
ASSOCIATEOBJTYPE	Mandatory	string	InfiniBand initiator type. **The value is described as follows:** 16499: InfiniBand initiator
ASSOCIATEOBJID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

Result

N/A

Example

- Deleting a InfiniBand initiator from a host.

```
Request: PUT /deviceManager/rest/210235843910E6000009/host/remove_associate
{
    "ID": "0",
    "ASSOCIATEOBJTYPE": 16499,
    "ASSOCIATEOBJID": "efcb312432655765"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.11 Interface for Deleting an FC Initiator from a Host (Host Port)

Function

This interface is used to delete a Fibre Channel initiator from a host.

Applicable Model

Applicable to V3 all series.

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HighRisk

You are about to remove initiator ({1}) from host ({0}). This operation will interrupt related ongoing services. Before performing this operation, ensure that the selected host and initiators are correct and stop services on the host.
You are about to remove initiator ({1}) from host ({0}). This operation will interrupt related ongoing services. Suggestion: Before performing this operation, ensure that the selected host and initiators are correct and stop services on the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator/remove_fc_from_host

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Fibre Channel initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

Result

N/A

Example

- Deleting a Fibre Channel initiator from a host.

```
Request: PUT /deviceManager/rest/210235843910E6000009/fc_initiator/
remove_fc_from_host
{
    "ID": "a000000000000000"
}

Response:
```

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```
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.12 Interface for Implementing Associated Query of InfiniBand Initiator Information (Host Port)

Function

This interface is used to implement associated query of InfiniBand initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator/associate/host

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Conditional	enum	Associated object type. **The value is described as follows:** 21: Host 16500: IB port **Note:**This field must be delivered if the associated objects are InfiniBand ports.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Conditional	string	Associated object ID. **Length:**128 **Note:** This field must be delivered if the associated objects are InfiniBand ports; If the associated object is a host and ASSOCIATEOBJID is not delivered or its value is invalid, all objects are returned. If ASSOCIATEOBJID is valid but does not exist, no object is returned.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISFREE	Optional	bool	Free or not. **The value is described as follows:** false: added to a host. true: not added to a host. **Note:**This field can be delivered based on site requirements if the associated objects are hosts, and not delivered if the associated objects are InfiniBand ports.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16499: IB initiator
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** false: added to a host. true: not added to a host.
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if the OPERATIONSYSTEM field is not delivered.

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Parameter	Mandatory/ Conditional	Type	Description
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Implementing associated query of InfiniBand initiators.

```
Request: GET/deviceManager/rest/210235843710E7000007/ib_initiator/associate/
host?ASSOCIATEOBJTYPE=21&ASSOCIATEOBJID=0

Response: {
```

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```
    "data": [
        {
            "HEALTHSTATUS": "1",
            "ID": "fff0000f00011111",
            "ISFREE": "false",
            "MULTIPATHTYPE": "1",
            "NAME": "test",
            "OPERATIONSYSTEM": "255",
            "RUNNINGSTATUS": "28",
            "TYPE": 16499,
            "FAILOVERMODE": "3",
            "SPECIALMODETYPE": "2",
            "PATHTYPE": "1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.13 Interface for Associating a Host with an InfiniBand Initiator (Host Port)

Function

This interface is used to associate a host with an InfiniBand initiator.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/create_associate

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host ID.
ASSOCIATEOBJTYPE	Mandatory	string	InfiniBand initiator type. **The value is described as follows:** 16499: InfiniBand initiator

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

Result

N/A

Example

- Associating a host with an InfiniBand initiator.

```
Request: PUT /deviceManager/rest/210235843910E6000009/host/create_associate
{
    "ID": "0",
    "ASSOCIATEOBJTYPE": 16499,
    "ASSOCIATEOBJID": "efcb312432655765"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.14 Interface for Creating a Fibre Channel Initiator (Host Port)

Function

This interface is used to create a Fibre Channel initiator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Fibre Channel initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This parameter is delivered when a Fibre Channel initiator is associated with a host.
PARENTID	Optional	string	ID of the parent object. **Note:**This parameter is delivered when a Fibre Channel initiator is associated with a host.

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Parameter	Mandatory/Optional/Conditional	Type	Description
FAILOVERMODE	Optional	enum	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Optional	enum	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter needs to be delivered only when initiator switchover mode is special ALUA.
PATHTYPE	Optional	enum	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MULTIPATHTYPE	Optional	enum	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 223: FC initiator
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: host **Note:**This field is returned if the initiator is not a free initiator.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. For details. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** false: added to a host true: not added to a host
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	string(enum)	Operation System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Creating a Fibre Channel initiator.

```
Request: POST /deviceManager/rest/210235843910E6000009/fc_initiator
{
    "ID": "A000000000000000",
    "NAME": "SSS",
    "MULTIPATHTYPE": "1",
    "FAILOVERMODE": "3",
    "SPECIALMODETYPE": "2",
    "PATHTYPE": "1"
}

Response:
 {
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "a000000000000000",
        "ISFREE": "true",
        "MULTIPATHTYPE": "1",
        "NAME": "SSS",
        "OPERATIONSYSTEM": "255",
        "RUNNINGSTATUS": "28",
        "TYPE": 223,
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    },
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.9.1.15 Interface for Modifying InfiniBand Initiator Information (Host Port)

Function

This interface is used to modify basic information about InfiniBand initiators.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add initiator to host.

Suggestion: Before performing this operation, determine whether the initiator that you have selected belongs to the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saves the port WWN. The value is a 16-bit hexadecimal number.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**0~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
FAILOVERMODE	Optional	enum	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Optional	enum	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter needs to be delivered only when initiator switchover mode is special ALUA.
PATHTYPE	Optional	enum	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MULTIPATHTYPE	Optional	enum	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software

Result

N/A

Example

- Modifying basic information about InfiniBand initiators.

```
Request: PUT /deviceManager/rest/210235843710E7000007/ib_initiator/
fff0000f00011111
{
    "MULTIPATHTYPE": "1",
    "NAME": "ib",
    "FAILOVERMODE": "3",
    "SPECIALMODETYPE": "2",
    "PATHTYPE": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.16 Interface for Batch Querying InfiniBand Initiator Information (Host Port)

Function

This interface is used to batch query basic information about InfiniBand initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
ISFREE	Optional	bool	Free or not. **The value is described as follows:** false: added to a host true: not added to a host

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16499: IB initiator

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** alse: added to a host true: not added to a hos
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if the OPERATIONSYSTEM field is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Batch querying basic information about InfiniBand initiators.

```
Request: GET /deviceManager/rest/210235843710E7000007/ib_initiator?
ISFREE=true&range=[0-100]

Response:
{
    "data": [{
        "HEALTHSTATUS": "1",
        "ID": "1111111111111119",
        "ISFREE": "true",
        "MULTIPATHTYPE": "1",
        "NAME": "",
        "OPERATIONSYSTEM": "1",
        "RUNNINGSTATUS": "28",
        "TYPE": 16499,
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }, {
        "HEALTHSTATUS": "1",
        "ID": "2222222222222220",
        "ISFREE": "true",
        "MULTIPATHTYPE": "1",
        "NAME": "",
        "OPERATIONSYSTEM": "1",
        "RUNNINGSTATUS": "28",
        "TYPE": 16499,
        "FAILOVERMODE": "3",
```

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```
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.17 Interface for Querying InfiniBand Initiator Information (Host Port)

Function

This interface is used to query basic information about InfiniBand initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
ISFREE	Optional	bool	Free or not. **The value is described as follows:** false: added to a host. true: not added to a host.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16499: IB initiator
ID	Mandatory	string	Object ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** false: added to a host true: not added to a host

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Parameter	Mandatory/ Conditional	Type	Description
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if the OPERATIONSYSTEM field is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Querying basic information about InfiniBand initiators.

```
Request: GET /deviceManager/rest/210235843710E7000007/ib_initiator/
fff0000f00011111

Response:
 {
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "fff0000f00011111",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "NAME": "test",
        "OPERATIONSYSTEM": "255",
        "RUNNINGSTATUS": "28",
        "TYPE": 16499,
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.1.18 Interface for Implementing Associated Query of iSCSI Initiator Information (Host Port)

Function

This interface is used to implement associated query of iSCSI initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 213: Ethernet port
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 222: iSCSI Initiator
ID	Mandatory	string	iSCSI initiator IQN. **The value is described as follows:** The value consists of visible ASCII characters, starting with a letter or digit.
NAME	Conditional	string	Alias. **The value is described as follows:** Contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object **The value is described as follows:** 21: HOST **Note:**This field is returned if the initiator is not a free initiator.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** false: no,added to a host true: yes,not added to a host
USECHAP	Mandatory	string(bool)	CHAP enabled or not. **The value is described as follows:** true: enabled false: disabled
CHAPNAME	Conditional	string	CHAP name. **Note:**This field is returned if CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
DISCOVERYVERMODE	Conditional	string(enum)	Authentication mode in discovery stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.
NORMALVERMODE	Conditional	string(enum)	Authentication mode in normal stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.

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Parameter	Mandatory/ Conditional	Type	Description
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Implementing associated query of iSCSI initiators.

```
Request: GET /deviceManager/rest/1016964156/iscsi_initiator/associate?
ASSOCIATEOBJTYPE=213&ASSOCIATEOBJID=131328&range=[1-100]

Response:
{
    "data": [{
        "HEALTHSTATUS": "1",
        "ID": "aaaaaaaa",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "NAME": "a",
        "OPERATIONSYSTEM": "1",
        "PARENTID": "23",
        "PARENTNAME": "",
        "PARENTTYPE": 21,
        "RUNNINGSTATUS": "27",
        "TYPE": 222,
        "USECHAP": "false",
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }, {
        "HEALTHSTATUS": "1",
        "ID": "bbbbbbbb",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "NAME": "b2222",
```

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```
        "OPERATIONSYSTEM": "1",
        "PARENTID": "0",
        "PARENTNAME": "",
        "PARENTTYPE": 21,
        "RUNNINGSTATUS": "27",
        "TYPE": 222,
        "USECHAP": "false",
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.19 Interface for Batch Querying iSCSI Initiator Information (Host Port)

Function

This interface is used to batch query basic information about iSCSI initiators.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
ISFREE	Optional	bool	Free or not.
PARENTID	Optional	string	ID of the Host.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 222: iSCSI Initiator
ID	Mandatory	string	Object ID.
NAME	Conditional	string	Name. **Note:**This field is returned if the initiator name is not blank.
PARENTTYPE	Conditional	enum	Type of the parent object. **The value is described as follows:** 21: Host **Note:**This field is returned if the initiator is not a free initiator.
PARENTID	Conditional	string	ID of the parent object. **Note:**This field is returned if the initiator is not a free initiator.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTNAME	Conditional	string	Name of the parent object. **Note:**This field is returned if the initiator is not a free initiator.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not.
USECHAP	Mandatory	string(bool)	CHAP enabled or not.
CHAPNAME	Conditional	string	CHAP name. **Note:**This field is returned if CHAP authentication is enabled for the initiator.
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
DISCOVERYVERMODE	Conditional	string(enum)	Authentication mode in discovery stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
NORMALVERMODE	Conditional	string(enum)	Authentication mode in normal stage. **The value is described as follows:** 0: none 1: oneway 2: both **Note:**This field is returned if CHAP authentication is enabled for the initiator.
OPERATIONSYSTEM	Mandatory	string(enum)	Operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if OPERATIONSYSTEM is not delivered.
CHAPNAMEINITATOR VERTARGET	Conditional	string	CHAP name for the initiator to authenticate the target. **Note:**This field is returned If bidirectional CHAP authentication is enabled for the initiator.

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Parameter	Mandatory/ Conditional	Type	Description
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Batch querying basic information about iSCSI initiators.

```
Request: GET /deviceManager/rest/210235843710E7000007/iscsi_initiator?
PARENTID=0

Response:
```

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```
{
    "data": {
        "HEALTHSTATUS": "1",
        "ID": "111111111111111111",
        "ISFREE": "false",
        "MULTIPATHTYPE": "1",
        "OPERATIONSYSTEM": "255",
        "PARENTID": "0",
        "PARENTNAME": "Host001",
        "PARENTTYPE": 21,
        "RUNNINGSTATUS": "28",
        "TYPE": 222,
        "USECHAP": "false",
        "FAILOVERMODE": "3",
        "SPECIALMODETYPE": "2",
        "PATHTYPE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.9.1.20 Interface for Querying the Number of InfiniBand Initiators (Host Port)

Function

This interface is used to query the number of InfiniBand initiators.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.
ISFREE	Optional	bool	Free or not. **The value is described as follows:** false: No. The initiator has been added to a host. true: Yes. The initiator has not been added to a host.
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 21: Host 16500: IB port
ASSOCIATEOBJID	Optional	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried InfiniBand initiators.

Example

- Querying the number of InfiniBand initiators.

```
Request: GET /deviceManager/rest/210235843910E6000009/ib_initiator/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.9.1.21 Interface for Creating an InfiniBand Initiator (Host Port)

Function

This interface is used to create an InfiniBand initiator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
FAILOVERMODE	Optional	enum	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Optional	enum	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter needs to be delivered only when initiator switchover mode is special ALUA.
PATHTYPE	Optional	enum	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter needs to be delivered only when uses third-party multipathing software is enabled.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MULTIPATHTYPE	Optional	enum	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16499: IB initiator
ID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.
NAME	Conditional	string	Alias. **The value is described as follows:** Which contains 0 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Note:**This field is returned if the initiator name is not blank.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 27: online 28: offline
ISFREE	Mandatory	string(bool)	Free or not. **The value is described as follows:** false: added to a host true: not added to a host
MULTIPATHTYPE	Mandatory	string(enum)	Multipathing type. **The value is described as follows:** 0: default 1: uses third-party multipathing software
OPERATIONSYSTEM	Mandatory	string(enum)	Opeartion System. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS **Note:**255 is returned if the OPERATIONSYSTEM field is not delivered.

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Parameter	Mandatory/ Conditional	Type	Description
FAILOVERMODE	Mandatory	string(enum)	Initiator switchover mode. **The value is described as follows:** 0: early-version ALUA 1: common ALUA 2: ALUA not used 3: special ALUA **Note:**This parameter value is 255 when uses third-party multipathing software is disabled, early-version ALUA is not supported in V5 all series.
SPECIALMODETYPE	Mandatory	string(enum)	Initiator special mode type. **The value is described as follows:** 0: mode 0 1: mode 1 2: mode 2 3: mode 3 **Note:**This parameter value is 255 when initiator switchover mode is not special ALUA.
PATHTYPE	Mandatory	string(enum)	Initiator path type. **The value is described as follows:** 0: optimal path 1: non-optimal path **Note:**This parameter value is 255 when uses third-party multipathing software is disabled.

Example

- Creating an InfiniBand initiator.

```
Request: POST/deviceManager/rest/210235843710E7000007/ib_initiator
{
    "ID": "1234567891234567",
    "NAME": "52"
```

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```
}
Response: {
    "data": {
        "FAILOVERMODE": "255",
        "HEALTHSTATUS": "1",
        "ID": "1234567891234567",
        "ISFREE": "true",
        "MULTIPATHTYPE": "0",
        "NAME": "52",
        "OPERATIONSYSTEM": "255",
        "PATHTYPE": "255",
        "RUNNINGSTATUS": "28",
        "SPECIALMODETYPE": "255",
        "TYPE": 16499
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.22 Interface for Querying the Number of Fibre Channel Initiators(Host Port)

Function

This interface is used to query the number of Fibre Channel initiators (host ports).

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_initiator/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS and RUNNINGSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISFREE	Optional	bool	Free or not. **The value is described as follows:** false: No. The initiator has been added to a host. true: Yes. The initiator has not been added to a host.
PARENTID	Optional	string	ID of the Host. **Note:**This field is delivered when the value of ISFREE is "false" or this field of ISFREE is not delivered.
ASSOCIATEOBJID	Optional	string	Associated object ID.
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 212: FC port

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried Fibre Channel Initiator.

Example

- Querying the number of Fibre Channel initiators (host ports).

```
Request: GET /deviceManager/rest/210235843910E6000009/fc_initiator/count

Response: {
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.1.23 Interface for Deleting an iSCSI Initiator (Host Port)

Function

This interface is used to delete a free iSCSI initiator.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	iSCSI initiator IQN. **The value is described as follows:** The value consists of visible ASCII characters, starting with a letter or digit. **Length:**1~223

Result

N/A

Example

- Deleting a free iSCSI initiator.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/iscsi_initiator/
cvcxvcxb

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.9.1.24 Interface for Deleting an iSCSI Initiator from a Host (Host Port)

Function

This interface is used to delete an iSCSI initiator from a host.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to remove initiator ({1}) from host ({0}). This operation will interrupt related ongoing services. Before performing this operation, ensure that the selected host and initiators are correct and stop services on the host.
You are about to remove initiator ({1}) from host ({0}). This operation will interrupt related ongoing services. Suggestion: Before performing this operation, ensure that the selected host and initiators are correct and stop services on the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_initiator/remove_iscsi_from_host

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	iSCSI initiator IQN. **The value is described as follows:** The value consists of visible ASCII characters, starting with a letter or digit. **Length:**1~223

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Result

N/A

Example

- Deleting an iSCSI initiator from a host.

```
Request: PUT /deviceManager/rest/210235843710E7000007/iscsi_initiator/
remove_iscsi_from_host
{
    "ID": "cccccccc"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.25 Interface for Deleting an InfiniBand Initiator (Host Port)

Function

This interface is used to delete an InfiniBand initiator.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ib_initiator/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	InfiniBand initiator ID. **The value is described as follows:** Saving the port WWN. The value is a 16-bit hexadecimal number.

Result

N/A

Example

- Deleting an InfiniBand initiator.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/ib_initiator/
fff0000f00011111

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.1.26 Interface for Modifying a iSCSI Initiator Name

Function

This interface is used to modify a iSCSI initiator name.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_iscsi_initiator_name

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CMO_SET_INITIATOR_NAME_CONTROLLER	Mandatory	string	Controller name. **Note:**The controller name is one of the returned controller names when an interface is used to query the iSCSI initiator name.
CMO_SET_INITIATOR_NAME_VALUE	Mandatory	string	Initiator name. **The value is described as follows:** Contains letters, digits,hyphens (-), and periods (.). **Length:**0~31

Result

N/A

Example

- Modifying a iSCSI initiator name.

```
Request: PUT /deviceManager/rest/210235843710E7000007/
iscsi_iscsi_initiator_name
{
    "CMO_SET_INITIATOR_NAME_CONTROLLER" : "0B",
    "CMO_SET_INITIATOR_NAME_VALUE" : "name1"
}
Response:
{
    "data" : {},
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.9.1.27 Interface for Querying a iSCSI Initiator Name

Function

This interface is used to query a iSCSI initiator name.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_iscsi_initiator_name

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
CMO_SET_INITIATOR_NAME_CONTROLLER	Mandatory	string	Controller name.
CMO_SET_INITIATOR_NAME_VALUE	Mandatory	string	Initiator name.

Example

- Querying a iSCSI initiator name.

```
Request: GET /deviceManager/rest/210235843710E7000007/
iscsi_iscsi_initiator_name
Response:
{
    "data" : [
        {
            "CMO_SET_INITIATOR_NAME_CONTROLLER" : "0B",
            "CMO_SET_INITIATOR_NAME_VALUE" : "iqn.
2006-08.com.huawei:oceanstor:21001051720c8a61:2"
        }
    ],
    "error" : {
        "code" : 0,
        "description" : "0"
    }
}
```

4.9.2 lun

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4.9.2.1 Interface for Implementing Associated Query of LUN Information

Function

This interface is used to implement associated query basic information about LUNs.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 21: host 256: LUN group 245: mapping view 268: SmartPartition 273: SmartCache 266: disk domain 230: SmartQoS
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description

ASSOCIATEMETADATA	Optional	json	The previous data can be used to query LUNs that can be accessed by a host through the ports.
			The value is described as follows:
			When the associated object is a host, the service port list can be used in the parameters.
			{
			"ports": {
			"fc": ["PORT_ID1","PORT_ID2","PORT_ID3"],
			"iscsi": ["PORT_ID1","PORT_ID2","PORT_ID3"]
			}
			}.
			Note: This parameter is delivered when associated obejcts are host.

range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 11: LUN
ID	Mandatory	string(uint32)	LUN ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
HASRSSOBJECT	Mandatory	string(json)	Status list of associated value-added service objects.
PARENTID	Mandatory	string	ID of the owning storage pool.
PARENTNAME	Mandatory	string	Name of the owning storage pool.
SUBTYPE	Mandatory	string(uint32)	Subtype. **The value is described as follows:** 0: common LUN
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 27: online 28: offline 53: initializing
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: thick LUN 1: thin LUN **Note:**2800 V3 do not support thin LUN.
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
SECTORSIZE	Mandatory	string(uint64)	Block size. **Unit:**bytes
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapped or not. **The value is described as follows:** false: not mapped true: mapped
WWN	Mandatory	string	WWN.
DATADISTRIBUTING	Mandatory	string(array)	Data distribution (the percentage of LUN data on each tier).
WRITEPOLICY	Mandatory	string(enum)	Write policy. **The value is described as follows:** 1: write back 2: write through
RUNNINGWRITEPOLI-CY	Mandatory	string(enum)	Running a write policy. **The value is described as follows:** 1: write back 2: write through

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Parameter	Mandatory/ Conditional	Type	Description
PREFETCHPOLICY	Mandatory	string(enum)	Prefetch policy. **The value is described as follows:** 0: no prefetch 1: constant prefetch 2: variable prefetch 3: intelligent prefetch
PREFETCHVALUE	Mandatory	string(uint32)	Prefetch policy value. **The value is described as follows:** The value of constant prefetch ranges from 0 to 2048 sectors. The value of variable prefetch ranges from 0 to 1024 times. **Note:**The unit of constant prefetch is sector, whereas that of variable prefetch is multiple.
OWNINGCONTROLLER	Mandatory	string	Owning controller.
WORKINGCONTROLLER	Mandatory	string	Working controller.
DATATRANSFERPOLICY	Mandatory	string(enum)	Data migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier

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Parameter	Mandatory/ Conditional	Type	Description
INITIALDISTRIBUTE-POLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.
IOCLASSID	Mandatory	string	I/O class.
MOVETOTIER0DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 0. **Unit:**sectors
MOVETOTIER1DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 1. **Unit:**sectors
MOVETOTIER2DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 2. **Unit:**sectors
METACAPACITY	Mandatory	string(uint64)	Metadata capacity. **Unit:**sectors
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
DRS_ENABLE	Mandatory	string(bool)	VMware vStorage APIs for Storage Awareness(VASA): DRS supported or not. **The value is described as follows:** false: not supported true: supported

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Parameter	Mandatory/ Conditional	Type	Description
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: NoProtected 1: Capacity 2: Performance 3: Extreme Performance 4: Muti-Tiers
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited
SC_CACHEDSIZE	Mandatory	string(uint64)	SmartCache size. **Unit:**bytes
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio.
CAPACITYALARMLE-VEL	Conditional	string(enum)	VASA: Thin LUN capacity alarm severit. **The value is described as follows:** 2: normal 3: warning 6: critical **Note:**This field is returned for thin LUNs only.
THINCAPACITYUSAGE	Conditional	string(uint32)	Ratio of thin LUN capacity occupied by data to the capacity available to the thin LUN. **Note:**This field is returned for thin LUNs only.

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Parameter	Mandatory/ Conditional	Type	Description
REPLICATION_CAPACITY	Mandatory	string(uint64)	Data replication capacity, expressed in sectors Capacity consumed by data replication refers to the capacity used for snapshot copy-on-write (COW). **Unit:**sectors
READCACHEPOLICY	Mandatory	string(enum)	Read cache policy. **The value is described as follows:** 1: permanent 2: default 3: reclaim
WRITECACHEPOLICY	Mandatory	string(enum)	Write cache policy. **The value is described as follows:** 4: permanent 5: default 6: reclaim
CACHEPARTITIONID	Mandatory	string	Cache Partition ID. **Note:**A blank character string is returned if the LUN is not added to a cache partition.
ISADD2LUNGROUP	Mandatory	string(bool)	Indicates whether a LUN has been added to a LUN group. **The value is described as follows:** false: no true: yes
SMARTCACHEPARTITIONID	Mandatory	string	SmartCache Partition ID. **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
PROGRESS	Mandatory	string(uint32)	Progress of the data destruction task. **The value is described as follows:** The value ranges from -1 to 100, if the data destruction task has not been performed for the LUN the value is -1.
REMOTELUNID	Mandatory	string	ID of the external LUN that maps to the eDevLUN. **Note:**"--" is returned for non-eDevLUNs.
USAGETYPE	Mandatory	string(enum)	LUN usage. **The value is described as follows:** 0: traditional LUN 1: eDevLUN (LUN created using an external LUN)
remoteLunWwn	Mandatory	string	WWN of the external LUN. **Note:**"--" is returned for non-eDevLUNs.
LUNMigrationOrigin	Mandatory	string(enum)	Indicates whether the LUN serves as the source or target LUN of LUN migration. **The value is described as follows:** 0: source LUN 1: target LUN **Note:** If there is no valid value, -1 is returned. The field is not used.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESSION	Mandatory	string(bool)	Indicates whether compression is enabled. **The value is described as follows:** false: disabled true: enabled
ENABLEDEDUP	Mandatory	string(bool)	Data reduction enabled or not. **The value is described as follows:** false: disabled true: enabled **Note:**The field is not used.
MIRRORTYPE	Mandatory	string(enum)	Mirror Type. **The value is described as follows:** 0: common LUN 1: mirror LUN 2: mirror copy LUN
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
DEDUPSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by deduplication. **Unit:**sectors
COMPRESSIONSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by compression. **Unit:**sectors
TOTALSAVEDCAPACITY	Mandatory	string(uint64)	Total space saved. **Unit:**sectors
ENABLESMARTDEDUP	Mandatory	string(bool)	Deduplication enabled or not. **The value is described as follows:** false: disabled true: enabled

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Parameter	Mandatory/ Conditional	Type	Description
ISCSITHINLUNTHRES-HOLD	Mandatory	string(uint32)	Capacity alarm threshold when thin LUNs are mounted to Windows 2012. **The value is described as follows:** [50,99]
ENABLEISCSITHIN-LUNTHRESHOLD	Mandatory	string(bool)	iSCSI thin LUN alarm switch in Windows 2012. **The value is described as follows:** false: off true: on
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication.
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression.
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio.
DISGUISESTATUS	Conditional	string(enum)	LUN disguise is enabled. **The value is described as follows:** 0: no disguise 1: basic disguise (supported by eDevLUN) 2: expansion disguise (supported by eDevLUN) 3: inheritance disguise (not supported by eDevLUN) 4: Third-party disguise (supported by eDevLUN) **Note:**This field is not returned if the LUN is not masqueraded.

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Parameter	Mandatory/ Conditional	Type	Description
DISGUISEREMOTEAR-RAYID	Conditional	string	Disguised as the specified remote array ID. Used in the expansion scenario when the heterogeneity takes over the earlier array. **Note:**This field is not returned if the LUN is not masqueraded.
EXTENDIFSWITCH	Mandatory	string(bool)	Support external DIF feature or not. **The value is described as follows:** false: not supported true: supported

ASSOCIATEMETADA-TA	Mandatory	string(json)	The previous data can be used to query LUNs that can be accessed by a host through the ports.
			The value is described as follows:
			When the associated object is a host, the service port list can be used in the parameters.
			{
			"ports": {
			"fc": ["PORT_ID1","PORT_ID2","PORT_ID3"],
			"iscsi": ["PORT_ID1","PORT_ID2","PORT_ID3"]
			}
			}.
			Note: The field is not used.

RETENTIONSTATE	Mandatory	string(enum)	Retention State. **The value is described as follows:** 1: read only 2: read and write
RETENTIONSETTIME	Mandatory	string(uint64)	Retention Set Time.

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Parameter	Mandatory/ Conditional	Type	Description
SAVEDAGOTOTALCA-PACITY	Mandatory	string(uint64)	Total space before saving.
RETENTIONTERM	Mandatory	string(uint32)	Retention Term. **Unit:**days
REMAINRETENTION-TERM	Mandatory	string(uint32)	Retention Time. **Unit:**hours
usedConsumerDataCa-pacity	Mandatory	string(uint64)	Used data capacity (excluding metadata). **Unit:**sectors
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
OWNERCONTROLLER LIST	Mandatory	string(array)	Status list of associated value-added service objects.
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true: valid false: invalid **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEDEDUPCHECK	Mandatory	string(bool)	Indicates whether deduplication check is enabled. **The value is described as follows:** false: disabled true: enabled **Note:**This field is valid for the CLI only.
takeOverLunWwn	Mandatory	string	WWN of the takeover LUN.

Example

- Implementing associated query basic information about LUNs.

```
Request: GET /deviceManager/rest/210235843710E7000007/lun/associate?
ASSOCIATEOBJTYPE=256&ASSOCIATEOBJID=0&range=[0-100]

Response:
{
    "data": [
        {
            "ALLOCCAPACITY": "21364736",
            "ALLOCTYPE": "0",
            "CACHEPARTITIONID": "",
            "CAPABILITY": "2",
            "CAPACITY": "20971520",
            "COMPRESSION": "0",
            "COMPRESSIONSAVEDCAPACITY": "0",
            "COMPRESSIONSAVEDRATIO": "0",
            "DATADISTRIBUTING": "[0,100,0]",
            "DATATRANSFERPOLICY": "0",
            "DEDUPSAVEDCAPACITY": "0",
            "DEDUPSAVEDRATIO": "0",
            "DESCRIPTION": "",
            "DRS_ENABLE": "false",
            "ENABLECOMPRESSION": "false",
            "ENABLEDEDUP": "false",
            "ENABLEDEDUPCHECK": "false",
            "ENABLEISCSITHINLUNTHRESHOLD": "true",
            "ENABLESMARTDEDUP": "false",
            "EXPOSEDTOINITIATOR": "false",
            "EXTENDIFSWITCH": "false",
            "HASRSSOBJECT": "{\"SnapShot\":\"FALSE\",\"LunCopy\":\"FALSE\",
\"RemoteReplication\":\"FALSE\",\"SplitMirror\":\"TRUE\",\"LunMigration\":
\"FALSE\",\"LUNMirror\":\"FALSE\",\"HyperMetro\":\"FALSE\"}",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "INITIALDISTRIBUTEPOLICY": "0",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "ISADD2LUNGROUP": "true",
            "ISCSITHINLUNTHRESHOLD": "-1",
            "ISSMARTTIERENABLE": "false",
            "METACAPACITY": "0",
            "MIRRORTYPE": "0",
            "MOVETOTIER0DATA": "0",
```

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```
            "MOVETOTIER1DATA": "0",
            "MOVETOTIER2DATA": "0",
            "NAME": "LUN0010000",
            "OWNERCONTROLLERLIST": "[\"0A\",\"0B\"]",
            "OWNINGCONTROLLER": "0A",
            "PARENTID": "1",
            "PARENTNAME": "StoragePool002",
            "PREFETCHPOLICY": "3",
            "PREFETCHVALUE": "0",
            "PROGRESS": "-1",
            "READCACHEPOLICY": "2",
            "REMAINRETENTIONTERM": "0",
            "REMOTELUNID": "--",
            "REPLICATION_CAPACITY": "0",
            "RETENTIONSETTIME": "0",
            "RETENTIONSTATE": "0",
            "RETENTIONTERM": "0",
            "RUNNINGSTATUS": "27",
            "RUNNINGWRITEPOLICY": "1",
            "SAVEDAGOTOTALCAPACITY": "0",
            "SC_CACHEDSIZE": "0",
            "SC_HITRAGE": "0",
            "SECTORSIZE": "512",
            "SMARTCACHEPARTITIONID": "",
            "SMARTCACHESTATE": "0",
            "SUBTYPE": "0",
            "TOTALSAVEDCAPACITY": "0",
            "TOTALSAVEDRATIO": "0",
            "TYPE": 11,
            "USAGETYPE": "0",
            "WORKINGCONTROLLER": "0A",
            "WRITECACHEPOLICY": "5",
            "WRITEPOLICY": "1",
            "WWN": "61051721000c8a61000a34ba00000000",
            "remoteLunWwn": "--",
            "usedConsumerDataCapacity": "8388608",
            "takeOverLunWwn": "91:02:A5:G6:LL:Z0:B8:00:00:08"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.9.2.2 Interface for Querying LUN Information

Function

This interface is used to query basic information about LUNs.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	LUN ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 11:LUN
ID	Mandatory	string(uint32)	LUN ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
PARENTID	Mandatory	string	ID of the owning storage pool.
PARENTNAME	Mandatory	string	Name of the owning storage pool.
SUBTYPE	Mandatory	string(uint32)	Subtype. **The value is described as follows:** 0: common LUN

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: Normal 2: Faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 27: Online 28: Offline 53: Initializing
DESCRIPTION	Mandatory	string	Description.
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: thick LUN 1: thin LUN **Note:**2800 V3 do not support thin LUN.
OWNERCONTROLLER LIST	Mandatory	string(array)	Status list of associated value-added service objects.
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
SECTORSIZE	Mandatory	string(uint64)	Block size. **Unit:**bytes
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapped or not. **The value is described as follows:** false: not mapped true: mapped
WWN	Mandatory	string	WWN.
DATADISTRIBUTING	Mandatory	string(array)	Data distribution (the percentage of LUN data on each tier).

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Parameter	Mandatory/ Conditional	Type	Description
WRITEPOLICY	Mandatory	string(enum)	Write policy. **The value is described as follows:** 1: write back 2: write through
RUNNINGWRITEPOLICY	Mandatory	string(enum)	Running a write policy. **The value is described as follows:** 1: write back 2: write through
PREFETCHPOLICY	Mandatory	string(enum)	Prefetch policy. **The value is described as follows:** 0: no prefetch 1: constant prefetch 2: variable prefetch 3: intelligent prefetch
PREFETCHVALUE	Mandatory	string(uint32)	Prefetch policy value. **The value is described as follows:** The value of constant prefetch ranges from 0 to 2048 sectors. The value of variable prefetch ranges from 0 to 1024 times. **Note:**The unit of constant prefetch is sector, whereas that of variable prefetch is multiple.
OWNINGCONTROLLER	Mandatory	string	Owning controller.
WORKINGCONTROLLER	Mandatory	string	Working controller.

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Parameter	Mandatory/ Conditional	Type	Description
DATATRANSFERPOLICY	Mandatory	string(enum)	Data migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.
IOCLASSID	Mandatory	string	I/O class.
MOVETOTIER0DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 0. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVETOTIER1DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 1. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVETOTIER2DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 2. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
METACAPACITY	Mandatory	string(uint64)	Metadata capacity. **Unit:**sectors
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
DRS_ENABLE	Mandatory	string(bool)	VMware vStorage APIs for Storage Awareness(VASA): DRS supported or not. **The value is described as follows:** false: not supported true: supported
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: NoProtected 1: Capacity 2: Performance 3: Extreme Performance 4: Muti-Tiers
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:**This field is not supported by V3 all-flash array series.
SC_CACHEDSIZE	Mandatory	string(uint64)	SmartCache size. **Unit:**bytes **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio. **Note:**This field is not supported by V3 all-flash array series.
CAPACITYALARMLE-VEL	Conditional	string(enum)	VASA: Thin LUN capacity alarm severit. **The value is described as follows:** 2: normal 3: warning 6: critical **Note:**This field is returned for thin LUNs only.
THINCAPACITYUSAGE	Conditional	string(uint32)	Ratio of thin LUN capacity occupied by data to the capacity available to the thin LUN. **Note:**This field is returned for thin LUNs only.
REPLICATION_CAPACITY	Mandatory	string(uint64)	Data replication capacity, expressed in sectors Capacity consumed by data replication refers to the capacity used for snapshot copy-on-write (COW). **Unit:**sectors
READCACHEPOLICY	Mandatory	string(enum)	Read cache policy. **The value is described as follows:** 1: permanent 2: default 3: reclaim
WRITECACHEPOLICY	Mandatory	string(enum)	Write cache policy. **The value is described as follows:** 4: permanent 5: default 6: reclaim

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Parameter	Mandatory/ Conditional	Type	Description
CACHEPARTITIONID	Mandatory	string	Cache Partition ID. **Note:**A blank character string is returned if the LUN is not added to a cache partition.
ISADD2LUNGROUP	Mandatory	string(bool)	Indicates whether a LUN has been added to a LUN group. **The value is described as follows:** false: no true: yes
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache Partition ID. **Note:**This field is not supported by V3 all-flash array series.
PROGRESS	Mandatory	string(uint32)	Progress of the data destruction task. **The value is described as follows:** The value ranges from -1 to 100, if the data destruction task has not been performed for the LUN the value is -1.
REMOTELUNID	Mandatory	string	ID of the external LUN that maps to the eDevLUN. **Note:**"--" is returned for non-eDevLUNs.
USAGETYPE	Mandatory	string(enum)	LUN usage. **The value is described as follows:** 0: traditional LUN 1: eDevLUN (LUN created using an external LUN)
remoteLunWwn	Mandatory	string	WWN of the external LUN. **Note:**"--" is returned for non-eDevLUNs.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESSION	Mandatory	string(bool)	Indicates whether compression is enabled. **The value is described as follows:** false: disabled true: enabled
ENABLEDEDUP	Mandatory	string(bool)	Data reduction enabled or not. **The value is described as follows:** false: disabled true: enabled **Note:**The field is not used.
MIRRORTYPE	Mandatory	string(enum)	Mirror Type. **The value is described as follows:** 0: common LUN 1: mirror LUN 2: mirror copy LUN
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
ENABLEDEDUPCHECK	Mandatory	string(bool)	Indicates whether deduplication check is enabled. **The value is described as follows:** false: disabled true: enabled
DEDUPSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by deduplication. **Unit:**sectors
COMPRESSIONSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by compression. **Unit:**sectors
TOTALSAVEDCAPACITY	Mandatory	string(uint64)	Total space saved. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
ENABLESMARTDEDUP	Mandatory	string(bool)	Deduplication enabled or not. **The value is described as follows:** false: disabled true: enabled
ISCSITHINLUNTHRES-HOLD	Mandatory	string(uint32)	Capacity alarm threshold when thin LUNs are mounted to Windows 2012. **The value is described as follows:** [50,99]
ENABLEISCSITHIN-LUNTHRESHOLD	Mandatory	string(bool)	iSCSI thin LUN alarm switch in Windows 2012. **The value is described as follows:** false: off true: on
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication.
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression.
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio.
DISGUISESTATUS	Conditional	string(enum)	LUN disguise is enabled. **The value is described as follows:** 0: no disguise 1: basic disguise (supported by eDevLUN) 2: expansion disguise (supported by eDevLUN) 3: inheritance disguise (not supported by eDevLUN) 4: third-party disguise (supported by eDevLUN) **Note:**This field is not returned if the LUN is not masqueraded.

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Parameter	Mandatory/ Conditional	Type	Description
DISGUISEREMOTEARRAYID	Conditional	string	Disguised as the specified remote array ID. Used in the expansion scenario when the heterogeneity takes over the earlier array. **Note:**This field is not returned if the LUN is not masqueraded.
EXTENDIFSWITCH	Mandatory	string(bool)	Support external DIF feature or not. **The value is described as follows:** false: not supported true: supported
LUNCOPYIDS	Mandatory	string(array)	Lun copy ID list.
SNAPSHOTIDS	Mandatory	string(array)	Snapshot copy ID list.
REMOTEREPLICATIONIDS	Mandatory	string(array)	Replication ID list.
SPLITMIRRORIDS	Mandatory	string(array)	Splitmirror copy ID list.
REMAINRETENTIONTERM	Mandatory	string(uint32)	Retention Time. **Unit:**hours
RETENTIONTERM	Mandatory	string(uint32)	Retention Term. **Unit:**days
SAVEDAGOTOTALCAPACITY	Mandatory	string(uint64)	Total space before saving.
RETENTIONSETTIME	Mandatory	string(uint64)	Retention Set Time.
RETENTIONSTATE	Mandatory	string(enum)	Retention State. **The value is described as follows:** 1: read only 2: read and write
usedConsumerDataCapacity	Mandatory	string(uint64)	Used data capacity (excluding metadata). **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
LUNMigrationOrigin	Mandatory	string(enum)	Indicates whether the LUN serves as the source or target LUN of LUN migration. **The value is described as follows:** 0: source LUN 1: target LUN **Note:**If there is no valid value, -1 is returned.
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true: valid false: invalid **Note:**This field is not supported by V3 all-flash array series.
takeOverLunWwn	Mandatory	string	WWN of the takeover LUN.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about LUNs.

```
Request: GET /deviceManager/rest/210235843710E7000007/lun/0
Response:
{
    "data": {
        "ALLOCCAPACITY": "2490368",
        "ALLOCTYPE": "0",
        "CACHEPARTITIONID": "",
        "CAPABILITY": "2",
        "CAPACITY": "2097152",
```

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```
        "COMPRESSION": "0",
        "COMPRESSIONSAVEDCAPACITY": "0",
        "COMPRESSIONSAVEDRATIO": "0",
        "DATADISTRIBUTING": "[0,100,0]",
        "DATATRANSFERPOLICY": "0",
        "DEDUPSAVEDCAPACITY": "0",
        "DEDUPSAVEDRATIO": "0",
        "DESCRIPTION": "",
        "DRS_ENABLE": "false",
        "ENABLECOMPRESSION": "false",
        "ENABLEDEDUP": "false",
        "ENABLEDEDUPCHECK": "false",
        "ENABLEISCSITHINLUNTHRESHOLD": "true",
        "ENABLESMARTDEDUP": "false",
        "EXPOSEDTOINITIATOR": "false",
        "EXTENDIFSWITCH": "false",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "INITIALDISTRIBUTEPOLICY": "0",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "ISADD2LUNGROUP": "false",
        "ISCSITHINLUNTHRESHOLD": "-1",
        "ISSMARTTIERENABLE": "false",
        "LUNCOPYIDS": "[]",
        "LUNMigrationOrigin": "-1",
        "METACAPACITY": "0",
        "MIRRORTYPE": "0",
        "MOVETOTIER0DATA": "0",
        "MOVETOTIER1DATA": "0",
        "MOVETOTIER2DATA": "0",
        "NAME": "LUN0020002",
        "OWNERCONTROLLERLIST": "[\"0A\",\"0B\"]",
        "OWNINGCONTROLLER": "0A",
        "PARENTID": "3",
        "PARENTNAME": "StoragePool004",
        "PREFETCHPOLICY": "3",
        "PREFETCHVALUE": "0",
        "PROGRESS": "-1",
        "READCACHEPOLICY": "2",
        "REMAINRETENTIONTERM": "0",
        "REMOTELUNID": "--",
        "REMOTEREPLICATIONIDS": "[]",
        "REPLICATION_CAPACITY": "0",
        "RETENTIONSETTIME": "0",
        "RETENTIONSTATE": "0",
        "RETENTIONTERM": "0",
        "RUNNINGSTATUS": "27",
        "RUNNINGWRITEPOLICY": "1",
        "SAVEDAGOTOTALCAPACITY": "0",
        "SC_CACHEDSIZE": "0",
        "SC_HITRAGE": "0",
        "SECTORSIZE": "512",
        "SMARTCACHEPARTITIONID": "",
        "SMARTCACHESTATE": "0",
        "SNAPSHOTIDS": "[\"14\"]",
        "SPLITMIRRORIDS": "[]",
        "SUBTYPE": "0",
        "TOTALSAVEDCAPACITY": "0",
        "TOTALSAVEDRATIO": "0",
        "TYPE": 11,
        "USAGETYPE": "0",
        "WORKINGCONTROLLER": "0A",
        "WRITECACHEPOLICY": "5",
        "WRITEPOLICY": "1",
        "WWN": "61051721000c8a610042f08300000003",
        "remoteLunWwn": "--",
        "usedConsumerDataCapacity": "2097152",
        "takeOverLunWwn": "91:02:A5:G6:LL:Z0:B8:00:00:08"
```


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```
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.2.3 Interface for Batch Querying LUN Information

Function

This interface is used to batch query basic information about LUNs.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID, ALLOCTYPE, PARENTID,DESCRIPTION,CAPACITY, ISADD2LUNGROUP, OWNINGCONTROLLER, IOCLASSID, HEALTHSTATUS, RUNNINGSTATUS, and SUBTYPE are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
RSSTYPE	Optional	enum	Type of LUNs that support value-added features. **The value is described as follows:** 0:LUN that can function as the primary LUN of a clone 1:LUN that can function as the secondary LUN of a clone 2:LUN that can be added to the secondary LUN of a clone 3:Local LUN that can function as the source LUN of a LUN copy 4:Local snapshot that can function as the source LUN of a LUN copy 5:Remote LUN that can function as the source LUN of a LUN copy 6:Local LUN that can function as the target LUN of a LUN copy 7:Local LUN that can be added to a LUN copy 8:Local snapshot that can function as the target LUN of a LUN copy 9:Local snapshot that can be added to a LUN copy 10:Remote LUN that can function as the target LUN of a LUN copy 11:Remote LUN that can be added to a LUN copy 12:LUN that can function as the primary LUN of a remote replication pair 13:Remote LUN that can function as the secondary LUN of remote replication

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Parameter	Mandatory/Optional/Conditional	Type	Description
			14:Third-party LUN that can function as the source LUN of a LUN copy 15:Third-party LUN that can function as the target LUN of a LUN copy 16:Third-party LUN that can be added to a LUN copy 17:LUN that can function as the source LUN of a mirror LUN 18:LUN that can function as the source LUN of LUN migration 19:LUN that can function as the target LUN of LUN migration 20:Resource that can function as the primary resource of a HyperMetro pair 21:Resource that can function as the secondary resource of a HyperMetro pair 22:LUN that supports snapshots 25:Primary LUN that supports SAN HyperMetro 26:Secondary LUN that supports SAN HyperMetro

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 11:LUN
HASRSSOBJECT	Mandatory	string(json)	Status list of associated value-added service objects.
OWNERCONTROLLER LIST	Mandatory	string(array)	List of owning controllers that support switchover.
ID	Mandatory	string(uint32)	LUN ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
PARENTID	Mandatory	string	ID of the owning storage pool.
PARENTNAME	Mandatory	string	Name of the owning storage pool.
SUBTYPE	Mandatory	string(uint32)	Subtype. **The value is described as follows:** 0: common LUN
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:Normal 2:Faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 27:Online 28:Offline 53:Initializing
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: thick LUN 1: thin LUN **Note:**2800 V3 do not support thin LUN.
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
SECTORSIZE	Mandatory	string(uint64)	Block size. **Unit:**bytes
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapped or not. **The value is described as follows:** false: not mapped true: mapped
WWN	Mandatory	string	WWN.
DATADISTRIBUTING	Mandatory	string(array)	Data distribution (the percentage of LUN data on each tier).
WRITEPOLICY	Mandatory	string(enum)	Write policy. **The value is described as follows:** 1: write back 2: write through
RUNNINGWRITEPOLI-CY	Mandatory	string(enum)	Running a write policy. **The value is described as follows:** 1: write back 2: write through

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Parameter	Mandatory/ Conditional	Type	Description
PREFETCHPOLICY	Mandatory	string(enum)	Prefetch policy. **The value is described as follows:** 0: no prefetch 1: constant prefetch 2: variable prefetch 3: intelligent prefetch
PREFETCHVALUE	Mandatory	string(uint32)	Prefetch policy value. **The value is described as follows:** The value of constant prefetch ranges from 0 to 2048 sectors. The value of variable prefetch ranges from 0 to 1024 times. **Note:**The unit of constant prefetch is sector, whereas that of variable prefetch is multiple.
OWNINGCONTROLLER	Mandatory	string	Owning controller.
WORKINGCONTROLLER	Mandatory	string	Working controller.
DATATRANSFERPOLICY	Mandatory	string(enum)	Data migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
INITIALDISTRIBUTE-POLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.
IOCLASSID	Mandatory	string	I/O class.
MOVETOTIER0DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 0. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVETOTIER1DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 1. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVETOTIER2DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 2. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
METACAPACITY	Mandatory	string(uint64)	Metadata capacity. **Unit:**sectors
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high

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Parameter	Mandatory/ Conditional	Type	Description
DRS_ENABLE	Mandatory	string(bool)	VMware vStorage APIs for Storage Awareness(VASA): DRS supported or not. **The value is described as follows:** false: not supported true: supported
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: NoProtected 1: Capacity 2: Performance 3: Extreme Performance 4: Muti-Tiers
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:**This field is not supported by V3 all-flash array series.
SC_CACHEDSIZE	Mandatory	string(uint64)	SmartCache size. **Unit:**bytes **Note:**This field is not supported by V3 all-flash array series.
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio. **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
CAPACITYALARMLE-VEL	Conditional	string(enum)	VASA: Thin LUN capacity alarm severit. **The value is described as follows:** 2: normal 3: warning 6: critical **Note:**This field is returned for thin LUNs only.
THINCAPACITYUSAGE	Conditional	string(uint32)	Ratio of thin LUN capacity occupied by data to the capacity available to the thin LUN. **Note:**This field is returned for thin LUNs only.
REPLICATION_CAPACITY	Mandatory	string(uint64)	Data replication capacity, expressed in sectors Capacity consumed by data replication refers to the capacity used for snapshot copy-on-write (COW). **Unit:**sectors
READCACHEPOLICY	Mandatory	string(enum)	Read cache policy. **The value is described as follows:** 1: permanent 2: default 3: reclaim
WRITECACHEPOLICY	Mandatory	string(enum)	Write cache policy. **The value is described as follows:** 4: permanent 5: default 6: reclaim
CACHEPARTITIONID	Mandatory	string	Cache partition ID. **Note:**A blank character string is returned if the LUN is not added to a cache partition.

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Parameter	Mandatory/ Conditional	Type	Description
ISADD2LUNGROUP	Mandatory	string(bool)	Indicates whether a LUN has been added to a LUN group. **The value is described as follows:** false: no true: yes
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache Partition ID. **Note:**This field is not supported by V3 all-flash array series.
PROGRESS	Mandatory	string(uint32)	Progress of the data destruction task. **The value is described as follows:** The value ranges from -1 to 100, if the data destruction task has not been performed for the LUN the value is -1.
REMOTELUNID	Mandatory	string	ID of the external LUN that maps to the eDevLUN. **Note:**"--" is returned for non-eDevLUNs.
USAGETYPE	Mandatory	string(enum)	LUN usage. **The value is described as follows:** 0: traditional LUN 1: eDevLUN (LUN created using an external LUN)
remoteLunWwn	Mandatory	string	WWN of the external LUN. **Note:**"--" is returned for non-eDevLUNs.
ENABLECOMPRESSIO N	Mandatory	string(bool)	Indicates whether compression is enabled. **The value is described as follows:** false: disabled true: enabled

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEDEDUP	Mandatory	string(bool)	Data reduction enabled or not. **The value is described as follows:** false: disabled true: enabled **Note:**The field is not used.
MIRRORTYPE	Mandatory	string(enum)	Mirror Type. **The value is described as follows:** 0: common LUN 1: mirror LUN 2: mirror copy LUN
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
ENABLEDEDUPCHECK	Mandatory	string(bool)	Indicates whether deduplication check is enabled. **The value is described as follows:** false: disabled true: enabled
DEDUPSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by deduplication. **Unit:**sectors
COMPRESSIONSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by compression. **Unit:**sectors
TOTALSAVEDCAPACITY	Mandatory	string(uint64)	Total space saved. **Unit:**sectors
ENABLESMARTDEDUP	Mandatory	string(bool)	Deduplication enabled or not. **The value is described as follows:** false: disabled true: enabled

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Parameter	Mandatory/ Conditional	Type	Description
ISCSITHINLUNTHRES-HOLD	Mandatory	string(uint32)	Capacity alarm threshold when thin LUNs are mounted to Windows 2012. **The value is described as follows:** [50,99]
ENABLEISCSITHIN-LUNTHRESHOLD	Mandatory	string(bool)	iSCSI thin LUN alarm switch in Windows 2012. **The value is described as follows:** false: off true: on
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication.
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression.
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio.
DISGUISESTATUS	Conditional	string(enum)	LUN disguise is enabled. **The value is described as follows:** 0: no disguise 1: basic disguise (supported by eDevLUN) 2: expansion disguise (supported by eDevLUN) 3: inheritance disguise (not supported by eDevLUN) 4: Third-party disguise (supported by eDevLUN) **Note:**This field is not returned if the LUN is not masqueraded.

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Parameter	Mandatory/ Conditional	Type	Description
DISGUISEREMOTEARRAYID	Conditional	string	Disguised as the specified remote array ID. Used in the expansion scenario when the heterogeneity takes over the earlier array. **Note:**This field is not returned if the LUN is not masqueraded.
EXTENDIFSWITCH	Mandatory	string(bool)	Support external DIF feature or not. **The value is described as follows:** false: not supported true: supported
REMAINRETENTIONTERM	Mandatory	string(uint32)	Retention Time. **Unit:**hours
RETENTIONTERM	Mandatory	string(uint32)	Retention Term. **Unit:**days
SAVEDAGOTOTALCAPACITY	Mandatory	string(uint64)	Total space before saving.
RETENTIONSETTIME	Mandatory	string(uint64)	Retention Set Time.
RETENTIONSTATE	Mandatory	string(enum)	Retention State. **The value is described as follows:** 1: read only 2: read and write
usedConsumerDataCapacity	Mandatory	string(uint64)	Used data capacity (excluding metadata). **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true: valid false: invalid **Note:**This field is not supported by V3 all-flash array series.
takeOverLunWwn	Mandatory	string	WWN of the takeover LUN.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying basic information about LUNs.

```
Request: GET /deviceManager/rest/210235843710E7000007/lun?range=[0-100]

Response:
{
    "data": [
        {
            "ALLOCCAPACITY": "2490368",
            "ALLOCTYPE": "0",
            "CACHEPARTITIONID": "",
            "CAPABILITY": "2",
            "CAPACITY": "2097152",
            "COMPRESSION": "0",
            "COMPRESSIONSAVEDCAPACITY": "0",
            "COMPRESSIONSAVEDRATIO": "0",
            "DATADISTRIBUTING": "[0,100,0]",
            "DATATRANSFERPOLICY": "0",
            "DEDUPSAVEDCAPACITY": "0",
            "DEDUPSAVEDRATIO": "0",
            "DESCRIPTION": "",
            "DRS_ENABLE": "false",
            "ENABLECOMPRESSION": "false",
            "ENABLEDEDUP": "false",
            "ENABLEDEDUPCHECK": "false",
            "ENABLEISCSITHINLUNTHRESHOLD": "true",
            "ENABLESMARTDEDUP": "false",
```

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```
            "EXPOSEDTOINITIATOR": "false",
            "EXTENDIFSWITCH": "false",
            "HASRSSOBJECT": "{\"SnapShot\":\"FALSE\",\"LunCopy\":\"FALSE\",
\"RemoteReplication\":\"TRUE\",\"SplitMirror\":\"FALSE\",\"LunMigration\":
\"FALSE\",\"LUNMirror\":\"FALSE\",\"HyperMetro\":\"FALSE\"}",
            "HEALTHSTATUS": "1",
            "ID": "1",
            "INITIALDISTRIBUTEPOLICY": "0",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "ISADD2LUNGROUP": "false",
            "ISCSITHINLUNTHRESHOLD": "-1",
            "ISSMARTTIERENABLE": "false",
            "METACAPACITY": "0",
            "MIRRORTYPE": "0",
            "MOVETOTIER0DATA": "0",
            "MOVETOTIER1DATA": "0",
            "MOVETOTIER2DATA": "0",
            "NAME": "LUN0020000",
            "OWNERCONTROLLERLIST": "[\"0A\",\"0B\"]",
            "OWNINGCONTROLLER": "0A",
            "PARENTID": "3",
            "PARENTNAME": "StoragePool004",
            "PREFETCHPOLICY": "3",
            "PREFETCHVALUE": "0",
            "PROGRESS": "-1",
            "READCACHEPOLICY": "2",
            "REMAINRETENTIONTERM": "0",
            "REMOTELUNID": "--",
            "REPLICATION_CAPACITY": "0",
            "RETENTIONSETTIME": "0",
            "RETENTIONSTATE": "0",
            "RETENTIONTERM": "0",
            "RUNNINGSTATUS": "27",
            "RUNNINGWRITEPOLICY": "1",
            "SAVEDAGOTOTALCAPACITY": "0",
            "SC_CACHEDSIZE": "0",
            "SC_HITRAGE": "0",
            "SECTORSIZE": "512",
            "SMARTCACHEPARTITIONID": "",
            "SMARTCACHESTATE": "0",
            "SUBTYPE": "0",
            "TOTALSAVEDCAPACITY": "0",
            "TOTALSAVEDRATIO": "0",
            "TYPE": 11,
            "USAGETYPE": "0",
            "WORKINGCONTROLLER": "0A",
            "WRITECACHEPOLICY": "5",
            "WRITEPOLICY": "1",
            "WWN": "61051721000c8a610042f00800000001",
            "remoteLunWwn": "--",
            "usedConsumerDataCapacity": "2097152",
            "takeOverLunWwn": "91:02:A5:G6:LL:Z0:B8:00:00:08"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.9.2.4 Interface for Querying the Number of LUNs

Function

This interface is used to query the number of LUNs.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID, DESCRIPTION, ALLOCTYPE, PARENTID, CAPACITY, ISADD2LUNGROUP, OWNINGCONTROLLER, IOCLASSID, HEALTHSTATUS, RUNNINGSTATUS, and SUBTYPE are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
RSSTYPE	Optional	enum	Type of LUNs that support value-added features. **The value is described as follows:** 0:LUN that can function as the primary LUN of a clone 1:LUN that can function as the secondary LUN of a clone 2:LUN that can be added to the secondary LUN of a clone 3:Local LUN that can function as the source LUN of a LUN copy 4:Local snapshot that can function as the source LUN of a LUN copy 5:Remote LUN that can function as the source LUN of a LUN copy 6:Local LUN that can function as the target LUN of a LUN copy 7:Local LUN that can be added to a LUN copy 8:Local snapshot that can function as the target LUN of a LUN copy 9:Local snapshot that can be added to a LUN copy 10:Remote LUN that can function as the target LUN of a LUN copy 11:Remote LUN that can be added to a LUN copy 12:LUN that can function as the primary LUN of a remote replication pair 13:Remote LUN that can function as the secondary LUN of remote replication

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Parameter	Mandatory/Optional/Conditional	Type	Description
			14:Third-party LUN that can function as the source LUN of a LUN copy 15:Third-party LUN that can function as the target LUN of a LUN copy 16:Third-party LUN that can be added to a LUN copy 17:LUN that can function as the source LUN of a mirror LUN 18:LUN that can function as the source LUN of LUN migration 19:LUN that can function as the target LUN of LUN migration 20:Resource that can function as the primary resource of a HyperMetro pair 21:Resource that can function as the secondary resource of a HyperMetro pair 22:LUN that supports snapshots 25:Primary LUN that supports SAN HyperMetro 26:Secondary LUN that supports SAN HyperMetro

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried luns.

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Example

- Querying the number of LUNs.

```
Request: GET/deviceManager/rest/210235843910E6000009/lun/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.2.5 Interface for Expanding a LUN

Function

This interface is used to expand a LUN.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to expand the LUN {0}.

This operation will expand the capacity of the LUN to {1}.

Suggestion:Rescan for the LUN on the server after the capacity expansion.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/expand

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CAPACITY	Conditional	uint64	Expanded capacity. **Unit:**sectors **Note:**This parameter is unavailable when an eDevLUN is expanded but is mandatory when a traditional LUN is expanded.
ID	Mandatory	string	LUN ID.

Result

N/A

Example

- Expand a LUN.

```
Request: PUT /deviceManager/rest/210235843710E7000007/lun/expand
{
    "CAPACITY": 4194304,
    "ID": "65"
}
Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.2.6 Interface for Deleting a LUN

Function

This interface is used to delete a LUN.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/${id}

Access Method

DELETE

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Delete a LUN.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/lun/0

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.2.7 Interface for Creating a LUN

Function

This interface is used to create a LUN.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Optional	uint32	LUN ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
PARENTID	Optional	string	ID of the owning storage pool. **Default:**0 **Note:**If this field is not delivered by the user, the system will deliver 0 as the value of "PARENTID" by default.
DESCRIPTION	Optional	string	Description. **Length:**0~255
ALLOCTYPE	Optional	enum	Space allocation type. **The value is described as follows:** 0: thick LUN 1: thin LUN **Default:**0: thick LUN **Note:** This parameter is not delivered for PE LUN. 2800 V3 do not support thin LUN.
CAPACITY	Conditional	uint64	Configured capacity. **Unit:**sectors **Note:**This parameter is mandatory for traditional LUNs, but is invalid for eDevLUNs.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.
SMARTCACHEPARTITIONID	Optional	string	SmartCache Partition ID. **Default:**0: default partition **Note:**2600-V do not support SmartCache Partition ID.
DISGUISESTATUS	Optional	enum	LUN disguise is enabled. **The value is described as follows:** 0: no disguise 1: basic disguise (supported by eDevLUN) 2: expansion disguise (supported by eDevLUN) 3: inheritance disguise (not supported by eDevLUN) 4: Third-party disguise (supported by eDevLUN) **Default:**0: no disguise

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Parameter	Mandatory/Optional/Conditional	Type	Description
DISGUISEREMOTEARRAYID	Conditional	string	Disguised as the specified remote array ID. Used in the expansion scenario when the heterogeneity takes over the earlier array. **Note:**This parameter must be delivered if LUN disguise is enabled.
WRITEPOLICY	Optional	enum	Write policy. **The value is described as follows:** 1: write back 2: write through **Note:**By default, the parameter value is write-back for common LUNs and write-through for eDevLUNs.
PREFETCHPOLICY	Optional	enum	Prefetch policy. **The value is described as follows:** 0: no prefetch 1: constant prefetch 2: variable prefetch 3: intelligent prefetch **Default:**3: intelligent prefetch

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Parameter	Mandatory/Optional/Conditional	Type	Description
PREFETCHVALUE	Conditional	uint32	Prefetch policy value. **The value is described as follows:** The value of constant prefetch ranges from 0 to 2048 sectors. The value of variable prefetch ranges from 0 to 1024 times. **Note:**This parameter needs to be delivered if PrefetchPolicy is delivered and its value is constant or variable prefetch. The unit of constant prefetch is sector, whereas that of variable prefetch is multiple.
OWNINGCONTROLLER	Optional	string	Owning controller.
DATATRANSFERPOLICY	Optional	enum	Data migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Default:**0: no relocation **Note:** eDevLUNs do not support this parameter. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
INITIALDISTRIBUTE-POLICY	Optional	enum	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Default:**0: automatic **Note:** eDevLUNs do not support this parameter. This field is not supported by V3 all-flash array series.
IOPRIORITY	Optional	enum	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high **Default:**1: low
SMARTCACHESTATE	Optional	enum	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Default:**0: disabled **Note:** This field is not supported by V3 all-flash array series. 2600-V do not support SmartCache status.
READCACHEPOLICY	Optional	enum	Read cache policy. **The value is described as follows:** 1: permanent 2: default 3: reclaim **Default:**2: default

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Parameter	Mandatory/Optional/Conditional	Type	Description
WRITECACHEPOLICY	Optional	enum	Write cache policy. **The value is described as follows:** 4: permanent 5: default 6: reclaim **Default:**5: default
REMOTELUNID	Conditional	string	ID of the external LUN that maps to the eDevLUN. **Note:**This parameter must be delivered if Usagetype is 1 and subtype is 0.
USAGETYPE	Conditional	enum	LUN usage. **The value is described as follows:** 0: traditional LUN 1: eDevLUN (LUN created using an external LUN) **Note:**This parameter is mandatory for eDevLUN creation.
ENABLECOMPRESSION	Optional	bool	Indicates whether compression is enabled. **The value is described as follows:** false: disabled true: enabled **Default:**false: disabled **Note:**eDevLUNs do not support this parameter.
ENABLEDEDUP	Optional	bool	Data reduction enabled or not. **The value is described as follows:** false: disabled true: enabled **Default:**false: disabled **Note:**The field is not used.

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Parameter	Mandatory/Optional/Conditional	Type	Description
COMPRESSION	Optional	enum	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression **Default:**0: rapid compression **Note:**This parameter takes effect after compression is enabled. eDevLUNs do not support this parameter.
ENABLEDEDUPCHECK	Optional	bool	Indicates whether deduplication check is enabled. **The value is described as follows:** false: disabled true: enabled **Default:**false: disabled **Note:**eDevLUNs do not support this parameter.
ENABLESMARTDEDUP	Optional	bool	Deduplication enabled or not. **The value is described as follows:** false: disabled true: enabled **Default:**false: disabled **Note:**eDevLUNs do not support this parameter.
MIRRORCHECKLUNID	Conditional	string	The MirrorLUN ID of source LUN. **Note:**This parameter must be delivered when creating MirrorLUN.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MIRRORTYPE	Conditional	enum	Mirror Type. **The value is described as follows:** 0: common LUN 1: mirror LUN 2: mirror copy LUN **Note:**This parameter must be delivered when creating MirrorLUN.If the mirror LUN is selected, this LUN can only serve as LUN mirror. Otherwise, the LUN is unavailable due to the lack of read and write permissions.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 11: LUN
ID	Mandatory	string(uint32)	LUN ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
PARENTID	Mandatory	string	ID of the owning storage pool.
PARENTNAME	Mandatory	string	Name of the owning storage pool.

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Parameter	Mandatory/ Conditional	Type	Description
SUBTYPE	Mandatory	string(uint32)	Subtype. **The value is described as follows:** 0: common LUN
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 27: online 28: offline 53: initializing
DESCRIPTION	Mandatory	string	Description.
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: thick LUN 1: thin LUN **Note:**2800 V3 do not support thin LUN.
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
SECTORSIZE	Mandatory	string(uint64)	Block size. **Unit:**bytes
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapped or not. **The value is described as follows:** false: not mapped true: mapped
WWN	Mandatory	string	WWN.
DATADISTRIBUTING	Mandatory	string(array)	Data distribution (the percentage of LUN data on each tier).

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Parameter	Mandatory/ Conditional	Type	Description
WRITEPOLICY	Mandatory	string(enum)	Write policy. **The value is described as follows:** 1: write back 2: write through
RUNNINGWRITEPOLICY	Mandatory	string(enum)	Running a write policy. **The value is described as follows:** 0: initializing 1: write back 2: write through
MIRRORTYPE	Mandatory	string(enum)	Mirror Type. **The value is described as follows:** 0: common LUN 1: mirror LUN 2: mirror copy LUN
PREFETCHPOLICY	Mandatory	string(enum)	Prefetch policy. **The value is described as follows:** 0: no prefetch 1: constant prefetch 2: variable prefetch 3: intelligent prefetch
PREFETCHVALUE	Mandatory	string(uint32)	Prefetch policy value. **The value is described as follows:** The value of constant prefetch ranges from 0 to 2048 sectors. The value of variable prefetch ranges from 0 to 1024 times. **Note:**The unit of constant prefetch is sector, whereas that of variable prefetch is multiple.
OWNINGCONTROLLER	Mandatory	string	Owning controller.
WORKINGCONTROLLER	Mandatory	string	Working controller.

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Parameter	Mandatory/ Conditional	Type	Description
DATATRANSFERPOLICY	Mandatory	string(enum)	Data migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.
IOCLASSID	Mandatory	string	I/O class. **Note:**If there is an ID, the ID is returned. If there is no ID, an empty string is returned.
MOVETOTIER0DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 0. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVETOTIER1DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 1. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
MOVETOTIER2DATA	Mandatory	string(uint64)	Amount of data to be migrated to tier 2. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
DRS_ENABLE	Mandatory	string(bool)	VMware vStorage APIs for Storage Awareness(VASA): DRS supported or not. **The value is described as follows:** false: not supported true: supported
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: NoProtected 1: Capacity 2: Performance 3: Extreme Performance 4: Muti-Tiers
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:** This field is not supported by V3 all-flash array series. 2600-V do not support SmartCache status.

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Parameter	Mandatory/ Conditional	Type	Description
SC_CACHEDSIZE	Mandatory	string(uint64)	SmartCache size. **Unit:**bytes **Note:** If the LUN is being created, 0 is returned. This field is not supported by V3 all-flash array series. 2600-V do not support SmartCache size.
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio. **Note:** If the LUN is being created, 0 is returned. This field is not supported by V3 all-flash array series. 2600-V do not support SmartCache hit ratio.
CAPACITYALARMLE-VEL	Conditional	string(enum)	VASA: Thin LUN capacity alarm severity. **The value is described as follows:** 2: normal 3: warning 6: critical **Note:** This field is not returned if the LUN is being created. 2600-V do not support thin LUN.
THINCAPACITYUSAGE	Conditional	string(uint32)	Ratio of thin LUN capacity occupied by data to the capacity available to the thin LUN. **Note:** This field is not returned if the LUN is being created. 2600-V do not support thin LUN.

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Parameter	Mandatory/ Conditional	Type	Description
REPLICATION_CAPACITY	Mandatory	string(uint64)	Data replication capacity, expressed in sectors Capacity consumed by data replication refers to the capacity used for snapshot copy-on-write (COW). **Unit:**sectors
READCACHEPOLICY	Mandatory	string(enum)	Read cache policy. **The value is described as follows:** 1: permanent 2: default 3: reclaim
WRITECACHEPOLICY	Mandatory	string(enum)	Write cache policy. **The value is described as follows:** 4: permanent 5: default 6: reclaim
CACHEPARTITIONID	Mandatory	string	Cache Partition ID. **Note:**If it is added to a cache partition, the cache partition ID is returned. If it is not added to a cache partition, an empty string is returned.
ISADD2LUNGROUP	Mandatory	string(bool)	Indicates whether a LUN has been added to a LUN group. **The value is described as follows:** false: no true: yes

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Parameter	Mandatory/ Conditional	Type	Description
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache Partition ID. **Note:** If it is added to a SmartCache partition, the SmartCache partition ID is returned. If it is not added to a SmartCache partition, an empty string is returned. This field is not supported by V3 all-flash array series. 2600-V do not support SmartCache Partition ID.
PROGRESS	Mandatory	string(uint32)	Progress of the data destruction task. **The value is described as follows:** The value ranges from 0 to 100.
REMOTELUNID	Mandatory	string	ID of the external LUN that maps to the eDevLUN. **Note:**"--" is returned for non-eDevLUNs.
USAGETYPE	Mandatory	string(enum)	LUN usage. **The value is described as follows:** 0: traditional LUN 1: eDevLUN (LUN created using an external LUN) **Note:**.
remoteLunWwn	Mandatory	string	WWN of the external LUN. **Note:**"--" is returned for non-eDevLUNs.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESSION	Mandatory	string(bool)	Indicates whether compression is enabled. **The value is described as follows:** false: disabled true: enabled
ENABLEDEDUP	Mandatory	string(bool)	Data reduction enabled or not. **The value is described as follows:** false: disabled true: enabled **Note:**The field is not used.
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
ENABLEDEDUPCHECK	Mandatory	string(bool)	Indicates whether deduplication check is enabled. **The value is described as follows:** false: disabled true: enabled
DEDUPSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by deduplication. **Unit:**sectors
COMPRESSIONSAVEDCAPACITY	Mandatory	string(uint64)	Space saved by compression. **Unit:**sectors
TOTALSAVEDCAPACITY	Mandatory	string(uint64)	Total space saved. **Unit:**sectors
ENABLESMARTDEDUP	Mandatory	string(bool)	Deduplication enabled or not. **The value is described as follows:** false: disabled true: enabled

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Parameter	Mandatory/ Conditional	Type	Description
ISCSITHINLUNTHRES-HOLD	Mandatory	string(uint32)	Capacity alarm threshold when thin LUNs are mounted to Windows 2012. **The value is described as follows:** [50,99] **Note:** If there is no valid value, -1 is returned. 2600-V do not support thin LUN.
ENABLEISCSITHIN-LUNTHRESHOLD	Mandatory	string(bool)	iSCSI thin LUN alarm switch in Windows 2012. **The value is described as follows:** false: off true: on **Note:** If there is no valid value, -1 is returned. 2600-V do not support thin LUN.
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication.
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression.
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio.

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Parameter	Mandatory/ Conditional	Type	Description
DISGUISESTATUS	Conditional	string(enum)	LUN disguise is enabled. **The value is described as follows:** 0: no disguise 1: basic disguise (supported by eDevLUN) 2: expansion disguise (supported by eDevLUN) 3: inheritance disguise (not supported by eDevLUN) 4: Third-party disguise (supported by eDevLUN) **Note:**This field is not returned if the LUN is not masqueraded.
DISGUISEREMOTEAR-RAYID	Conditional	string	Disguised as the specified remote array ID. Used in the expansion scenario when the heterogeneity takes over the earlier array. **Note:**This field is not returned if the LUN is not masqueraded.If there is no valid value, "--" is returned.
EXTENDIFSWITCH	Mandatory	string(bool)	Support external DIF feature or not. **The value is described as follows:** false: not supported true: supported
LUNCOPYIDS	Mandatory	string(array)	Lun copy ID list.
SNAPSHOTIDS	Mandatory	string(array)	Snapshot copy ID list.
REMOTEREPLICATIO-NIDS	Mandatory	string(array)	Replication ID list.
SPLITMIRRORIDS	Mandatory	string(array)	Splitmirror copy ID list.
REMAINRETENTION-TERM	Mandatory	string(uint32)	Retention Time. **Unit:**hours

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Parameter	Mandatory/ Conditional	Type	Description
RETENTIONSTATE	Mandatory	string(enum)	Retention State. **The value is described as follows:** 1: read only 2: read and write
RETENTIONSETTIME	Mandatory	string(uint64)	Retention Set Time.
SAVEDAGOTOTALCA-PACITY	Mandatory	string(uint64)	Total space before saving.
RETENTIONTERM	Mandatory	string(uint32)	Retention Term. **Unit:**days
usedConsumerDataCa-pacity	Mandatory	string(uint64)	Used data capacity (excluding metadata). **Unit:**sectors
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true: valid false: invalid **Note:**This field is not supported by V3 all-flash array series.
METACAPACITY	Mandatory	string(uint64)	Metadata capacity. **Unit:**sectors
LUNMigrationOrigin	Mandatory	string(enum)	Indicates whether the LUN serves as the source or target LUN of LUN migration. **The value is described as follows:** 0: source LUN 1: target LUN **Note:**If there is no valid value, -1 is returned.
takeOverLunWwn	Mandatory	string	WWN of the takeover LUN.

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Example

- Creating a LUN.

```
Request: POST /deviceManager/rest/210235843710E7000007/lun
{
    "NAME": "LUN072",
    "ALLOCTYPE": 0,
    "CAPACITY": 2097152,
    "PARENTID": "0",
    "WRITEPOLICY": 1,
    "INITIALDISTRIBUTEPOLICY": 0,
    "DATATRANSFERPOLICY": 0,
    "IOPRIORITY": 1,
    "SMARTCACHESTATE": 2,
    "READCACHEPOLICY": 2,
    "WRITECACHEPOLICY": 5,
    "PREFETCHPOLICY": 3
}

Response:
{
    "data": {
        "ALLOCCAPACITY": "0",
        "ALLOCTYPE": "0",
        "CACHEPARTITIONID": "",
        "CAPABILITY": "0",
        "CAPACITY": "2097152",
        "COMPRESSION": "0",
        "COMPRESSIONSAVEDCAPACITY": "0",
        "COMPRESSIONSAVEDRATIO": "0",
        "DATADISTRIBUTING": "[0,0,0]",
        "DATATRANSFERPOLICY": "0",
        "DEDUPSAVEDCAPACITY": "0",
        "DEDUPSAVEDRATIO": "0",
        "DESCRIPTION": "",
        "DRS_ENABLE": "false",
        "ENABLECOMPRESSION": "false",
        "ENABLEDEDUP": "false",
        "ENABLEDEDUPCHECK": "false",
        "ENABLEISCSITHINLUNTHRESHOLD": "true",
        "ENABLESMARTDEDUP": "false",
        "EXPOSEDTOINITIATOR": "false",
        "EXTENDIFSWITCH": "false",
        "HEALTHSTATUS": "1",
        "ID": "57",
        "INITIALDISTRIBUTEPOLICY": "0",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "ISADD2LUNGROUP": "false",
        "ISCSITHINLUNTHRESHOLD": "-1",
        "ISSMARTTIERENABLE": "false",
        "LUNCOPYIDS": "[]",
        "LUNMigrationOrigin": "-1",
        "METACAPACITY": "0",
        "MIRRORTYPE": "0",
        "MOVETOTIER0DATA": "0",
        "MOVETOTIER1DATA": "0",
        "MOVETOTIER2DATA": "0",
        "NAME": "LUN072",
        "OWNINGCONTROLLER": "0B",
        "PARENTID": "0",
        "PARENTNAME": "StoragePool004",
        "PREFETCHPOLICY": "3",
        "PREFETCHVALUE": "0",
        "PROGRESS": "0",
        "READCACHEPOLICY": "2",
        "REMAINRETENTIONTERM": "0",
        "REMOTELUNID": "--",
        "REMOTEREPLICATIONIDS": "[]",
```

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```
        "REPLICATION_CAPACITY": "0",
        "RETENTIONSETTIME": "0",
        "RETENTIONSTATE": "0",
        "RETENTIONTERM": "0",
        "RUNNINGSTATUS": "53",
        "RUNNINGWRITEPOLICY": "0",
        "SAVEDAGOTOTALCAPACITY": "0",
        "SC_CACHEDSIZE": "0",
        "SC_HITRAGE": "0",
        "SECTORSIZE": "512",
        "SMARTCACHEPARTITIONID": "",
        "SMARTCACHESTATE": "2",
        "SNAPSHOTIDS": "[]",
        "SPLITMIRRORIDS": "[]",
        "SUBTYPE": "0",
        "TOTALSAVEDCAPACITY": "0",
        "TOTALSAVEDRATIO": "0",
        "TYPE": 11,
        "USAGETYPE": "0",
        "WORKINGCONTROLLER": "0B",
        "WRITECACHEPOLICY": "5",
        "WRITEPOLICY": "1",
        "WWN": "61051721000c8a610104705f00000039",
        "remoteLunWwn": "--",
        "usedConsumerDataCapacity": "0",
        "takeOverLunWwn": "91:02:A5:G6:LL:Z0:B8:00:00:08"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.9.2.8 Interface for Modifying LUN Information

Function

This interface is used to modify LUNs.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the priority of LUN ({0}).

This operation may affect the LUN performance.

Suggestion: Before performing this operation, ensure that the preceding risk is acceptable and the correct LUN is selected.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/${id}

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	LUN ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
PREFETCHPOLICY	Optional	enum	Prefetch policy. **The value is described as follows:** 0: no prefetch 1: constant prefetch 2: variable prefetch 3: intelligent prefetch
PREFETCHVALUE	Conditional	uint32	Prefetch policy value. **The value is described as follows:** The value of constant prefetch ranges from 0 to 2048 sectors. The value of variable prefetch ranges from 0 to 1024 times. **Note:**This parameter needs to be delivered if PrefetchPolicy is delivered and its value is constant or variable prefetch. The unit of constant prefetch is sector, whereas that of variable prefetch is multiple.
OWNINGCONTROLLER	Optional	string	Owning controller.
DATATRANSFERPOLICY	Optional	enum	Data migration policy. **The value is described as follows:** 0: no relocation 1: automatic relocation 2: highest available 3: lowest available **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
IOPRIORITY	Optional	enum	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
READCACHEPOLICY	Optional	enum	Read cache policy. **The value is described as follows:** 1: permanent 2: default 3: reclaim
WRITECACHEPOLICY	Optional	enum	Write cache policy. **The value is described as follows:** 4: permanent 5: default 6: reclaim
EXTENDIFSWITCH	Optional	bool	Indicates whether the external data integrity field (DIF) feature is supported. **The value is described as follows:** false: not supported true: supported
ENABLECOMPRESSION	Optional	bool	Indicates whether compression is enabled. **The value is described as follows:** false: disabled true: enabled
ENABLEDEDUP	Optional	bool	Data reduction enabled or not. **The value is described as follows:** false: disabled true: enabled **Note:**The field is not used.

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Parameter	Mandatory/Optional/Conditional	Type	Description
COMPRESSION	Optional	enum	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression **Note:**This parameter takes effect after compression is enabled. eDevLUNs do not support this parameter.
ENABLEDEDUPCHECK	Optional	bool	Indicates whether deduplication check is enabled. **The value is described as follows:** false: disabled true: enabled **Note:**eDevLUNs do not support this parameter.
ENABLESMARTDEDUP	Optional	bool	Deduplication enabled or not. **The value is described as follows:** false: disabled true: enabled **Note:**eDevLUNs do not support this parameter.
ISCSITHINLUNTHRES-HOLD	Optional	uint32	Capacity alarm threshold when thin LUNs are mounted to Windows 2012. **The value is described as follows:** [50,99] **Note:**Only thin LUNs support this property.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLEISCSITHIN-LUNTHRESHOLD	Optional	bool	iSCSI thin LUN alarm switch in Windows 2012. **The value is described as follows:** false: off true: on **Note:**Only thin LUNs support this property.
WRITEPOLICY	Optional	enum	Write policy. **The value is described as follows:** 1: write back 2: write through
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
DISGUISESTATUS	Optional	enum	LUN disguise is enabled. **The value is described as follows:** 0: no disguise 1: basic disguise (supported by eDevLUN) 2: expansion disguise (supported by eDevLUN) 3: inheritance disguise (not supported by eDevLUN) 4: Third-party disguise (supported by eDevLUN)

Result

N/A

Example

- Modifying LUNs.

```
Request: PUT /deviceManager/rest/210235843710E7000007/lun/0
{
    "DESCRIPTION": "123456"
}

Response:
```

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```
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3 mapping_view

4.9.3.1 Interface for Deleting a Mapping View Association

Function

This interface is used to delete a mapping view association.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to modify mappings among LUN groups, host groups, and port groups in the mapping view.

This operation will make the original mappings become invalid.

Before performing this operation, ensure that the selected mapping view, LUN groups, host groups, and port groups are correct, and stop host services related to the mapping view.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/remove_associate

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mapping view ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 14: Host group 256: LUN group 257: Port group
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Example

- Deleting a mapping view association.

```
Request: PUT /deviceManager/rest/210235843710E7000007/mappingview/
remove_associate
{
    "ID": "2",
    "ASSOCIATEOBJTYPE": 256,
    "ASSOCIATEOBJID": "4"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.2 Interface for Creating a Mapping View

Function

This interface is used to create a mapping view.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**1~63

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 245: Mapping View
ID	Mandatory	string	Object ID, saving port IQN.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ENABLEINBANDCOM-MAND	Mandatory	string(bool)	Indicates whether the command device is enabled. **The value is described as follows:** false: no true: yes
INBANDLUNWWN	Mandatory	string	command LUN WWN.
AVAILABLEHOSTLU-NIDLIST	Mandatory	string(array)	List of available host LUN IDs.

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Example

- Creating a mapping view.

```
Request: POST/deviceManager/rest/210235843710E7000007/mappingview{
    "NAME": "MappingView001"
}
Response: {
    "data": {
        "AVAILABLEHOSTLUNIDLIST":
"[0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22]",
        "DESCRIPTION": "",
        "ENABLEINBANDCOMMAND": "true",
        "ID": "1",
        "INBANDLUNWWN": "",
        "NAME": "MappingView001",
        "TYPE": 245
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.3 Interface for Modifying a Mapping View

Function

This interface is used to modify a mapping view.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the host LUN ID of the LUN in mapping {0}.

This operation may interrupt host services or cause data inconsistency if services are running on the host.

This operation causes the LUN unable to be detected by the host if the new host LUN ID is beyond the host LUN ID range supported by the host.

Before performing this operation:

1. Ensure that you have selected the correct LUN, stopped host services running on the LUN, and uninstalled physical disks and virtual disks generated by the multipathing. After this operation, scan disks on the host again.

2. Ensure that the new host LUN ID is within the host LUN ID range supported by the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/${id}

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mapping view ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
ENABLEINBANDCOM-MAND	Optional	bool	Indicates whether the command device is enabled. **The value is described as follows:** false: no true: yes

Result

N/A

Example

- Modifying a mapping view.

```
Request: PUT /deviceManager/rest/210235843710E7000007/mappingview/1
{
    "DESCRIPTION": "description"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
    "description": "0"
    }
}
```

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4.9.3.4 Interface for Creating a Mapping View Association

Function

This interface is used to create a mapping view association.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to modify mappings among LUN groups, host groups, and port groups in the mapping view. This operation will make the original mappings become invalid. Before performing this operation, ensure that the selected mapping view, LUN groups, host groups, and port groups are correct, and stop host services related to the mapping view.
You are about to map all LUNs in the LUN group ({0}) to all hosts in the host group ({1}). If the host group contains multiple hosts but mutual access exclusion is not properly configured, multiple service hosts may write data to the same LUN, causing data damage or inconsistency. Suggestion: Before you perform this operation, ensure that mutual access exclusion has been correctly configured on service hosts.
You are about to map all LUNs in the LUN group ({0}) to all hosts in the host group ({1}). If the host group contains multiple hosts but mutual access exclusion is not properly configured, multiple service hosts may write data to the same LUN, causing data corruption or inconsistency. Suggestion: Before you perform this operation, ensure that mutual access exclusion has been correctly configured on service hosts.
You are about to map all LUNs in the LUN group ({0}) to all hosts in the host group ({1}). If the host group contains multiple hosts but mutual access exclusion is not properly configured, multiple service hosts may write data to the same LUN, causing data corruption or inconsistency. Suggestion: Before you perform this operation, ensure that mutual access exclusion has been correctly configured on service hosts.
You are about to map all LUNs in the LUN group to all hosts in the host group ({0}). If the host group contains multiple hosts but mutual access exclusion is not properly configured, multiple service hosts may write data to the same LUN, causing data corruption or inconsistency. Suggestion: Before you perform this operation, ensure that mutual access exclusion has been correctly configured on service hosts.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/create_associate

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 14: Host group 256: LUN group 257: Port group
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Example

- Creating a mapping view association.

```
Request: PUT /deviceManager/rest/210235843710E7000007/mappingview/
create_associate
{
    "ASSOCIATEOBJTYPE": 14,
    "ASSOCIATEOBJID": "1",
    "ID": "3"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.5 Interface for Querying the Number of Mapping Views

Function

This interface is used to query the number of mapping views.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried mapping views.

Example

- Querying the number of mapping views.

```
Request: GET /deviceManager/rest/210235843910E6000009/mappingview/count

Response: {
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.6 Interface for Deleting a Mapping View

Function

This interface is used to delete a mapping view.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mapping view ID.

Result

N/A

Example

- Deleting a mapping view.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/mappingview/1
Response: {
    "data": {

    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.7 Interface for Querying a Mapping View

Function

This interface is used to query basic information about a mapping view.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mapping view ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 245: Mapping View
ID	Mandatory	string	Object ID, saving port IQN.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ENABLEINBANDCOM-MAND	Mandatory	string(bool)	Indicates whether the command device is enabled. **The value is described as follows:** false: no true: yes
AVAILABLEHOSTLU-NIDLIST	Mandatory	string(array)	List of available host LUN IDs.
INBANDLUNWWN	Mandatory	string	command LUN WWN.

Example

- Querying basic information about a mapping view.

```
Request: GET/deviceManager/rest/210235843710E7000007/mappingview/1
Response: {
```

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```
    "data": [
        {
            "AVAILABLEHOSTLUNIDLIST":
"[9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
,
35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,
61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,
87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109
,
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,12
9,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,
149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,16
8,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,
188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,20
7,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,
227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,24
6,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,
266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,28
5,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,
305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,32
4,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,
344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,36
3,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,
383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,40
2,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,
422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,44
1,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,
461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,48
0,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,
500,501,502,503,504,505,506,507,508,509,510,511]",
            "DESCRIPTION": "",
            "ENABLEINBANDCOMMAND": "true",
            "ID": "1",
            "INBANDLUNWWN": "",
            "NAME": "MappingView001",
            "TYPE": 245
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.9.3.8 Interface for Associatively Query Mapping Views

Function

This interface is used to implement associated query of mapping views information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview/associate

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 14: Host group 256: LUN group 257: Port group
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 245:Mapping View
ID	Mandatory	string	Object ID, saving port IQN.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEINBANDCOM-MAND	Mandatory	string(bool)	Indicates whether the command device is enabled. **The value is described as follows:** false: no true: yes
INBANDLUNWWN	Mandatory	string	Command LUN WWN.

Example

- Associated querying of mapping views information.

```
Request: GET /deviceManager/rest/210235843710E7000007/mappingview/associate?
ASSOCIATEOBJTYPE=14&ASSOCIATEOBJID=0&range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "ENABLEINBANDCOMMAND": "false",
            "ID": "3",
            "INBANDLUNWWN": "",
            "NAME": "lv-001",
            "TYPE": 245
        },
        {
            "DESCRIPTION": "",
            "ENABLEINBANDCOMMAND": "false",
            "ID": "4",
            "INBANDLUNWWN": "",
            "NAME": "MappingView004",
            "TYPE": 245
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.9 Interface for Batch Querying Mapping Views

Function

This interface is used to batch query basic information about mapping views.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mappingview

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 245: Mapping View
ID	Mandatory	string	Object ID, saving port IQN.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ENABLEINBANDCOM-MAND	Mandatory	string(bool)	Indicates whether the command device is enabled. **The value is described as follows:** false: no true: yes
INBANDLUNWWN	Mandatory	string	command LUN WWN.

Example

- Batch querying basic information about mapping views.

```
Request: GET /deviceManager/rest/210235843710E7000007/mappingview?
range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "ENABLEINBANDCOMMAND": "true",
            "ID": "1",
            "INBANDLUNWWN": "",
            "NAME": "MappingView001",
            "TYPE": 245
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.3.10 Interface for Querying the Maximum Range of a Host LUN ID

Function

This interface is used to query the maximum range of a host LUN ID.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/get_host_lun_max_id

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
MAXSIZE	Mandatory	string(uint32)	Maximum number of host LUN IDs. **Note:**ID starts at 0.

Example

- Querying the maximum range of a host LUN ID.

```
Request: GET/deviceManager/rest/210235843710E7000007/get_host_lun_max_id

Response:
{
    "data": {
        "MAXSIZE": "256"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4 host

4.9.4.1 Interface for Batch Querying Host Information

Function

This interface is used to batch query basic information about hosts.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 21: Host
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal
DESCRIPTION	Mandatory	string	Description.
OPERATIONSYSTEM	Mandatory	string(enum)	Host operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS
NETWORKNAME	Mandatory	string	Host domain name.
IP	Mandatory	string	IP address.
MODEL	Mandatory	string	Host model.
ISADD2HOSTGROUP	Mandatory	string(bool)	Indicates whether the host has been added to a host group.
INITIATORNUM	Mandatory	string(uint32)	The number of Host INITIATOR.

Example

- Batch querying basic information about hosts.

```
Request: GET /deviceManager/rest/210235843710E7000007/host?range=[0-100]

Response:
```

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```
{
    "data": [
        {
            "DESCRIPTION": "",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "INITIATORNUM": "0",
            "IP": "",
            "ISADD2HOSTGROUP": "true",
            "LOCATION": "",
            "MODEL": "",
            "NAME": "Host001",
            "NETWORKNAME": "",
            "OPERATIONSYSTEM": "0",
            "RUNNINGSTATUS": "1",
            "TYPE": 21
        },
        {
            "DESCRIPTION": "",
            "HEALTHSTATUS": "1",
            "ID": "1",
            "INITIATORNUM": "0",
            "IP": "",
            "ISADD2HOSTGROUP": "false",
            "LOCATION": "",
            "MODEL": "",
            "NAME": "Host002",
            "NETWORKNAME": "",
            "OPERATIONSYSTEM": "0",
            "RUNNINGSTATUS": "1",
            "TYPE": 21
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.9.4.2 Interface for Querying the Number of Hosts

Function

This interface is used to query the number of hosts.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 14: HOSTGROUP
ASSOCIATEOBJID	Optional	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried hosts.

Example

- Querying the number of hosts.

```
Request: GET /deviceManager/rest/210235843910E6000009/host/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4.3 Interface for Implementing Associated Query of Host Information

Function

This interface is used to implement associated query of host information.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type, including LUN, snapshot, host group. **The value is described as follows:** 11: LUN 27: SNAPSHOT 14: HOSTGROUP
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 21: Host
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal
DESCRIPTION	Mandatory	string	Description.
OPERATIONSYSTEM	Mandatory	string(enum)	Host operating system. (Windows is used by default) **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS
NETWORKNAME	Mandatory	string	Host domain name.
IP	Mandatory	string	IP address.

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Parameter	Mandatory/ Conditional	Type	Description
MODEL	Mandatory	string	Host model.
ISADD2HOSTGROUP	Mandatory	string(bool)	Indicates whether the host has been added to a host group.
INITIATORNUM	Mandatory	string(uint32)	The number of Host INITIATOR.

Example

- Associated querying of host information.

```
Request: GET /deviceManager/rest/210235843710E7000007/host/associate?
ASSOCIATEOBJTYPE=14&ASSOCIATEOBJID=1

Response:
{
    "data": [
        {
            "DESCRIPTION": "111111hhhhh11111111ab1111",
            "HEALTHSTATUS": "1",
            "ID": "1",
            "INITIATORNUM": "0",
            "IP": "",
            "ISADD2HOSTGROUP": "true",
            "LOCATION": "",
            "MODEL": "",
            "NAME": "host1",
            "NETWORKNAME": "",
            "OPERATIONSYSTEM": "2",
            "RUNNINGSTATUS": "1",
            "TYPE": 21
        },
        {
            "DESCRIPTION": "rfff",
            "HEALTHSTATUS": "1",
            "ID": "2",
            "INITIATORNUM": "1",
            "IP": "",
            "ISADD2HOSTGROUP": "true",
            "LOCATION": "",
            "MODEL": "",
            "NAME": "Host003",
            "NETWORKNAME": "",
            "OPERATIONSYSTEM": "0",
            "RUNNINGSTATUS": "1",
            "TYPE": 21
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.4.4 Interface for Creating a Host

Function

This interface is used to create a host.

Applicable Model

Applicable to V3 all series.

HighRisk

1. Before performing this operation, confirm that the operating system type of the host to be created is the same as that of the service host.

2. If the operating system of the service host is Windows, and all thin LUN functions are required to get better experience, select Windows Server 2012.

Suggestion: Confirm again that the correct operating system type has been specified.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
LOCATION	Optional	string	Location. **Length:**0~31
DESCRIPTION	Optional	string	Description. **Length:**0~63

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Parameter	Mandatory/Optional/Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	enum	Operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS
NETWORKNAME	Optional	string	Host domain name. **Length:**0~31
IP	Optional	string	IP address. **Length:**0~63
MODEL	Optional	string	Host model. **Length:**0~31

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 21: Host
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
LOCATION	Mandatory	string	Location.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal
DESCRIPTION	Mandatory	string	Description.
OPERATIONSYSTEM	Mandatory	string(enum)	Host operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS
NETWORKNAME	Mandatory	string	Host domain name.
IP	Mandatory	string	IP address.
MODEL	Mandatory	string	Host model.
ISADD2HOSTGROUP	Mandatory	string(bool)	Indicates whether the host has been added to a host group. **The value is described as follows:** true: yes false: no
INITIATORNUM	Mandatory	string(uint32)	The number of Host INITIATOR.

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Example

- Creating a host.

```
Request: POST /deviceManager/rest/210235843710E7000007/host
{
    "DESCRIPTION": "host",
    "IP": "",
    "LOCATION": "",
    "NAME": "Host003",
    "OPERATIONSYSTEM": 9
}

Response:
{
    "data": {
        "DESCRIPTION": "host",
        "HEALTHSTATUS": "1",
        "ID": "2",
        "INITIATORNUM": "0",
        "IP": "",
        "ISADD2HOSTGROUP": "false",
        "LOCATION": "",
        "MODEL": "",
        "NAME": "Host003",
        "NETWORKNAME": "",
        "OPERATIONSYSTEM": "9",
        "RUNNINGSTATUS": "1",
        "TYPE": 21
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4.5 Interface for Modifying a Host

Function

This interface is used to modify hosts.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change the host operating system from {0} to {1}.

This operation will change the host operating system type. If the new operating system type is different from the operating system type of service hosts, an unknown compatibility error may occur.

Before performing this operation, check whether the two operating system types are the same.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/${id}

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
LOCATION	Optional	string	Location. **Length:**0~31
DESCRIPTION	Optional	string	Description. **Length:**0~63
OPERATIONSYSTEM	Optional	enum	Operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS
NETWORKNAME	Optional	string	Host domain name. **Length:**0~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
IP	Optional	string	IP address. **The value is described as follows:** A correct IPv4 or IPv6 address, for example, 192.168.1.100 or fc00: : 1234. **Length:**0~63
MODEL	Optional	string	Host model. **Length:**0~31

Result

N/A

Example

- Modifying hosts.

```
Request: PUT /deviceManager/rest/210235843710E7000007/host/2
{
    "DESCRIPTION": "host1231",
    "OPERATIONSYSTEM": "3"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4.6 Interface for Deleting a Host

Function

This interface is used to delete a host.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/${id}

Access Method

DELETE

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host ID.

Result

N/A

Example

- Deleting a host.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/host/2

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4.7 Interface for Querying Host Information

Function

This interface is used to query basic information about a host.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 21: Host
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
LOCATION	Mandatory	string	Location.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1:normal
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
OPERATIONSYSTEM	Mandatory	string(enum)	Host operating system. **The value is described as follows:** 0: Linux 1: Windows 2: Solaris 3: HP-UX 4: AIX 5: XenServer 6: Mac OS 7: VMware ESX 8: LINUX_VIS 9: Windows Server 2012 10: Oracle VM 11: OpenVMS
NETWORKNAME	Mandatory	string	Host domain name.
IP	Mandatory	string	IP address.
MODEL	Mandatory	string	Host model.
ISADD2HOSTGROUP	Mandatory	string(bool)	Indicates whether the host has been added to a host group.
INITIATORNUM	Mandatory	string(uint32)	The number of Host INITIATOR.

Example

- Querying basic information about a host.

```
Request: GET /deviceManager/rest/210235843710E7000007/host/2

Response:
{
    "data": {
        "DESCRIPTION": "host",
        "HEALTHSTATUS": "1",
        "ID": "2",
        "INITIATORNUM": "0",
        "IP": "",
        "ISADD2HOSTGROUP": "false",
        "LOCATION": "",
        "MODEL": "",
        "NAME": "Host003",
        "NETWORKNAME": "",
        "OPERATIONSYSTEM": "9",
        "RUNNINGSTATUS": "1",
        "TYPE": 21
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4.8 Interface for Querying Host Link Information

Function

This interface is used to query a Host link information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host_link/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Link ID.

Result

Parameter	Mandatory/Conditional	Type	Description
CTRL_ID	Mandatory	string	Controller ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
ID	Mandatory	string	Link ID.
INITIATOR_ID	Mandatory	string	Initiator ID.

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Parameter	Mandatory/ Conditional	Type	Description
INITIATOR_NODE_WWN	Mandatory	string	Initiator identifier.
INITIATOR_PORT_WWN	Mandatory	string	Initiator IQN or the port WWN.
INITIATOR_TYPE	Mandatory	string(enum)	Initiator type. **The value is described as follows:** 222: iSCSI Initiator 223: FC Initiator 16499: InfiniBand initiator
PARENTID	Mandatory	string	Type of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 21: host
RUNNINGSTATUS	Mandatory	string(enum)	Running Status. **The value is described as follows:** 10: Link up 11: Link down 27: Online 31: disabled 101: connecting
TARGET_ID	Mandatory	string	Target ID.
TARGET_NODE_WWN	Mandatory	string	Target identifier.
TARGET_PORT_WWN	Mandatory	string	Target IQN or the port WWN.
TARGET_TYPE	Mandatory	string(enum)	Target type. **The value is described as follows:** 213: Ethernet Port

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Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 255: Host Link
ULTRAPATHVERSION	Mandatory	string	The host multipath version. **The value is described as follows:** x.xx.xxx

Example

- Querying a Host link information.

```
Request: GET/deviceManager/rest/1016964156/host_link/
0f5668c006c788f0-0000000001022003
Response: {
    "data": {
        "CTRL_ID": "0B",
        "HEALTHSTATUS": "1",
        "ID": "0f5668c006c788f0-0000000001022003",
        "INITIATOR_ID": "iqn.2006-08.com.huawei:oceanstor:2100643e8c453ffa::
0",
        "INITIATOR_NODE_WWN": "",
        "INITIATOR_PORT_WWN": "iqn.2006-08.com.huawei:oceanstor:
2100643e8c453ffa::0",
        "INITIATOR_TYPE": "222",
        "PARENTID": "0",
        "PARENTNAME": "Host001",
        "PARENTTYPE": 21,
        "RUNNINGSTATUS": "27",
        "TARGET_ID": "0000000000000003",
        "TARGET_NODE_WWN": "",
        "TARGET_PORT_WWN": "iqn.2006-08.com.huawei:oceanstor:
210000acbbe13ad2::1022003:8.47.75.75",
        "TARGET_TYPE": "213",
        "ULTRAPATHVERSION": "8.03.025",
        "TYPE": 255
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.4.9 Interface for Batch Querying Host Links Information

Function

This interface is used to batch query Host links information.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host_link

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTID	Mandatory	string	Host ID.
INITIATOR_TYPE	Mandatory	enum	Initiator type. **The value is described as follows:** 222: iSCSI Initiator 223: FC Initiator 16499: InfiniBand initiator **Note:**2200 V3, 2600 V3, and 2600 V3 for Video do not support the 16499 value.

Result

Parameter	Mandatory/Conditional	Type	Description
CTRL_ID	Mandatory	string	Controller ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
ID	Mandatory	string	Link ID.
INITIATOR_ID	Mandatory	string	Initiator ID.
INITIATOR_NODE_WWN	Mandatory	string	Initiator identifier.

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Parameter	Mandatory/ Conditional	Type	Description
INITIATOR_PORT_WWN	Mandatory	string	Initiator IQN or the port WWN.
INITIATOR_TYPE	Mandatory	string(enum)	Initiator type. **The value is described as follows:** 222: iSCSI Initiator 223: FC Initiator 16499: InfiniBand initiator **Note:**2200 V3, 2600 V3, and 2600 V3 for Video do not support the 16499 value.
PARENTID	Mandatory	string	Type of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 21: host
RUNNINGSTATUS	Mandatory	string(enum)	Running Status. **The value is described as follows:** 10: Link up 11: Link down 27: Online 31: disabled 101: connecting
TARGET_ID	Mandatory	string	Target ID.
TARGET_NODE_WWN	Mandatory	string	Target identifier.
TARGET_PORT_WWN	Mandatory	string	Target IQN or the port WWN.
TARGET_TYPE	Mandatory	string(enum)	Target type. **The value is described as follows:** 213: Ethernet Port

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Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 255: Host Link
ULTRAPATHVERSION	Mandatory	string	The host multipath version. **The value is described as follows:** x.xx.xxx

Example

- Batch querying Host links information.

```
Request: GET/deviceManager/rest/1016964156/host_link?
INITIATOR_TYPE=222&PARENTID=0
Response: {
    "data": [
        {
            "CTRL_ID": "0B",
            "HEALTHSTATUS": "1",
            "ID": "0f5668c006c788f0-0000000001022003",
            "INITIATOR_ID": "iqn.2006-08.com.huawei:oceanstor:
2100643e8c453ffa::0",
            "INITIATOR_NODE_WWN": "",
            "INITIATOR_PORT_WWN": "iqn.2006-08.com.huawei:oceanstor:
2100643e8c453ffa::0",
            "INITIATOR_TYPE": "222",
            "PARENTID": "0",
            "PARENTNAME": "Host001",
            "PARENTTYPE": 21,
            "RUNNINGSTATUS": "27",
            "TARGET_ID": "0000000000000003",
            "TARGET_NODE_WWN": "",
            "TARGET_PORT_WWN": "iqn.2006-08.com.huawei:oceanstor:
210000acbbe13ad2::1022003:8.47.75.75",
            "TARGET_TYPE": "213",
            "ULTRAPATHVERSION": "8.03.025",
            "TYPE": 255
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.5 target

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4.9.5.1 Interface for Creating Heterogeneous Remote Device

Function

This interface is used to create heterogeneous remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/create/and/connect

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
REMOTEIP	Mandatory	string	Remote IP.
PORT	Mandatory	uint32	Remote port.
RECOVERY_POLICY	Mandatory	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
ENABLECHAP	Mandatory	bool	CHAP enabled or not. **The value is described as follows:** true: enabled false: disabled
CHAPUSER	Conditional	string	CHAP name. **Length:**4~223 **Note:**This field must be delivered if ENABLECHAP is true.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CHAPPASSWD	Conditional	string	Password. **Length:**12~16 **Note:**This field must be delivered if IENABLECHAP is true.

Result

N/A

Example

- Creating heterogeneous remote devices.

```
Request: PUT/deviceManager/rest/2102350BSE10F3000088/create/and/connect
{
    "LOCALCONTROLID": "0A",
    "LOCALPORTID": "139267",
    "REMOTEIP": "30.30.30.146",
    "PORT": 3260,
    "RECOVERY_POLICY": 1,
    "ENABLECHAP": false
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.5.2 Interface for Implementing Associated Query of iSCSI_TGT_Port Information

Function

This interface is used to implement associated query of iSCSI_TGT_Port.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_tgt_port/associate/eth_port

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 213: Ethernet port
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 249: iSCSI_TGT_Port
ID	Mandatory	string	iSCSI_TGT_Port name.
TPGT	Mandatory	string(uint32)	Target Portal Group TAG.
ETHPORTID	Mandatory	string	Associated Ethernet port ID.

Example

- Implementing associated query of iSCSI_TGT_Port.

```
Request: GET /deviceManager/rest/1016964156/iscsi_tgt_port/associate/eth_port?
ASSOCIATEOBJTYPE=213&ASSOCIATEOBJID=132353

Response:
{
    "data": [
        {
            "ETHPORTID": "131075",
            "ID": "0+iqn.2006-08.com.huawei:oceanstor:21004846fb8ca15d::
20003:10.10.10.200,t,0x0004",
            "TPGT": "4",
            "TYPE": 249
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.9.6 lun_group

4.9.6.1 Interface for Creating a LUN Group

Function

This interface is used to create a LUN group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
APPTYPE	Mandatory	enum	Application type. **The value is described as follows:** 0: other 1: oracle 2: exchange 3: sqlserver 4: vmware 5: hyper-V
CONFIGDATA	Optional	string	Application configuration data. **Length:**0~255

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 256: LUN group
ID	Mandatory	string(uint32)	LUN group ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the LUN group has been added to a mapping view. **The value is described as follows:** false: no true: yes

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Parameter	Mandatory/ Conditional	Type	Description
APPTYPE	Mandatory	string(enum)	Application type. **The value is described as follows:** 0: other 1: oracle 2: exchange 3: sqlserver 4: vmware 5: hyper-V
GROUPTYPE	Mandatory	string(uint32)	Group type. **The value is described as follows:** 0: LUN group
CONFIGDATA	Mandatory	string	Application configuration data.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 53: Initializing

Example

- Creating a LUN group.

```
Request: POST /deviceManager/rest/210235843910E6000009/lungroup
{
    "APPTYPE": "0",
    "NAME": "LUNGroup006"
}

Response:
{
    "data": {
        "APPTYPE": "0",
        "CONFIGDATA": "",
        "DESCRIPTION":"",
        "GROUPTYPE": "0",
        "HEALTHSTATUS":"1",
        "ID": "5",
        "ISADD2MAPPINGVIEW": "false",
        "NAME": "LUNGroup006",
```

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```
        "RUNNINGSTATUS": "53",
        "TYPE": 256
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.2 Interface for Modifying LUN Group Information

Function

This interface is used to modify a LUN group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	LUN group ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
APPTYPE	Optional	enum	Application type. **The value is described as follows:** 0: other 1: oracle 2: exchange 3: sqlserver 4: vmware 5: hyper-V
CONFIGDATA	Optional	string	Application configuration data. **Length:**0~255

Result

N/A

Example

- Modifying the LUN group whose ID is 0.

```
Request: PUT /deviceManager/rest/210235843910E6000009/lungroup/0
{
    "NAME": "LUNGroup0011"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.3 Interface for Implementing Associated Query of LUN Group Information

Function

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/associate

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 245: Mapping View 27: Snapshot 11: LUN
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **The value is described as follows:** Mapping view ID or snapshot ID or LUN ID.
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 256: LUN group
ID	Mandatory	string(uint32)	LUN group ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the LUN group has been added to a mapping view. **The value is described as follows:** false: no true: yes
APPTYPE	Mandatory	string(enum)	Application type. **The value is described as follows:** 0: other 1: oracle 2: exchange 3: sqlserver 4: vmware 5: hyper-V
GROUPTYPE	Mandatory	string(uint32)	Group type. **The value is described as follows:** 0: LUN group
CONFIGDATA	Mandatory	string	Application configuration data.

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Example

- Implementing associated query of LUN group information.

```
Request: GET /deviceManager/rest/210235843910E6000009/lungroup/associate?
ASSOCIATEOBJTYPE=11&ASSOCIATEOBJID=0&range=[0-100]


Response: {
    "data": [
        {
            "APPTYPE": "0",
            "CONFIGDATA": "",
            "DESCRIPTION": "",
            "GROUPTYPE": "0",
            "ID": "0",
            "ISADD2MAPPINGVIEW": "false",
            "NAME": "LUNGroup001",
            "TYPE": 256
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.4 Interface for Deleting a LUN Group Association

Function

This interface is used to delete a LUN group association.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/associate

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11: LUN 27: snapshot
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **The value is described as follows:** LUN ID or snapshot ID.
ID	Mandatory	uint32	LUN group ID.

Result

N/A

Example

- Disassociating LUN 0 from LUN group 0.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/lungroup/associate?
ID=0&ASSOCIATEOBJTYPE=11&ASSOCIATEOBJID=1

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.5 Interface for Batch Querying LUN Group Information

Function

This interface is used to batch query basic information about LUN groups.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ISADD2MAPPINGVIEW, and APPTYPE are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 256: LUN group
ID	Mandatory	string(uint32)	Object ID. **The value is described as follows:** LUN group ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the LUN group has been added to a mapping view. **The value is described as follows:** false: no true: yes
APPTYPE	Mandatory	string(enum)	Application type. **The value is described as follows:** 0: other 1: oracle 2: exchange 3: sqlserver 4: vmware 5: hyper-V
GROUPTYPE	Mandatory	string(uint32)	Group type. **The value is described as follows:** 0: LUN group
CAPCITY	Mandatory	string(uint64)	Configured capacity (bytes). **Unit:**bytes
CONFIGDATA	Mandatory	string	Application configuration data.

Example

- Batch querying basic information about LUN groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/lungroup?
filter=APPTYPE::0&range=[0-100]

Response: {
    "data": [
        {
```

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```
            "APPTYPE": "0",
            "CAPCITY": "2097152",
            "CONFIGDATA": "",
            "DESCRIPTION": "",
            "GROUPTYPE":"0",
            "ID": "0",
            "ISADD2MAPPINGVIEW": "false",
            "NAME": "LUNGroup001",
            "TYPE": 256
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.6 Interface for Querying the Number of LUN Group

Function

This interface is used to query the number of LUN groups.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ISADD2MAPPINGVIEW, and APPTYPE are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried LUN groups.

Example

- Querying the number of LUN groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/lungroup/count

Response: {
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.7 Interface for Creating a LUN Group Association

Function

This interface is used to create a LUN group association.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/associate

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/ Conditional	Type	Description
ID	Mandatory	uint32	LUN group ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11:LUN 27:snapshot
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **The value is described as follows:** LUN ID or snapshot ID.

Result

N/A

Example

- Associating LUN 1 with LUN group 0.

```
Request: POST /deviceManager/rest/210235843910E6000009/lungroup/associate
{
    "ID": "0",
    "ASSOCIATEOBJTYPE": 11,
    "ASSOCIATEOBJID": "1"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.8 Interface for Querying LUN Group Information

Function

This interface is used to query information about a LUN group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	LUN group ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 256: LUN group
ID	Mandatory	string(uint32)	LUN group ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.).
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the LUN group has been added to a mapping view. **The value is described as follows:** false: no true: yes

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Parameter	Mandatory/ Conditional	Type	Description
APPTYPE	Mandatory	string(enum)	Application type. **The value is described as follows:** 0: other 1: oracle 2: exchange 3: sqlserver 4: vmware 5: hyper-V
GROUPTYPE	Mandatory	string(uint32)	Group type. **The value is described as follows:** 0: LUN group
CAPCITY	Mandatory	string(uint64)	Configured capacity. **Unit:**bytes
CONFIGDATA	Mandatory	string	Application configuration data.

Example

- Querying information about the LUN group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/lungroup/0

Response:
{
    "data": [
        {
            "APPTYPE": "0",
            "CAPCITY": "2097152",
            "CONFIGDATA": "",
            "DESCRIPTION": "",
            "GROUPTYPE": "0",
            "ID": "0",
            "ISADD2MAPPINGVIEW": "false",
            "NAME": "LUNGroup001",
            "TYPE": 256
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.6.9 Interface for Deleting a LUN Group

Function

This interface is used to delete a LUN group.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lungroup/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	LUN group ID.

Result

N/A

Example

- Deleting the LUN group whose ID is 0.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/lungroup/0

Response: {
    "data": { },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.7 host_group

4.9.7.1 Interface for Implementing Associated Query of Host Group Information

Function

This interface is used to implement associated query of host group information.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 245: Mapping view 21: Host
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 14: Host Group
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the host group has been added to a mapping. **The value is described as follows:** false: no true: yes

Example

- Implementing associated query of host group information.

```
Request: GET /deviceManager/rest/210235843910E6000009/hostgroup/associate?
ASSOCIATEOBJTYPE=245&ASSOCIATEOBJID=2&range=[0-100]

Response:
{
     "data": [
        {
            "DESCRIPTION": "",
            "ID": "1",
            "ISADD2MAPPINGVIEW": "true",
            "NAME": "HostGroup002",
            "TYPE": 21
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.7.2 Interface for Creating a Host Group

Function

This interface is used to create a host group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~63

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 14: Host Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the host group has been added to a mapping. **The value is described as follows:** false: no true: yes

Example

- Creating a host group.

```
Request: POST /deviceManager/rest/210235843910E6000009/hostgroup
{
```

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```
    "NAME": "HostGroup001",
    "DESCRIPTION": "test craete hostGroup rest"
}

Response:
{
    "data": {
        "DESCRIPTION": "test craete hostGroup rest",
        "ID": "0",
        "ISADD2MAPPINGVIEW": "false",
        "NAME": "HostGroup001",
        "TYPE": 14
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.7.3 Interface for Modifying Host Group Information

Function

This interface is used to modify a host group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HostGroup ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
DESCRIPTION	Optional	string	Description. **Length:**0~63

Result

N/A

Example

- Modifying the host group whose ID is 0.

```
Request: PUT /deviceManager/rest/210235843910E6000009/hostgroup/0
{
    "NAME": "HostGroup00112"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.7.4 Interface for Querying Host Group Information

Function

This interface is used to query information about a host group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host group ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 14: Host Group.
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPPINGVIEW	Mandatory	string(bool)	Indicates whether the host group has been added to a mapping. **The value is described as follows:** false: no true: yes

Example

- Querying information about the host group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/hostgroup/0
Response: {
    "data": [
        {
            "DESCRIPTION": "",
            "ID": "0",
            "ISADD2MAPPINGVIEW": "false",
            "NAME": "hostgroup1",
            "TYPE": 14
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.7.5 Interface for Creating a Host Group Association

Function

This interface is used to create a host group association.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup/associate

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host group ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 21: Host
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Example

- Associating host 0 with host group 2.

```
Request: POST /deviceManager/rest/210235843910E6000009/hostgroup/associate
{
    "ID": "2",
    "ASSOCIATEOBJTYPE": 21,
    "ASSOCIATEOBJID": "0"
}

Response:
{
    "data": { },
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.9.7.6 Interface for Deleting a Host Group Association

Function

This interface is used to delete a host group association.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/host/associate

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HostGroup ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 21: Host
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Example

- Disassociating host 0 from host group 0.

```
Request: DELETE  /deviceManager/rest/210235843910E6000009/host/associate?
ID=0&ASSOCIATEOBJTYPE=21&ASSOCIATEOBJID=0

Response:
{
```

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```
    "data": {},
    "error": {
         "code": 0,
         "description": "0"
     }
}
```

4.9.7.7 Interface for Batch Querying Host Group Information

Function

This interface is used to batch query basic information about host groups.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 14: Host Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
ISADD2MAPINGVIEW	Mandatory	string(bool)	Indicates whether the host group has been added to a mapping view. **The value is described as follows:** false: no true: yes

Example

- Batch querying basic information about host groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/hostgroup?range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "ID": "0",
            "ISADD2MAPPINGVIEW": "false",
            "NAME": "hostgroup1",
            "TYPE": 14
        },
        {
            "DESCRIPTION": "",
            "ID": "1",
            "ISADD2MAPPINGVIEW": "false",
            "NAME": "HostGroup002",
            "TYPE": 14
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.9.7.8 Interface for Querying the Number of Host Group

Function

This interface is used to query the number of host groups.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID and NAME are supported.
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 245: Mapping view 21: Host
ASSOCIATEOBJID	Optional	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried host groups.

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Example

- Querying the number of host groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/hostgroup/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.7.9 Interface for Deleting a Host Group

Function

This interface is used to delete a host group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hostgroup/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Host group ID.

Result

N/A

Example

- Deleting the host group whose ID is 0.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/hostgroup/0
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8 port_group

4.9.8.1 Interface for Implementing Associated Query of Port Group Information

Function

This interface is used to implement associated query of port group information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 212: FC port 213: Ethernet port 252: FcoE port 245: Mapping view 16500: IB port

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **The value is described as follows:** Port ID or Mapping view ID **Note:**The returned information is blank if the parameter is not delivered or fails to be delivered.
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 257: Port Group.
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

Example

- Implementing associated query of port group information.

```
Request: GET /deviceManager/rest/210235843910E6000009/portgroup/associate?
ASSOCIATEOBJTYPE=212&ASSOCIATEOBJID=131072&range=[0-100]

Response: {
```

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```
    "data": [
        {
            "DESCRIPTION": "",
            "ID": "0",
            "NAME": "PortGroup001",
            "TYPE": 257
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8.2 Interface for Deleting a Port Group

Function

This interface is used to delete a port group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Port Group ID.

Result

N/A

Example

- Deleting a port group whose ID is 1.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/portgroup/1

Response:
{
    "data": {},
```

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```
    "error": {
    "code": 0,
    "description": "0"
    }
}
```

4.9.8.3 Interface for Modifying Port Group Information

Function

This interface is used to modify a port group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Port Group ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~63

Result

N/A

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Example

- Modifying the port group whose ID is 1.

```
Request: PUT /deviceManager/rest/210235843910E6000009/portgroup/1
{
    "DESCRIPTION": "123",
    "NAME": "PortGroup003"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8.4 Interface for Deleting a Port Group Association

Function

This interface is used to delete a port group association.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/port/associate/portgroup

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	PortGroup ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 212: FC port 213: Ethernet port 252: FcoE port 16500: IB port

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **The value is described as follows:** Port ID.

Result

N/A

Example

- Disassociating port 30000000 from port group 0.

```
Request: DELETE  /deviceManager/rest/210235843910E6000009/port/associate/
portgroup?ID=0&ASSOCIATEOBJTYPE=212&ASSOCIATEOBJID=30000000

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8.5 Interface for Querying Port Group Information

Function

This interface is used to query basic information about a port group.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Port Group ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 257: Port Group
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

Example

- Querying basic information about the port group whose ID is 0.

```
Request: GET /deviceManager/rest/210235843910E6000009/portgroup/0

Response:
{
    "data": {
        "DESCRIPTION": "",
        "ID": "0",
        "NAME": "PortGroup001",
        "TYPE": 257
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8.6 Interface for Creating a Port Group

Function

This interface is used to create a port group.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~63
ID	Optional	string	Object ID. **The value is described as follows:** Contains only digits. For 2200 V3, the value ranges from 0 to 127. For 2600 V3, the value ranges from 0 to 1023. For 5300 V3,5500 V3,5600 V3 and 5800 V3, the value ranges from 0 to 2047. For 6800 V3, the value ranges from 0 to 4095. For 18000 V3, the value ranges from 0 to 8191.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 257: Port Group
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

Example

- Creating a port group.

```
Request: POST /deviceManager/rest/210235843910E6000009/portgroup
{
    "DESCRIPTION": "123",
    "NAME": "PortGroup003"
}

Response:{
    data: {
        "DESCRIPTION": "123",
        "ID": "2",
        "NAME": "PortGroup003",
        "TYPE": 257
    },
    error: {
        code: 0,
        description: "0"
    }
}
```

4.9.8.7 Interface for Creating a Port Group Association

Function

This interface is used to create a port group association.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/port/associate/portgroup

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	PortGroup ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 212: FC port 213: Ethernet port 252: FcoE port 16500: IB port
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **The value is described as follows:** Port ID.

Result

N/A

Example

- Creating a port group association.

```
Request:POST /deviceManager/rest/210235843910E6000009/port/associate/portgroup
{
    "ASSOCIATEOBJTYPE": 212,
    "ASSOCIATEOBJID": "1114880",
    "ID": "1"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8.8 Interface for Batch Querying Port Group Information

Function

This interface is used to batch query basic information about port groups.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 257: Port Group

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

Example

- Batch querying basic information about port groups.

```
Request:GET /deviceManager/rest/210235843910E6000009/portgroup?range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "ID": "0",
            "NAME": "PortGroup001",
            "TYPE": 257
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.8.9 Interface for Querying the Number of Port Group

Function

This interface is used to query the number of port groups.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/portgroup/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID are supported.
ASSOCIATEOBJID	Optional	string	Associated object ID.
ASSOCIATEOBJTYPE	Optional	enum	Type number of the managed object. **The value is described as follows:** 212: FC port 213: Ethernet port 252: FcoE port 245: Mapping view 16500: IB port

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried port groups.

Example

- Querying the number of port groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/portgroup/count

Response: {
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.9 lun_destroy_data

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4.9.9.1 Interface for Creating a Task for Destroying LUN Data

Function

This interface is used to create a task for destroying LUN data.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to erase data on LUN ({0}).

This operation will erase all data on the LUN.

Suggestion: Before performing this operation, ensure that data on the LUN has been backed up or is allowed to be erased.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lundestroydata

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 11: LUN **Default:**11: LUN **Note:**The field is not used.
PARENTID	Mandatory	string	ID of the parent object (LUN ID).

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Parameter	Mandatory/Optional/Conditional	Type	Description
DESTROYTYPE	Mandatory	enum	Destroying type. **The value is described as follows:** 1: DoD(Overwrite data based on the US Department of Defense standards for erasing original data) 2: custom
WRITECOUNT	Conditional	int	Count of writes input by users. **The value is described as follows:** 3~99. **Note:**This parameter needs to be delivered if the value of DESTROYTYPE is 2.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 270: LUNDestroyData
ID	Mandatory	string	ID of the task to destroy LUN data.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 11: LUN **Note:**The field is not used.
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object. **Note:**The field is not used.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 53: initializing
DESTROYTYPE	Mandatory	enum	Destroying type. **The value is described as follows:** 1: DoD(Overwrite data based on the US Department of Defense standards for erasing original data) 2: custom
WRITECOUNT	Mandatory	string(int)	Count of writes input by users. **The value is described as follows:** 3~99. **Note:** If the value of DESTROYTYPE is 1, 0 will be returned; If the value of DESTROYTYPE is 1, 3 to 99 will be returned.

Example

- Creating a task for destroying LUN data.

```
Request: POST /deviceManager/rest/1016964156/lundestroydata
{
    "PARENTTYPE": 11,
    "PARENTID": "5",
    "DESTROYTYPE": 1
}

Response:
{
    "data": {
        "DESCRIPTION": "1",
        "HEALTHSTATUS": "1",
        "ID": "1",
```

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```
        "PARENTID": "5",
        "PARENTNAME": "",
        "PARENTTYPE": 11,
        "RUNNINGSTATUS": "53",
        "TYPE": 270,
        "WRITECOUNT": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.9.9.2 Interface for Deleting a Task for Destroying LUN Data

Function

This interface is used to delete a task for destroying LUN data.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lundestroydata/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory		LUN ID.

Result

N/A

Example

- Deleting a task for destroying LUN data.

```
Request: DELETE /deviceManager/rest/1016964156/lundestroydata/8

Response:
{
    "data": {
```

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```
            },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10 Storage pool

4.10.1 storage_pool

4.10.1.1 Interface for Querying Globle Migration Level

Function

This interface is used to query the global migration level.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool/getmigrationlevel

Access Method

PUT

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 32785:Migration level

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Parameter	Mandatory/ Conditional	Type	Description
ALLMIGRATIONSPEEDLEVEL	Mandatory	string(enum)	Migration Speed Level. **The value is described as follows:** 1:Low 2:Midium 3:High

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Querying the global migration level.

```
Request: PUT /deviceManager/rest/210235843710E7000007/storagepool/
getmigrationlevel

Response:
{
    "data": {
        "ALLMIGRATIONSPEEDLEVEL": "2",
        "TYPE": 32785
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.1.2 Interface for Modifying Globle Migration Level

Function

This interface is used to modify global migration level.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool/setmigrationlevel

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ALLMIGRATIONSPEEDLEVEL	Mandatory	string(enum)	Migration Speed Level. **The value is described as follows:** 1:Low 2:Midium 3:High

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Modifying the global migration level.

```
Request: PUT /deviceManager/rest/210235843710E7000007/storagepool/
setmigrationlevel
{
    "ALLMIGRATIONSPEEDLEVEL": "1"
}

Response:
{
    "data": {
        "ALLMIGRATIONSPEEDLEVEL": "1",
        "TYPE": 32785
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.1.3 Interface for Deleting a Storage Pool

Function

This interface is used to delete a storage pool.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool/${id}

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Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	ID of the storage pool.

Result

N/A

Example

- Deleting a storage pool.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/storagepool/2

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.1.4 Interface for Modifying Storage Pool Information

Function

This interface is used to modify storage pools.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to change (expand or shrink) storage pool? ({0}) capacity. If SmartTier has been activated for this storage pool, shrinking the capacity of a tier will cause less data to be migrated to this tier.

Suggestion: Before performing this operation, ensure that the you have selected the correct storage pool and capacity.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	ID of the storage pool.
NAME	Optional	string	Name of the storage pool. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
USERCONSUMEDCAPACITYTHRESHOLD	Optional	uint32	Used capacity threshold. **The value is described as follows:** [1,95] **Unit:**%
TIER0CAPACITY	Optional	uint64	Raw capacity of tier 0. **Unit:**sectors
TIER1CAPACITY	Optional	uint64	Raw capacity of tier 1. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
TIER2CAPACITY	Optional	uint64	Raw capacity of tier 2. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER0RAIDLV	Optional	enum	RAID level of tier 0. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3
TIER0RAIDDISKNUM	Optional	uint32	Number of member disks in a RAID group of tier 0.
TIER0DISKTYPE	Optional	enum	Disk type of tier 0. **The value is described as follows:** 3: SSD 10: SSD SED
TIER1RAIDLV	Optional	enum	RAID level of tier 1. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:**This field is not supported by V3 all-flash array series.
TIER1RAIDDISKNUM	Optional	uint32	Number of member disks in a RAID group of tier 1. **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER1DISKTYPE	Optional	enum	Disk type of tier 1. **The value is described as follows:** 1: SAS 8: SAS SED **Note:**This field is not supported by V3 all-flash array series.
TIER2RAIDLV	Optional	enum	RAID level of tier 2. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:**This field is not supported by V3 all-flash array series.
TIER2RAIDDISKNUM	Optional	uint32	Number of member disks in a RAID group of tier 2. **Note:**This field is not supported by V3 all-flash array series.
ENABLESSDBUFFER	Optional	bool	Whether to enable SSD buffer mode. **The value is described as follows:** false: disabled true: enbaled **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER2DISKTYPE	Optional	enum	Disk type of tier 2. **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:**This field is not supported by V3 all-flash array series.

Result

N/A

Example

- Modifying storage pools.

```
Request: PUT /deviceManager/rest/210235843710E7000007/storagepool/2
{
    "DESCRIPTION": "123123"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.1.5 Interface for Batch Querying Storage Pool Information

Function

This interface is used to batch query basic information about storage pools.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, RUNNINGSTATUS, and HEALTHSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 216: storage pool
ID	Mandatory	string(uint32)	ID of the storage pool.
NAME	Mandatory	string	Name of the storage pool. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.).

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** ID of the disk domain.
PARENTNAME	Mandatory	string	Name of the parent object. **The value is described as follows:** Name of the disk domain.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: initializing
DESCRIPTION	Mandatory	string	Description.
USERTOTALCAPACITY	Mandatory	string(uint64)	Total capacity. **Unit:**sectors
USERFREECAPACITY	Mandatory	string(uint64)	Free capacity. **Unit:**sectors
USERCONSUMEDCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
USERCONSUMEDCAPACITYPERCENTAGE	Mandatory	string(uint32)	Used capacity ratio. **Unit:**%
USERCONSUMEDCAPACITYTHRESHOLD	Mandatory	string(uint32)	Used capacity threshold. **The value is described as follows:** [1,95] **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
DSTSTATUS	Mandatory	string(enum)	Dynamic storage tiering (DST). **The value is described as follows:** 1: active 2: inactive **Note:**This field is not supported by V3 all-flash array series.
DSTRUNNINGSTATUS	Mandatory	string(enum)	DST operating status. **The value is described as follows:** 1: ready 2: migrated 3: suspended **Note:**This field is not supported by V3 all-flash array series.
EXTENTSIZE	Mandatory	string(uint32)	Migration granularity. **The value is described as follows:** [512K,64M]. The value is a multiple. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONMODE	Mandatory	string(enum)	Migration triggering mode. **The value is described as follows:** 1: dynamic 2: manual **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
IMMEDIATEMIGRATION	Mandatory	string(bool)	Immediate migration switch. **The value is described as follows:** false: off true: on **Note:**This field is not supported by V3 all-flash array series.
PAUSEMIGRATIONS-WITCH	Mandatory	string(bool)	Migration suspension switch. **The value is described as follows:** false: off true: on **Note:**This field is not supported by V3 all-flash array series.
MOVEUPDATA	Mandatory	string(uint64)	Amount of data to be promoted. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVEDOWNDATA	Mandatory	string(uint64)	Amount of data to be demoted. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONESTIMA-TEDTIME	Mandatory	string(uint64)	Migration time. **Unit:**seconds **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER0RAIDLV	Mandatory	string(enum)	RAID level of tier 0. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:**0 is returned if this field is invalid.
TIER0RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 0. **Note:**0 is returned if this field is invalid.
TIER0DISKTYPE	Mandatory	string(enum)	Disk type of tier 0. **The value is described as follows:** 3: SSD 10: SSD SED **Note:**0 is returned if this field is invalid.
TIER1RAIDLV	Mandatory	string(enum)	RAID level of tier 1. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 1. **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER1DISKTYPE	Mandatory	string(enum)	Disk type of tier 1. **The value is described as follows:** 1: SAS 8: SAS SED **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2RAIDLV	Mandatory	string(enum)	RAID level of tier 2. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER2RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 2. **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2DISKTYPE	Mandatory	string(enum)	Disk type of tier 2. **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER0STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 0. **Unit:**sectors **Note:**0 is returned if this field is invalid.
TIER1STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 1. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 2. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
MOVEDUPDATA	Mandatory	string(uint64)	Amount of data that has been promoted, expressed in sectors. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVEDDOWNDATA	Mandatory	string(uint64)	Amount of data that has been demoted, expressed in sectors. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONSCHEDU-LEID	Mandatory	string(array)	ID of the migration schedule. **Note:**This field is not supported by V3 all-flash array series.
MONITORSCHEDULEI D	Mandatory	string(array)	ID of the monitoring schedule. **Note:**This field is not supported by V3 all-flash array series.
RESERVEDCAPACITY	Mandatory	string(uint64)	Reserved capacity of the pool, expressed in sectors. **Unit:**sectors
TIER0CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 0. **Unit:**sectors **Note:**0 is returned if this field is invalid.
TIER1CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 1. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER2CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 2. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
REPLICATIONCAPACI-TY	Mandatory	string(uint64)	Capacity consumed by all LUNs for data protection . **Unit:**sectors **Note:**The capacity is used for snapshot COW.
ENABLESSDBUFFER	Mandatory	string(bool)	Whether to enable SSD buffer mode. **The value is described as follows:** false: disabled true: enbaled **Note:**This field is not supported by V3 all-flash array series.
DATASPACE	Mandatory	string(uint64)	Available capacity for creating LUNs or filesystems in the storage pool. **Unit:**sectors **Note:**Which equals the remaining storage pool capacity minus metadata capacity.2200 V3 (8 GB memory) and 2800 V3 do not support file systems.
ENABLESMARTCACHE	Mandatory	string(bool)	Indicates whether SmartCache is enabled. **The value is described as follows:** false: disabled true: enbaled **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
USAGETYPE	Mandatory	string(enum)	Storage pool usage. **The value is described as follows:** 1: LUN 2: file system **Note:**2200 V3 (8 GB memory) and 2800 V3 do not support file systems.
LUNCONFIGEDCAPACITY	Mandatory	string(uint64)	Configured Capacity. **Unit:**sectors
TOTALFSCAPACITY	Mandatory	string(uint64)	TotalFSCapacity. **Unit:**sectors
IMMEDIATEMIGRATIONDURATIONTIME	Mandatory	string(uint32)	Immediate Migration Duration Time. **Unit:**seconds **Note:**This field is not supported by V3 all-flash array series.
REPCAPACITYTHRES-HOLD	Mandatory	string(uint32)	The alarm threshold of protection capacity for protecting data of luns in storage pool. **The value is described as follows:** [1,100] **Unit:**%
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true: valid false: invalid **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
reductionInvolvedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartDedupe and SmartCompression. **Unit:**sectors
dedupedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartDedupe. **Unit:**sectors
compressedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartCompression. **Unit:**sectors
dedupRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartDedupe to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%
compressRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartCompression to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%
dedupCompressRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartDedupe and SmartCompression to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%

Example

- Batch querying basic information about storage pools.

```
Request: GET /deviceManager/rest/210235843710E7000007/storagepool?
range=[0-100]

Response:
{
    "data": [
        {
```

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```
            "DATASPACE": "1048576",
            "DESCRIPTION": "adsf",
            "DSTRUNNINGSTATUS": "1",
            "DSTSTATUS": "2",
            "ENABLESMARTCACHE": "false",
            "ENABLESSDBUFFER": "false",
            "EXTENTSIZE": "8192",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "IMMEDIATEMIGRATION": "0",
            "IMMEDIATEMIGRATIONDURATIONTIME": "0",
            "ISSMARTTIERENABLE": "false",
            "LUNCONFIGEDCAPACITY": "16777216",
            "MIGRATIONESTIMATEDTIME": "0",
            "MIGRATIONMODE": "2",
            "MIGRATIONSCHEDULEID": "[]",
            "MONITORSCHEDULEID": "[]",
            "MOVEDDOWNDATA": "0",
            "MOVEDOWNDATA": "0",
            "MOVEDUPDATA": "0",
            "MOVEUPDATA": "0",
            "NAME": "StoragePool001",
            "PARENTID": "0",
            "PARENTNAME": "Default_DiskDomain001",
            "PAUSEMIGRATIONSWITCH": "0",
            "REPCAPACITYTHRESHOLD": "100",
            "REPLICATIONCAPACITY": "0",
            "RESERVEDCAPACITY": "0",
            "RUNNINGSTATUS": "27",
            "TIER0CAPACITY": "0",
            "TIER0DISKTYPE": "0",
            "TIER0RAIDDISKNUM": "0",
            "TIER0RAIDLV": "0",
            "TIER0STRIPEDEPTH": "0",
            "TIER1CAPACITY": "20971520",
            "TIER1DISKTYPE": "1",
            "TIER1RAIDDISKNUM": "5",
            "TIER1RAIDLV": "2",
            "TIER1STRIPEDEPTH": "256",
            "TIER2CAPACITY": "0",
            "TIER2DISKTYPE": "0",
            "TIER2RAIDDISKNUM": "0",
            "TIER2RAIDLV": "0",
            "TIER2STRIPEDEPTH": "0",
            "TOTALFSCAPACITY": "0",
            "TYPE": 216,
            "USAGETYPE": "1",
            "USERCONSUMEDCAPACITY": "19529728",
            "USERCONSUMEDCAPACITYPERCENTAGE": "93",
            "USERCONSUMEDCAPACITYTHRESHOLD": "80",
            "USERFREECAPACITY": "1441792",
            "USERTOTALCAPACITY": "20971520",
            "compressRatio":"50",
            "compressedCapacity":"42949672",
            "dedupCompressRatio":"50",
            "dedupRatio":"50",
            "dedupedCapacity":"42949672",
            "reductionInvolvedCapacity":"85899344"
        }
    ],
        "error": {
            "code": 0,
            "description": "0"
        }
}
```


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4.10.1.6 Interface for Querying Storage Pool Information

Function

This interface is used to query basic information about storage pools.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	ID of the storage pool.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 216: storage pool
ID	Mandatory	string(uint32)	ID of the storage pool.
NAME	Mandatory	string	Name of the storage pool. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.).

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** ID of the disk domain.
PARENTNAME	Mandatory	string	Name of the parent object. **The value is described as follows:** Name of the disk domain.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: Initializing
DESCRIPTION	Mandatory	string	Description. **The value is described as follows:** Contains 0 to 255 characters.
USERTOTALCAPACITY	Mandatory	string(uint64)	Total capacity. **Unit:**sectors
USERFREECAPACITY	Mandatory	string(uint64)	Free capacity. **Unit:**sectors
USERCONSUMEDCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
USERCONSUMEDCAPACITYPERCENTAGE	Mandatory	string(uint32)	Used capacity ratio. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
USERCONSUMEDCAPACITYTHRESHOLD	Mandatory	string(uint32)	Used capacity threshold. **The value is described as follows:** [1,95] **Unit:**%
DSTSTATUS	Mandatory	string(enum)	Dynamic storage tiering (DST). **The value is described as follows:** 1: active 2: inactive **Note:**This field is not supported by V3 all-flash array series.
DSTRUNNINGSTATUS	Mandatory	string(enum)	DST operating status. **The value is described as follows:** 1: ready 2: migrated 3: suspended **Note:**This field is not supported by V3 all-flash array series.
EXTENTSIZE	Mandatory	string(uint32)	Migration granularity. **The value is described as follows:** [512K,64M]. The value is a multiple. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONMODE	Mandatory	string(enum)	Migration triggering mode. **The value is described as follows:** 1: dynamic 2: manual **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
IMMEDIATEMIGRATION	Mandatory	string(bool)	Immediate migration switch. **The value is described as follows:** false: off true: on **Note:**This field is not supported by V3 all-flash array series.
PAUSEMIGRATIONS-WITCH	Mandatory	string(bool)	Migration suspension switch. **The value is described as follows:** false: off true: on **Note:**This field is not supported by V3 all-flash array series.
MOVEUPDATA	Mandatory	string(uint64)	Amount of data to be promoted. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVEDOWNDATA	Mandatory	string(uint64)	Amount of data to be demoted. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONESTIMA-TEDTIME	Mandatory	string(uint64)	Migration time. **Unit:**seconds **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER0RAIDLV	Mandatory	string(enum)	RAID level of tier 0. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:**0 is returned if this field is invalid.
TIER0RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 0. **Note:**0 is returned if this field is invalid.
TIER0DISKNUM	Conditional	string(uint32)	Number of disks on tier 0. **Note:**This field is returned when tier 0 exists.
TIER0DISKTYPE	Mandatory	string(enum)	Disk type of tier 0. **The value is described as follows:** 3: SSD 10: SSD SED **Note:**0 is returned if this field is invalid.
TIER0DISKLIST	Conditional	array	Disk list of tier 0. **Note:**This field is returned when tier 0 exists.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1RAIDLV	Mandatory	string(enum)	RAID level of tier 1. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER1RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 1. **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER1DISKNUM	Conditional	string(uint32)	Number of disks on tier 1. **Note:** This field is returned when tier 1 exists. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1DISKTYPE	Mandatory	string(enum)	Disk type of tier 1. **The value is described as follows:** 1: SAS 8: SAS SED **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER1DISKLIST	Conditional	array	Disk list of tier 1. **Note:** This field is returned when tier 1 exists. This field is not supported by V3 all-flash array series.
TIER2RAIDLV	Mandatory	string(enum)	RAID level of tier 2. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 2. **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER2DISKNUM	Conditional	string(uint32)	Number of disks on tier 2. **Note:** This field is returned when tier 2 exists. This field is not supported by V3 all-flash array series.
TIER2DISKTYPE	Mandatory	string(enum)	Disk type of tier 2. **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2DISKLIST	Conditional	array	Disk list of tier. **Note:** This field is returned when tier 2 exists. This field is not supported by V3 all-flash array series.
TIER0STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 0. **Unit:**sectors **Note:**0 is returned if this field is invalid.
TIER1STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 1. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER2STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 2. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
MOVEDUPDATA	Mandatory	string(uint64)	Amount of data that has been promoted, expressed in sectors. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVEDDOWNDATA	Mandatory	string(uint64)	Amount of data that has been demoted, expressed in sectors. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONSCHEDU-LEID	Mandatory	string(array)	ID of the migration schedule. **Note:**This field is not supported by V3 all-flash array series.
MONITORSCHEDULEI D	Mandatory	string(array)	ID of the monitoring schedule. **Note:**This field is not supported by V3 all-flash array series.
TIER0CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 0. **Unit:**sectors **Note:**0 is returned if this field is invalid.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 1. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 2. **Unit:**sectors **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
REPLICATIONCAPACI-TY	Mandatory	string(uint64)	Capacity consumed by all LUNs for data protection . **The value is described as follows:** The capacity is used for snapshot COW. **Unit:**sectors
DATASPACE	Mandatory	string(uint64)	Available capacity for creating LUNs or filesystems in the storage pool. **The value is described as follows:** Which equals the remaining storage pool capacity minus metadata capacity. **Unit:**sectors **Note:**Which equals the remaining storage pool capacity minus metadata capacity2200 V3 (8 GB memory) and 2800 V3 do not support file systems.

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Parameter	Mandatory/ Conditional	Type	Description
USAGETYPE	Mandatory	string(enum)	Storage pool usage. **The value is described as follows:** 1: LUN 2: file system **Note:**2200 V3 (8 GB memory) and 2800 V3 do not support file systems.
LUNCONFIGEDCAPACITY	Mandatory	string(uint64)	Configured Capacity. **Unit:**sectors
TOTALFSCAPACITY	Mandatory	string(uint64)	TotalFSCapacity. **Unit:**sectors
ENABLESSDBUFFER	Mandatory	string(bool)	Whether to enable SSD buffer mode. **The value is described as follows:** false: disabled true: enbaled **Note:**This field is not supported by V3 all-flash array series.
ENABLESMARTCACHE	Mandatory	string(bool)	Whether to enable SmartCache. **The value is described as follows:** true:on false:off **Note:**This field is not supported by V3 all-flash array series.
RESERVEDCAPACITY	Mandatory	string(uint64)	Reserved Capacity. **Unit:**sectors
IMMEDIATEMIGRATIONDURATIONTIME	Mandatory	string(uint32)	Immediate Migration Duration Time. **Unit:**seconds **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true:valid false:invalid **Note:**This field is not supported by V3 all-flash array series.
REPCAPACITYTHRES-HOLD	Mandatory	string(uint32)	The alarm threshold of protection capacity for protecting data of luns in storage pool. **The value is described as follows:** [1,100] **Unit:**%
reductionInvolvedCapaci-ty	Mandatory	string(uint64)	Capacity Saved by SmartDedupe and SmartCompression. **Unit:**sectors
dedupedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartDedupe. **Unit:**sectors
compressedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartCompression. **Unit:**sectors
dedupRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartDedupe to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
compressRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartCompression to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%
dedupCompressRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartDedupe and SmartCompression to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%

Example

- Querying basic information about storage pools.

```
Request: GET /deviceManager/rest/210235843710E7000007/storagepool/0

Response:
 {
    "data": {
        "DATASPACE": "1048576",
        "DESCRIPTION": "adsf",
        "DSTRUNNINGSTATUS": "1",
        "DSTSTATUS": "2",
        "ENABLESMARTCACHE": "false",
        "ENABLESSDBUFFER": "false",
        "EXTENTSIZE": "8192",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "IMMEDIATEMIGRATION": "0",
        "IMMEDIATEMIGRATIONDURATIONTIME": "0",
        "ISSMARTTIERENABLE": "false",
        "LUNCONFIGEDCAPACITY": "16777216",
        "MIGRATIONESTIMATEDTIME": "0",
        "MIGRATIONMODE": "2",
        "MIGRATIONSCHEDULEID": "[]",
        "MONITORSCHEDULEID": "[]",
        "MOVEDDOWNDATA": "0",
        "MOVEDOWNDATA": "0",
        "MOVEDUPDATA": "0",
        "MOVEUPDATA": "0",
        "NAME": "StoragePool001",
        "PARENTID": "0",
        "PARENTNAME": "Default_DiskDomain001",
        "PAUSEMIGRATIONSWITCH": "0",
        "REPCAPACITYTHRESHOLD": "100",
        "REPLICATIONCAPACITY": "0",
        "RESERVEDCAPACITY": "0",
        "RUNNINGSTATUS": "27",
        "TIER0CAPACITY": "0",
```

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```
        "TIER0DISKTYPE": "0",
        "TIER0RAIDDISKNUM": "0",
        "TIER0RAIDLV": "0",
        "TIER0STRIPEDEPTH": "0",
        "TIER1CAPACITY": "20971520",
        "TIER1DISKTYPE": "1",
        "TIER1RAIDDISKNUM": "5",
        "TIER1RAIDLV": "2",
        "TIER1STRIPEDEPTH": "256",
        "TIER2CAPACITY": "0",
        "TIER2DISKTYPE": "0",
        "TIER2RAIDDISKNUM": "0",
        "TIER2RAIDLV": "0",
        "TIER2STRIPEDEPTH": "0",
        "TOTALFSCAPACITY": "0",
        "TYPE": 216,
        "USAGETYPE": "1",
        "USERCONSUMEDCAPACITY": "19529728",
        "USERCONSUMEDCAPACITYPERCENTAGE": "93",
        "USERCONSUMEDCAPACITYTHRESHOLD": "80",
        "USERFREECAPACITY": "1441792",
        "USERTOTALCAPACITY": "20971520",
        "compressRatio":"50",
        "compressedCapacity":"42949672",
        "dedupCompressRatio":"50",
        "dedupRatio":"50",
        "dedupedCapacity":"42949672",
        "reductionInvolvedCapacity":"85899344"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.10.1.7 Interface for Creating a Storage Pool

Function

This interface is used to create a storage pool.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to use {NearLine SAS| SATA} disks to create a storage pool.

Suggestion: RAID6 level is recommended according to the reliability of {NearLine SAS| SATA} disks, to have a higher data security than other RAID types.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name of the storage pool. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
PARENTID	Optional	string	ID of the parent object. **The value is described as follows:** ID of the disk domain. **Default:**0
ID	Optional	uint32	ID of the storage pool. **Default:**0
DESCRIPTION	Optional	string	Description. **Length:**0~255
USERCONSUMEDCAPACITYTHRESHOLD	Mandatory	uint32	Used capacity threshold. **The value is described as follows:** [1,95] **Unit:**%
EXTENTSIZE	Optional	uint32	Migration granularity. **The value is described as follows:** [512K,64M]. The value is a multiple. **Default:**4MB **Unit:**sectors **Note:**This parameter is not delivered for non-typical configuration (IS_DEFAULT_RAID_POLICY). This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
PAUSEMIGRATIONS-WITCH	Optional	bool	Migration suspension switch. **The value is described as follows:** false: off true: on **Default:**false: off **Note:**This parameter is invalid for file systems. This field is not supported by V3 all-flash array series.
TIER0RAIDLV	Optional	enum	RAID level of tier 0. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Default:**1: RAID 10
TIER0RAIDDISKNUM	Optional	uint32	Number of member disks in a RAID group of tier 0.
TIER0DISKTYPE	Conditional	enum	Disk type of tier 0. **The value is described as follows:** 3: SSD 10: SSD SED **Note:**This parameter must be delivered when tier 0 is selected.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER1RAIDLV	Optional	enum	RAID level of tier 1. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Default:**2: RAID 5 **Note:**This field is not supported by V3 all-flash array series.
TIER1RAIDDISKNUM	Optional	uint32	Number of member disks in a RAID group of tier 1. **Note:**This field is not supported by V3 all-flash array series.
TIER1DISKTYPE	Conditional	enum	Disk type of tier 1. **The value is described as follows:** 1: SAS 8: SAS SED **Note:** This parameter must be delivered when tier 1 is selected. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER2RAIDLV	Optional	enum	RAID level of tier 2. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Default:**5: RAID 6 **Note:**This field is not supported by V3 all-flash array series.
TIER2RAIDDISKNUM	Optional	uint32	Number of member disks in a RAID group of tier 2. **Note:**This field is not supported by V3 all-flash array series.
TIER2DISKTYPE	Conditional	enum	Disk type of tier 2. **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** This parameter must be delivered when tier 2 is selected. This field is not supported by V3 all-flash array series.
TIER0STRIPEDEPTH	Optional	uint32	Stripe depth of tier 0. **The value is described as follows:** [32K,512K]. The value is a multiple. **Unit:**KB

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER1STRIPEDEPTH	Optional	uint32	Stripe depth of tier 1. **The value is described as follows:** [32K,512K]. The value is a multiple. **Unit:**KB **Note:**This field is not supported by V3 all-flash array series.
TIER2STRIPEDEPTH	Optional	uint32	Stripe depth of tier 2. **The value is described as follows:** [32K,512K]. The value is a multiple. **Unit:**KB **Note:**This field is not supported by V3 all-flash array series.
TIER0CAPACITY	Conditional	uint64	Raw capacity of tier 0. **Unit:**sectors **Note:**This parameter must be delivered when tier 0 is selected.
TIER1CAPACITY	Conditional	uint64	Raw capacity of tier 1. **Unit:**sectors **Note:** This parameter must be delivered when tier 1 is selected. This field is not supported by V3 all-flash array series.
TIER2CAPACITY	Conditional	uint64	Raw capacity of tier 2. **Unit:**sectors **Note:** This parameter must be delivered when tier 2 is selected. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
USAGETYPE	Optional	enum	Storage pool usage. **The value is described as follows:** 1: LUN 2: file system **Default:**1: LUN **Note:**2200 V3 (8 GB memory) and 2800 V3 do not support file systems.
REPCAPACITYTHRES-HOLD	Optional	uint32	The alarm threshold of protection capacity for protecting data of luns in storage pool. **The value is described as follows:** [1,100] **Default:**100 **Unit:**%

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 216: storage pool
ID	Mandatory	string(uint32)	ID of the storage pool.
NAME	Mandatory	string	Name of the storage pool. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.).
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** ID of the disk domain.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTNAME	Mandatory	string	Name of the parent object. **The value is described as follows:** Name of the disk domain.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: initializing
MOVEUPDATA	Mandatory	string(uint64)	Total volume of data on all tiers in the storage pool that is waiting to be migrated upward. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVEDOWNDATA	Mandatory	string(uint64)	Total volume of data on all tiers in the storage pool that is waiting to be migrated downward. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
DESCRIPTION	Mandatory	string	Description.
USERTOTALCAPACITY	Mandatory	string(uint64)	Total capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
USERFREECAPACITY	Mandatory	string(uint64)	Free capacity. **Unit:**sectors
USERCONSUMEDCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
USERCONSUMEDCAPACITYPERCENTAGE	Mandatory	string(uint32)	Used capacity ratio. **Unit:**%
USERCONSUMEDCAPACITYTHRESHOLD	Mandatory	string(uint32)	Used capacity threshold. **The value is described as follows:** [1,95] **Unit:**%
DSTSTATUS	Mandatory	string(enum)	Dynamic storage tiering (DST). **The value is described as follows:** 1: active 2: inactive **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
DSTRUNNINGSTATUS	Mandatory	string(enum)	DST operating status. **The value is described as follows:** 1: ready 2: migrated 3: suspended **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
EXTENTSIZE	Mandatory	string(uint32)	Migration granularity. **The value is described as follows:** [512K,64M]. The value is a multiple. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONMODE	Mandatory	string(enum)	Migration triggering mode. **The value is described as follows:** 1: dynamic 2: manual **Note:**This field is not supported by V3 all-flash array series.
IMMEDIATEMIGRATION	Mandatory	string(bool)	Immediate migration switch. **The value is described as follows:** false: off true: on **Note:**This field is not supported by V3 all-flash array series.
PAUSEMIGRATIONS-WITCH	Mandatory	string(bool)	Migration suspension switch. **The value is described as follows:** false: off true: on **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONESTIMA-TEDTIME	Mandatory	string(uint64)	Migration time. **Unit:**seconds **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER0RAIDLV	Mandatory	string(enum)	RAID level of tier 0. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:**0 is returned if this field is invalid.
TIER0RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 0. **Note:**0 is returned if this field is invalid.
TIER0DISKTYPE	Mandatory	string(enum)	Disk type of tier 0. **The value is described as follows:** 3: SSD 10: SSD SED **Note:**If there is no valid value, 0 is returned.
TIER1RAIDLV	Mandatory	string(enum)	RAID level of tier 1. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 1. **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
TIER1DISKTYPE	Mandatory	string(enum)	Disk type of tier 1. **The value is described as follows:** 1: SAS 8: SAS SED **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
TIER2RAIDLV	Mandatory	string(enum)	RAID level of tier 2. **The value is described as follows:** 1: RAID 10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER2RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group of tier 2. **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
TIER2DISKTYPE	Mandatory	string(enum)	Disk type of tier 2. **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
TIER0STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 0. **Unit:**sectors **Note:**0 is returned if this field is invalid.
TIER1STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 1. **Unit:**sectors **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
TIER2STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth of tier 2. **Unit:**sectors **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
MOVEDUPDATA	Mandatory	string(uint64)	Amount of data that has been promoted, expressed in sectors. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
MOVEDDOWNDATA	Mandatory	string(uint64)	Amount of data that has been demoted, expressed in sectors. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
TIER0CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 0. **Unit:**sectors **Note:**0 is returned if this field is invalid.
TIER1CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 1. **Unit:**sectors **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
TIER2CAPACITY	Mandatory	string(uint64)	Raw capacity of tier 2. **Unit:**sectors **Note:** If there is no valid value, 0 is returned. This field is not supported by V3 all-flash array series.
REPLICATIONCAPACITY	Mandatory	string(uint64)	Capacity consumed by all LUNs for data protection . **Unit:**sectors **Note:**The capacity is used for snapshot COW.

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Parameter	Mandatory/ Conditional	Type	Description
DATASPACE	Mandatory	string(uint64)	Available capacity for creating LUNs or filesystems in the storage pool. **Unit:**sectors **Note:**Which equals the remaining storage pool capacity minus metadata capacity.2200 V3 (8 GB memory) and 2800 V3 do not support file systems.
USAGETYPE	Mandatory	string(enum)	Storage pool usage. **The value is described as follows:** 1: LUN 2: file system **Note:**2200 V3 (8 GB memory) and 2800 V3 do not support file systems.
REPCAPACITYTHRES-HOLD	Mandatory	string(uint32)	The alarm threshold of protection capacity for protecting data of luns in storage pool. **The value is described as follows:** [1,100] **Unit:**%
TOTALFSCAPACITY	Mandatory	string(uint64)	TotalFSCapacity. **Unit:**sectors
LUNCONFIGEDCAPAC ITY	Mandatory	string(uint64)	Configured Capacity. **Unit:**sectors
ENABLESMARTCACH E	Mandatory	string(bool)	Whether to enable SmartCache. **The value is described as follows:** true:on false:off **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLESSDBUFFER	Mandatory	string(bool)	Whether to enable SSD buffer mode. **The value is described as follows:** true:on false:off **Note:**This field is not supported by V3 all-flash array series.
IMMEDIATEMIGRATIONDURATIONTIME	Mandatory	string(uint32)	Immediate Migration Duration Time. **Unit:**seconds **Note:**This field is not supported by V3 all-flash array series.
ISSMARTTIERENABLE	Mandatory	string(bool)	Whether the SmartTier feature is applicable to the storage pool (controlled by the license). **The value is described as follows:** true:valid false:invalid **Note:**This field is not supported by V3 all-flash array series.
MIGRATIONSCHEDULEID	Mandatory	string(array)	Migration Schedule ID. **Note:**This field is not supported by V3 all-flash array series.
MONITORSCHEDULEID	Mandatory	string(array)	Monitor Schedule ID. **Note:**This field is not supported by V3 all-flash array series.
RESERVEDCAPACITY	Mandatory	string(uint64)	Reserved Capacity. **Unit:**sectors
reductionInvolvedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartDedupe and SmartCompression. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
dedupedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartDedupe. **Unit:**sectors
compressedCapacity	Mandatory	string(uint64)	Capacity Saved by SmartCompression. **Unit:**sectors
dedupRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartDedupe to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%
compressRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartCompression to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%
dedupCompressRatio	Mandatory	string(uint32)	Percentage of capacity saved by SmartDedupe and SmartCompression to the total used capacity. **The value is described as follows:** [0,100] **Unit:**%

Example

- Creating a storage pool.

```
Request: POST /deviceManager/rest/210235843710E7000007/storagepool
{
    "DESCRIPTION": "",
    "EXTENTSIZE": 8192,
    "NAME": "StoragePool003",
    "PARENTID": "0",
    "REPCAPACITYTHRESHOLD": 100,
    "TIER1CAPACITY": 2097152,
    "TIER1DISKTYPE": "1",
    "TIER1RAIDDISKNUM": "5",
    "TIER1RAIDLV": "2",
    "USAGETYPE": 1,
    "USERCONSUMEDCAPACITYTHRESHOLD": 80
```

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```
}

Response:
{
    "data": {
        "DATASPACE": "1703936",
        "DESCRIPTION": "",
        "DSTRUNNINGSTATUS": "1",
        "DSTSTATUS": "2",
        "ENABLESMARTCACHE": "false",
        "ENABLESSDBUFFER": "false",
        "EXTENTSIZE": "8192",
        "HEALTHSTATUS": "1",
        "ID": "2",
        "IMMEDIATEMIGRATION": "0",
        "IMMEDIATEMIGRATIONDURATIONTIME": "0",
        "ISSMARTTIERENABLE": "false",
        "LUNCONFIGEDCAPACITY": "0",
        "MIGRATIONESTIMATEDTIME": "0",
        "MIGRATIONMODE": "2",
        "MIGRATIONSCHEDULEID": "[]",
        "MONITORSCHEDULEID": "[]",
        "MOVEDDOWNDATA": "0",
        "MOVEDOWNDATA": "0",
        "MOVEDUPDATA": "0",
        "MOVEUPDATA": "0",
        "NAME": "StoragePool003",
        "PARENTID": "0",
        "PARENTNAME": "Default_DiskDomain001",
        "PAUSEMIGRATIONSWITCH": "0",
        "REPCAPACITYTHRESHOLD": "100",
        "REPLICATIONCAPACITY": "0",
        "RESERVEDCAPACITY": "0",
        "RUNNINGSTATUS": "27",
        "TIER0CAPACITY": "0",
        "TIER0DISKTYPE": "0",
        "TIER0RAIDDISKNUM": "0",
        "TIER0RAIDLV": "0",
        "TIER0STRIPEDEPTH": "0",
        "TIER1CAPACITY": "2097152",
        "TIER1DISKTYPE": "1",
        "TIER1RAIDDISKNUM": "5",
        "TIER1RAIDLV": "2",
        "TIER1STRIPEDEPTH": "256",
        "TIER2CAPACITY": "0",
        "TIER2DISKTYPE": "0",
        "TIER2RAIDDISKNUM": "0",
        "TIER2RAIDLV": "0",
        "TIER2STRIPEDEPTH": "0",
        "TOTALFSCAPACITY": "0",
        "TYPE": 216,
        "USAGETYPE": "1",
        "USERCONSUMEDCAPACITY": "0",
        "USERCONSUMEDCAPACITYPERCENTAGE": "0",
        "USERCONSUMEDCAPACITYTHRESHOLD": "80",
        "USERFREECAPACITY": "2097152",
        "USERTOTALCAPACITY": "2097152",
        "compressRatio":"50",
        "compressedCapacity":"42949672",
        "dedupCompressRatio":"50",
        "dedupRatio":"50",
        "dedupedCapacity":"42949672",
        "reductionInvolvedCapacity":"85899344"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.10.1.8 Interface for Querying the Number of Storage Pools

Function

This interface is used to query the number of storage pools.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagepool/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried storage pools.

Example

- Querying the number of storage pools.

```
Request: GET /deviceManager/rest/210235843910E6000009/storagepool/count

Response:
{
```

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```
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.1.9 Interface for Batch Querying Storage Tier Information

Function

This interface is used to batch query basic information about storage tiers.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/storagetier

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
DISKTYPE	Mandatory	string(enum)	DISK Type. **The value is described as follows:** 1: SAS 2: SATA 3: SSD 4: NL-SAS 8: SAS SED 10: SSD SED 11: NL-SAS SED **Note:**0 is returned if this field is invalid.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
ID	Mandatory	string	ID. **The value is described as follows:** tier0 is pooid.0 tier1 is pooid.1 tier2 is pooid.2
MAXSHRINKCAPACITY	Mandatory	string(uint64)	Maximum capacity of a contractible volume. **Unit:**Byte
NAME	Mandatory	string	Name. **The value is described as follows:** tier0: tier0 tier1: tier1 tier2: tier2
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** ID of the storage pool.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 216: storage pool
RAIDDISKNUM	Mandatory	string(uint32)	Number of member disks in a RAID group. **Note:**0 is returned if this field is invalid.
RAIDLV	Mandatory	string(enum)	RAID level. **The value is described as follows:** 1: RAID10 2: RAID 5 3: RAID 0 4: RAID 1 5: RAID 6 6: RAID 50 7: RAID 3 **Note:**0 is returned if this field is invalid.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: Initializing
STRIPEDEPTH	Mandatory	string(uint32)	Stripe depth. **Unit:**sectors **Note:**0 is returned if this field is invalid.
TIERAVAILABLECA-PACITY	Mandatory	string(uint64)	Available Capacity. **Unit:**sectors
TIERCONSUMEDCAPA CITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
TIERMOVEDOWNDATA	Mandatory	string(uint64)	Amount of data to be demoted. **Unit:**sectors
TIERMOVEUPDATA	Mandatory	string(uint64)	Amount of data to be promoted. **Unit:**sectors
TIERUSERCAPACITY	Mandatory	string(uint64)	User Capacity. **Unit:**sectors
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 217: storage tier

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Batch querying basic information about storage tiers.

```
Request: GET /deviceManager/rest/210235843710E7000007/storagetier

Response:
 {
    "data": [
        {
            "DISKTYPE": "1",
            "HEALTHSTATUS": "1",
            "ID": "0.1",
            "MAXSHRINKCAPACITY": "997506154496",
            "NAME": "tier1",
            "PARENTID": "0",
            "PARENTTYPE": 216,
            "RAIDDISKNUM": "5",
            "RAIDLV": "2",
            "RUNNINGSTATUS": "27",
            "STRIPEDEPTH": "256",
            "TIERAVAILABLECAPACITY": "2048720896",
            "TIERCONSUMEDCAPACITY": "333643776",
            "TIERMOVEDOWNDATA": "0",
            "TIERMOVEUPDATA": "0",
            "TIERUSERCAPACITY": "2382364672",
            "TYPE": 217
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.10.1.10 Interface for Pausing or Continuing a SmartTier Task

Function

This interface is used to pause or continue a SmartTier task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smarttier/pause

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Storage pool ID.
PAUSEMIGRATIONS-WITCH	Optional	string(bool)	Migration suspension switch. **The value is described as follows:** false: off true: on **Default:**false: off

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Continuing a SmartTier task.

```
Request: PUT/deviceManager/rest/210235843710E7000007/smarttier/pause
{
    "ID": "2",
```

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```
    "PAUSEMIGRATIONSWITCH": "false"
}
Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.1.11 Interface for Starting or Stopping a SmartTier Task

Function

This interface is used to start or stop a SmartTier task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smarttier/start

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Storage pool ID.
IMMEDIATEMIGRATION	Optional	string(bool)	Immediate migration switch. **The value is described as follows:** false: off true: on **Default:**false: off

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Parameter	Mandatory/Optional/Conditional	Type	Description
IMMEDIATEMIGRATIONDURATIONTIME	Conditional	uint32	Duration of immediate migration. **The value is described as follows:** The value is a multiple of 60 and must range from 1800 to 86400. **Unit:**seconds **Note:**The field must be delivered when immediate migration is enabled.

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Starting a SmartTier task.

```
Request: PUT /deviceManager/rest/210235843710E7000007/smarttier/start
{
    "ID": "2",
    "IMMEDIATEMIGRATION": "true",
    "IMMEDIATEMIGRATIONDURATIONTIME": 1800
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.2 smart_tier

4.10.2.1 Interface for Creating a Schedule

Function

This interface is used to create a Schedule.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/schedule

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** The value consists of 1 and 31 ASCII characters including number, letters, periods (.), underscores (_), and hyphens (-). **Length:**1~31
RELATEDOBJID	Mandatory	array	ID of the schedule application object.
APP_TYPE	Mandatory	enum	Schedule application type. **The value is described as follows:** 1: IO Monitoring Schedule 2: Migration Schedule 4: FSSnapshot Schedule

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Parameter	Mandatory/Optional/Conditional	Type	Description
DAYS	Conditional	array	Day of application in a week. **The value is described as follows:** 0:Sunday 1:Monday 2:Tuesday 3:Wednesday 4:Thursday 5:Friday 6:Saturday **Default:**[0,1,2,3,4,5,6] **Note:**This parameter must be configured if the application is executed weekly.
STARTTIME	Conditional	string	Start time. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Default:**01:00 **Note:**This parameter must be configured if the application is executed weekly.
DURATIONTIME	Conditional	uint32	Duration. **Default:**14400 **Unit:**seconds **Note:**This parameter must be configured if the application type is IO Monitoring Schedule or Migration Schedule.

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Parameter	Mandatory/Optional/Conditional	Type	Description
DAYHOURS	Conditional	array	Hour of application in a day. **The value is described as follows:** The value is an integer between 0 and 23. **Note:**This parameter must be configured if the application is executed daily.
DAYMINUTE	Conditional	uint32	Minute of application in an hour. **The value is described as follows:** The value is an integer between 0 and 59. **Unit:**minutes **Note:**This parameter must be configured if the application is executed daily.
MONTHDAYS	Conditional	array	Day of application in a month. **The value is described as follows:** The value is an integer between 1 and 31. **Note:**This parameter must be configured if the application is executed monthly.
MONTHSTARTTIME	Conditional	string	Time of application in a day. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed monthly.

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Parameter	Mandatory/Optional/Conditional	Type	Description
EXPIRETIME	Conditional	uint32	Expiration time of periodic snapshots. **Unit:**seconds **Note:**This parameter must be configured if the application type is FSSnapshot Schedule.
FREQUENCYTIME	Conditional	uint32	Interval. **The value is described as follows:** The value is an integer between 0 and 1439. **Unit:**minutes **Note:**This parameter must be configured if the application is executed at a certain interval.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 246: Schedule
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 40: FileSystem 216: StoragePool
RELATEDOBJID	Mandatory	array	Schedule application object.

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Parameter	Mandatory/ Conditional	Type	Description
APP_TYPE	Mandatory	enum	Schedule application type. **The value is described as follows:** 1: IO Monitoring Schedule 2: Migration Schedule 3: Spindown Schedule 4: FSSnapshot Schedule 5: Directory Schedule
DAYS	Conditional	array	Day of application in a week. **The value is described as follows:** 0:Sunday 1:Monday 2:Tuesday 3:Wednesday 4:Thursday 5:Friday 6:Saturday **Note:**This parameter must be configured if the application is executed weekly.
STARTTIME	Conditional	string	Start time. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed weekly.

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Parameter	Mandatory/ Conditional	Type	Description
DURATIONTIME	Conditional	uint32	Duration. **Unit:**seconds **Note:**This parameter must be configured if the application type is IO Monitoring Schedule or Migration Schedule.
DAYHOURS	Conditional	array	Hour of application in a day. **The value is described as follows:** The value is an integer between 0 and 23. **Note:**This parameter must be configured if the application is executed daily.
DAYMINUTE	Conditional	uint32	Minute of application in an hour. **The value is described as follows:** The value is an integer between 0 and 59. **Unit:**minutes **Note:**This parameter must be configured if the application is executed daily.
MONTHDAYS	Conditional	array	Day of application in a month. **The value is described as follows:** The value is an integer between 1 and 31. **Note:**This parameter must be configured if the application is executed monthly.

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Parameter	Mandatory/ Conditional	Type	Description
MONTHSTARTTIME	Conditional	string	Time of application in a day. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed monthly.
EXPIRETIME	Conditional	uint32	Expiration time of periodic snapshots. **Unit:**seconds **Note:**This parameter must be configured if the application type is FSSnapshot Schedule.
FREQUENCYTIME	Conditional	uint32	Interval. **Unit:**minutes **Note:**This parameter must be configured if the application is executed at a certain interval.

Example

- Creating a Schedule.

```
Request: POST/deviceManager/rest/210235843710E7000007/schedule

{
    "APP_TYPE": 4,
    "DAYHOURS": [0, 2, 4],
    "DAYMINUTE": "10",
    "DAYS": "[]",
    "FREQUENCYTIME": "0",
    "MONTHDAYS": "[]",
    "MONTHSTARTTIME": "00:00",
    "NAME": "666_schedule",
    "RELATEDOBJID": ["19"],
    "STARTTIME": "01:00"
}

Response:
{
    "data": {
        "APP_TYPE": "4",
        "ASSOCIATEOBJTYPE": "40",
        "DAYHOURS": "[0,2,4]",
```

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```
        "DAYMINUTE": "10",
        "DAYS": "[]",
        "DURATIONTIME": "14400",
        "FREQUENCYTIME": "0",
        "ID": "0",
        "MONTHDAYS": "[]",
        "MONTHSTARTTIME": "00:00",
        "NAME": "666_schedule",
        "RELATEDOBJID": "[\"19\"]",
        "STARTTIME": "01:00",
        "TYPE": 246
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.2.2 Interface for Deleting a Schedule

Function

This interface is used to delete a Schedule.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/schedule/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Schedule ID.

Result

N/A

Example

- Deleteing a Schedule.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/schedule/0
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.2.3 Interface for Modifying a Schedule

Function

This interface is used to modify a Schedule.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/schedule/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Schedule ID.
NAME	Optional	string	Name. **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
DAYS	Conditional	array	Day of application in a week. **The value is described as follows:** 0:Sunday 1:Monday 2:Tuesday 3:Wednesday 4:Thursday 5:Friday 6:Saturday **Note:**This parameter must be configured if the application is executed weekly.
STARTTIME	Conditional	string	Start time. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed weekly.
DURATIONTIME	Conditional	uint32	Duration. **Unit:**seconds **Note:**This parameter must be configured if the application type is IO Monitoring Schedule or Migration Schedule.
DAYHOURS	Conditional	array	Hour of application in a day. **The value is described as follows:** The value is an integer between 0 and 23. **Note:**This parameter must be configured if the application is executed daily.

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Parameter	Mandatory/Optional/Conditional	Type	Description
DAYMINUTE	Conditional	uint32	Minute of application in an hour. **The value is described as follows:** The value is an integer between 0 and 59. **Unit:**minutes **Note:**This parameter must be configured if the application is executed daily.
MONTHDAYS	Conditional	array	Day of application in a month. **The value is described as follows:** The value is an integer between 1 and 31. **Note:**This parameter must be configured if the application is executed monthly.
MONTHSTARTTIME	Conditional	string	Time of application in a day. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed monthly.
EXPIRETIME	Conditional	uint32	Expiration time of periodic snapshots. **Unit:**seconds **Note:**This parameter must be configured when the expiration time needs to be set if the application type is FSSnapshot Schedule.

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Parameter	Mandatory/Optional/Conditional	Type	Description
FREQUENCYTIME	Conditional	uint32	Interval. **The value is described as follows:** The value is an integer between 0 and 1439. **Unit:**minutes **Note:**This parameter must be configured if the application is executed at a certain interval.

Result

N/A

Example

- Modifying a Schedule.

```
Request: PUT /deviceManager/rest/210235843710E7000007/schedule/4
{
    "DAYHOURS": "[0,1]",
    "DAYMINUTE": 0,
    "DAYS": "[0,1,2]",
    "FREQUENCYTIME": 60,
    "MONTHDAYS": "[1,2]",
    "MONTHSTARTTIME": "00:00",
    "STARTTIME": "01:00"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.2.4 Interface for Querying a Schedule

Function

This interface is used to query basic information about a schedule.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/schedule/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Schedule ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object.
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 40: FileSystem 216: StoragePool
RELATEDOBJID	Mandatory	array	Schedule application object.
APP_TYPE	Mandatory	enum	Schedule application type. **The value is described as follows:** 1: IO Monitoring Schedule 2: Migration Schedule 3: Spindown Schedule 4: FSSnapshot Schedule 5: Directory Schedule

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Parameter	Mandatory/ Conditional	Type	Description
DAYS	Conditional	array	Day of application in a week. **The value is described as follows:** 0:Sunday 1:Monday 2:Tuesday 3:Wednesday 4:Thursday 5:Friday 6:Saturday **Note:**This parameter must be configured if the application is executed weekly.
STARTTIME	Conditional	string	Start time. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed weekly.
DURATIONTIME	Conditional	uint32	Duration. **Unit:**seconds **Note:**This parameter must be configured if the application type is IO Monitoring Schedule or Migration Schedule.
DAYHOURS	Conditional	array	Hour of application in a day. **The value is described as follows:** The value is an integer between 0 and 23. **Note:**This parameter must be configured if the application is executed daily.

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Parameter	Mandatory/ Conditional	Type	Description
DAYMINUTE	Conditional	uint32	Minute of application in an hour. **The value is described as follows:** The value is an integer between 0 and 59. **Unit:**minutes **Note:**This parameter must be configured if the application is executed daily.
MONTHDAYS	Conditional	array	Day of application in a month. **The value is described as follows:** The value is an integer between 1 and 31. **Note:**This parameter must be configured if the application is executed monthly.
MONTHSTARTTIME	Conditional	string	Time of application in a day. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed monthly.
EXPIRETIME	Conditional	uint32	Expiration time of periodic snapshots. **Unit:**seconds **Note:**This parameter must be configured if the application type is FSSnapshot Schedule.

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Parameter	Mandatory/ Conditional	Type	Description
FREQUENCYTIME	Conditional	uint32	Interval. **Unit:**minutes **Note:**This parameter must be configured if the application is executed at a certain interval.

Example

- Querying basic information about a schedule.

```
Request: GET /deviceManager/rest/210235843710E7000007/schedule/0

Response:
{
    "data": {
        "APP_TYPE": "4",
        "DAYHOURS": "[]",
        "DAYMINUTE": "0",
        "DAYS": "[]",
        "DURATIONTIME": "14400",
        "FREQUENCYTIME": "361",
        "ID": "14",
        "MONTHDAYS": "[]",
        "MONTHSTARTTIME": "00:00",
        "NAME": "97_schedule",
        "RELATEDOBJID": "[\"97\"]",
        "STARTTIME": "01:00",
        "TYPE": 246
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.2.5 Interface for Batch Querying Schedule Information

Function

This interface is used to batch query basic information about Schedule.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/schedule

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object.
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 40: FileSystem 216: StoragePool
RELATEDOBJID	Mandatory	array	Schedule application object.

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Parameter	Mandatory/ Conditional	Type	Description
APP_TYPE	Mandatory	enum	Schedule application type. **The value is described as follows:** 1: IO Monitoring Schedule 2: Migration Schedule 3: Spindown Schedule 4: FSSnapshot Schedule 5: Directory Schedule
DAYS	Conditional	array	Day of application in a week. **The value is described as follows:** 0:Sunday 1:Monday 2:Tuesday 3:Wednesday 4:Thursday 5:Friday 6:Saturday **Note:**This parameter must be configured if the application is executed weekly.
STARTTIME	Conditional	string	Start time. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed weekly.

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Parameter	Mandatory/ Conditional	Type	Description
DURATIONTIME	Conditional	uint32	Duration. **Unit:**seconds **Note:**This parameter must be configured if the application type is IO Monitoring Schedule or Migration Schedule.
DAYHOURS	Conditional	array	Hour of application in a day. **The value is described as follows:** The value is an integer between 0 and 23. **Note:**This parameter must be configured if the application is executed daily.
DAYMINUTE	Conditional	uint32	Minute of application in an hour. **The value is described as follows:** The value is an integer between 0 and 59. **Unit:**minutes **Note:**This parameter must be configured if the application is executed daily.
MONTHDAYS	Conditional	array	Day of application in a month. **The value is described as follows:** The value is an integer between 1 and 31. **Note:**This parameter must be configured if the application is executed monthly.

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Parameter	Mandatory/ Conditional	Type	Description
MONTHSTARTTIME	Conditional	string	Time of application in a day. **The value is described as follows:** The value is a time between "00:00" and 23:59" in the format of "HH:MM". **Note:**This parameter must be configured if the application is executed monthly.
EXPIRETIME	Conditional	uint32	Expiration time of periodic snapshots. **Unit:**seconds **Note:**This parameter must be configured if the application type is FSSnapshot Schedule.
FREQUENCYTIME	Conditional	uint32	Interval. **Unit:**minutes **Note:**This parameter must be configured if the application is executed at a certain interval.

Example

- Batch querying basic information about schedule.

```
Request: GET /deviceManager/rest/210235843710E7000007/schedule

Response:
{
    "data": [
        {
            "APP_TYPE": "4",
            "ASSOCIATEOBJTYPE": "40",
            "DAYHOURS": "[]",
            "DAYMINUTE": "0",
            "DAYS": "[]",
            "DURATIONTIME": "0",
            "FREQUENCYTIME": "60",
            "ID": "0",
            "MONTHDAYS": "[]",
            "MONTHSTARTTIME": "00:00",
            "NAME": "0_schedule",
            "RELATEDOBJID": "[\"0\"]",
            "STARTTIME": "01:00",
            "TYPE": 246
        },
```

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```
        {
            "APP_TYPE": "4",
            "ASSOCIATEOBJTYPE": "40",
            "DAYHOURS": "[0]",
            "DAYMINUTE": "0",
            "DAYS": "[]",
            "DURATIONTIME": "0",
            "FREQUENCYTIME": "60",
            "ID": "1",
            "MONTHDAYS": "[]",
            "MONTHSTARTTIME": "00:00",
            "NAME": "9_schedule",
            "RELATEDOBJID": "[\"9\"]",
            "STARTTIME": "01:00",
            "TYPE": 246
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.10.3 disk_domain

4.10.3.1 Interface for Creating a Disk Domain

Function

This interface is used to create a disk domain.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/diskpool

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
ID	Optional	uint32	Disk domain ID.
DESCRIPTION	Optional	string	Description. **Length:**0~255
SSDHOTSPARESTRAT-EGY	Optional	enum	SSD hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Default:**2: high
SASHOTSPARESTRAT-EGY	Optional	enum	SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Default:**2: high **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
NLSASHOTSPARESTRATEGY	Optional	enum	NL-SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Default:**2: high **Note:**This field is not supported by V3 all-flash array series.
SSDDISKNUM	Conditional	uint32	Number of SSDs. **The value is described as follows:** The disks are automatically selected for disk domain creation and expansion. -1 indicates that all free SSDs are automatically selected. **Note:**If ASSOCIATEOBJIDLIST is not delivered, SSDDISKNUM, SASDISKNUM, or NLSASDISKNUM must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SASDISKNUM	Conditional	uint32	Number of SAS disks. **The value is described as follows:** The disks are automatically selected for disk domain creation and expansion. -1 indicates that all free SAS disks are automatically selected. **Note:** If ASSOCIATEOBJIDLIST is not delivered, SSDDISKNUM, SASDISKNUM, or NLSASDISKNUM must be delivered. This field is not supported by V3 all-flash array series.
NLSASDISKNUM	Conditional	uint32	Number of NL-SAS disks. **The value is described as follows:** The disks are automatically selected for disk domain creation and expansion. -1 indicates that all free NL-SAS disks are automatically selected. **Note:** If ASSOCIATEOBJIDLIST is not delivered, SSDDISKNUM, SASDISKNUM, or NLSASDISKNUM must be delivered. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJIDLIST	Conditional	array	IDs of the disks selected to create a disk domain. **The value is described as follows:** for example, ["32", "33", "34", "38"]. **Note:**If SSDDISKNUM, SASDISKNUM, or NLSASDISKNUM is not delivered, this field must be delivered.
TIER0DISKTYPE	Optional	enum	High performance tier (SSD tier). **The value is described as follows:** 3: SSD 10: SSD SED **Note:**Can be made of SSDs or SSD SEDs. The two disk types are mutually exclusive.
TIER1DISKTYPE	Optional	enum	Performance tier (SAS tier). **The value is described as follows:** 1: SAS 8: SAS SED **Note:** Can be made of SAS disks or SAS SEDs. The two disk types are mutually exclusive. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER2DISKTYPE	Optional	enum	Capacity tier (NL-SAS tier). **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** Can be made of NL-SAS disks or NL-SAS SED or SATA disks. The three disk types are mutually exclusive. This field is not supported by V3 all-flash array series.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 266: disk domain
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.).
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: initializing
DESCRIPTION	Mandatory	string	Description. **The value is described as follows:** Which contains 0 to 255 characters.
TOTALCAPACITY	Mandatory	string(uint64)	Total available raw capacity. **Unit:**sectors
SPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw capacity. **Unit:**sectors
USEDSPARECAPACI-TY	Mandatory	string(uint64)	Used hot spare raw capacity. **Unit:**sectors
FREECAPACITY	Mandatory	string(uint64)	Free capacity. **Unit:**sectors
SSDTOTALCAPACITY	Mandatory	string(uint64)	Total available raw SSD capacity. **Unit:**sectors
SSDSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw SSD capacity. **Unit:**sectors
SSDUSEDSPARECAPA CITY	Mandatory	string(uint64)	Used hot spare raw SSD capacity. **Unit:**sectors
SSDFREECAPACITY	Mandatory	string(uint64)	Free raw SSD capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
SASTOTALCAPACITY	Mandatory	string(uint64)	Total available raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASFREECAPACITY	Mandatory	string(uint64)	Free raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASTOTALCAPACITY	Mandatory	string(uint64)	Total available raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASFREECAPACITY	Mandatory	string(uint64)	Free raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SSDHOTSPARESTRATEGY	Mandatory	string(enum)	SSD hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:**0 is returned if this field is invalid.
SASHOTSPARESTRATEGY	Mandatory	string(enum)	SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASHOTSPARESTRATEGY	Mandatory	string(enum)	NL-SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
SSDDISKNUM	Mandatory	string(uint32)	Number of SSDs.
SASDISKNUM	Mandatory	string(uint32)	Number of SAS disks. **Note:**This field is not supported by V3 all-flash array series.
NLSASDISKNUM	Mandatory	string(uint32)	Number of NL-SAS disks. **Note:**This field is not supported by V3 all-flash array series.
USEDCAPACITY	Mandatory	string(uint64)	Allocated raw capacity. **Unit:**sectors
SSDUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw SSD capacity. **Unit:**sectors
SASUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
ASSOCIATEOBJID	Mandatory	string(array)	Invalid to a single object. It applies only to batch creating association relationships. For example, associate several disks with a pool at a time.
ENCRYPTDISKTYPE	Mandatory	string(enum)	Disk encryption type. **The value is described as follows:** 0: Normal Disk 1: Encrypt disk **Note:**2600-V do not support Encrypt disk.
TIER0DISKTYPE	Mandatory	string(enum)	High performance tier (SSD tier). **The value is described as follows:** 3: SSD 10: SSD SED **Note:**Can be made of SSDs or SSD SEDs. The two disk types are mutually exclusive.-1 is returned if this field is invalid.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1DISKTYPE	Mandatory	string(enum)	Performance tier (SAS tier). **The value is described as follows:** 1: SAS 8: SAS SED **Note:** Can be made of SAS disks or SAS SEDs. The two disk types are mutually exclusive.-1 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2DISKTYPE	Mandatory	string(enum)	Capacity tier (NL-SAS tier). **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** Can be made of NL-SAS disks or NL-SAS SED or SATA disks. The three disk types are mutually exclusive.-1 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
DEEPLYDELETE	Mandatory	string(bool)	Whether to enable deep delete. **The value is described as follows:** true: deep delete false: common delete

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Parameter	Mandatory/ Conditional	Type	Description
FORMATREMAINTIME	Conditional	string(uint32)	Remaining time of formatting. **Unit:**seconds **Note:**This field is returned only when formatting is performed.
FORMATPROGRESS	Conditional	string(uint32)	Formatting progress. **Unit:**% **Note:**This field is returned only when formatting is performed.
FREECAPACITYLIST	Mandatory	string(json)	List of free capacities for the member disks at each tier. **Note:**This field is not supported by V3 all-flash array series.
UPDATEENCRYPTKEY	Mandatory	string(bool)	Whether to update keys. **The value is described as follows:** true: Keys will be updated false: Keys will not be updated **Note:**Keys can be updated only when the disk domain contains encrypted disks.
UNSPECIFIEDRAID-DISKNUM	Mandatory	string(json)	Actual number of RAID member disks of each tier when the number is not specified.

Example

- Creating a disk domain.

```
Request: POST /deviceManager/rest/210235843710E7000007/diskpool
{
    "NAME": "DiskDomain002",
    "DESCRIPTION": "hehe",
    "SSDDISKNUM": -1,
    "SASDISKNUM": -1,
    "NLSASDISKNUM": -1,
    "SASHOTSPARESTRATEGY": "2",
    "TIER1DISKTYPE": 1,
```

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```
    "TIER2DISKTYPE": 4,
    "NLSASHOTSPARESTRATEGY": "2"
}

Response:
 {
    "data": {
        "ASSOCIATEOBJID": "[\"3\",\"1\",\"2\",\"0\",\"11\",\"44\",\"45\",
\"32\",\"50\",\"54\",\"36\",\"53\",\"34\",\"8\",\"55\",\"52\",\"6\",\"38\",
\"5\",\"4\",\"41\",\"10\",\"46\",\"56\",\"37\",\"33\",\"9\",\"7\"]",
        "DEEPLYDELETE": "false",
        "DESCRIPTION": "hehe",
        "ENCRYPTDISKTYPE": "0",
        "FORMATPROGRESS": "0",
        "FORMATREMAINTIME": "0",
        "FREECAPACITY": "0",
        "FREECAPACITYLIST": "{ }",
        "HEALTHSTATUS": "1",
        "ID": "1",
        "NAME": "DiskDomain002",
        "NLSASDISKNUM": "5",
        "NLSASFREECAPACITY": "0",
        "NLSASHOTSPARESTRATEGY": "2",
        "NLSASSPARECAPACITY": "0",
        "NLSASTOTALCAPACITY": "0",
        "NLSASUSEDCAPACITY": "0",
        "NLSASUSEDSPARECAPACITY": "0",
        "RUNNINGSTATUS": "53",
        "SASDISKNUM": "23",
        "SASFREECAPACITY": "0",
        "SASHOTSPARESTRATEGY": "2",
        "SASSPARECAPACITY": "0",
        "SASTOTALCAPACITY": "0",
        "SASUSEDCAPACITY": "0",
        "SASUSEDSPARECAPACITY": "0",
        "SPARECAPACITY": "0",
        "SSDDISKNUM": "0",
        "SSDFREECAPACITY": "0",
        "SSDHOTSPARESTRATEGY": "0",
        "SSDSPARECAPACITY": "0",
        "SSDTOTALCAPACITY": "0",
        "SSDUSEDCAPACITY": "0",
        "SSDUSEDSPARECAPACITY": "0",
        "TIER0DISKTYPE": "-1",
        "TIER1DISKTYPE": "1",
        "TIER2DISKTYPE": "4",
        "TOTALCAPACITY": "0",
        "TYPE": 266,
        "UPDATEENCRYPTKEY": "false",
        "USEDCAPACITY": "0",
        "UNSPECIFIEDRAIDDISKNUM": "{\n\t\"tier0\":\t{\n\t\t\"raid0\":\t\"0\",
\n\t\t\"raid10\":\t\"0\"\n\t},\n\t\"tier1\":\t{\n\t\t\"raid0\":\t\"4\",\n\t\t
\"raid10\":\t\"4\"\n\t},\n\t\"tier2\":\t{\n\t\t\"raid0\":\t\"0\",\n\t\t
\"raid10\":\t\"0\"\n\t}\n}",
        "USEDSPARECAPACITY": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.3.2 Interface for Batch Querying Disk Domain Information

Function

This interface is used to batch query disk domain information.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/diskpool

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 266: disk domain
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.).
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: initializing
DESCRIPTION	Mandatory	string	Description. **The value is described as follows:** Which contains 0 to 255 characters.
TOTALCAPACITY	Mandatory	string(uint64)	Total available raw capacity. **Unit:**sectors
SPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
USEDSPARECAPACI-TY	Mandatory	string(uint64)	Used hot spare raw capacity. **Unit:**sectors
FREECAPACITY	Mandatory	string(uint64)	Free capacity. **Unit:**sectors
SSDTOTALCAPACITY	Mandatory	string(uint64)	Total available raw SSD capacity. **Unit:**sectors
SSDSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw SSD capacity. **Unit:**sectors
SSDUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw SSD capacity. **Unit:**sectors
SSDFREECAPACITY	Mandatory	string(uint64)	Free raw SSD capacity. **Unit:**sectors
SASTOTALCAPACITY	Mandatory	string(uint64)	Total available raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASFREECAPACITY	Mandatory	string(uint64)	Free raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASTOTALCAPACITY	Mandatory	string(uint64)	Total available raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASFREECAPACITY	Mandatory	string(uint64)	Free raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SSDHOTSPARESTRATEGY	Mandatory	string(enum)	SSD hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:**0 is returned if this field is invalid.

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Parameter	Mandatory/ Conditional	Type	Description
SASHOTSPARESTRAT-EGY	Mandatory	string(enum)	SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
NLSASHOTSPARESTRATEGY	Mandatory	string(enum)	NL-SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
SSDDISKNUM	Mandatory	string(uint32)	Number of SSDs.
SASDISKNUM	Mandatory	string(uint32)	Number of SAS disks. **Note:**This field is not supported by V3 all-flash array series.
NLSASDISKNUM	Mandatory	string(uint32)	Number of NL-SAS disks. **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
USEDCAPACITY	Mandatory	string(uint64)	Allocated raw capacity. **Unit:**sectors
SSDUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw SSD capacity. **Unit:**sectors
SASUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASUSEDCAPACI-TY	Mandatory	string(uint64)	Allocated raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
ASSOCIATEOBJID	Mandatory	string(array)	Invalid to a single object. It applies only to batch creating association relationships. For example, associate several disks with a pool at a time.
ENCRYPTDISKTYPE	Mandatory	string(enum)	Disk encryption type. **The value is described as follows:** 0: Normal Disk 1: Encrypt disk **Note:**2600-V do not support Encrypt disk.
FREECAPACITYLIST	Mandatory	string(json)	List of free capacities for the member disks at each tier. **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER0DISKTYPE	Mandatory	string(enum)	High performance tier (SSD tier). **The value is described as follows:** 3: SSD 10: SSD SED **Note:**Can be made of SSDs or SSD SEDs. The two disk types are mutually exclusive.-1 is returned if this field is invalid.
TIER1DISKTYPE	Mandatory	string(enum)	Performance tier (SAS tier). **The value is described as follows:** 1: SAS 8: SAS SED **Note:** Can be made of SAS disks or SAS SEDs. The two disk types are mutually exclusive.-1 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
TIER2DISKTYPE	Mandatory	string(enum)	Capacity tier (NL-SAS tier). **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** Can be made of NL-SAS disks or NL-SAS SED or SATA disks. The three disk types are mutually exclusive.-1 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
DEEPLYDELETE	Mandatory	string(bool)	Whether to enable deep delete. **The value is described as follows:** true: deep delete false: common delete
UPDATEENCRYPTKEY	Mandatory	string(bool)	Whether to update keys. **The value is described as follows:** true: Keys will be updated false: Keys will not be updated **Note:**Keys can be updated only when the disk domain contains encrypted disks.
UNSPECIFIEDRAID-DISKNUM	Mandatory	string(json)	Actual number of RAID member disks of each tier when the number is not specified.

Example

- Batch Querying disk domain information.

```
Request: GET /deviceManager/rest/210235843710E7000007/diskpool
```

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```
Response:
{
    "data": [
        {
            "ASSOCIATEOBJID": "[\"2\",\"1\",\"4\",\"16\",\"7\",\"3\",\"6\",
\"9\",\"12\",\"8\",\"13\",\"11\",\"17\",\"18\",\"0\",\"10\",\"14\",\"15\",
\"5\"]",
            "DEEPLYDELETE": "false",
            "DESCRIPTION": "",
            "ENCRYPTDISKTYPE": "0",
            "FREECAPACITY": "3924749047",
            "FREECAPACITYLIST": "{\n\t\"tier0\":\t{\n\t\t\"2\":\t\"0\",\n\t\t
\"3\":\t\"0\",\n\t\t\"4\":\t\"0\",\n\t\t\"5\":\t\"0\",\n\t\t\"6\":\t\"0\",\n\t
\t\"7\":\t\"0\",\n\t\t\"8\":\t\"0\",\n\t\t\"9\":\t\"0\",\n\t\t\"10\":\t\"0\",
\n\t\t\"11\":\t\"0\",\n\t\t\"12\":\t\"0\",\n\t\t\"13\":\t\"0\",\n\t\t\"14\":\t
\"0\",\n\t\t\"15\":\t\"0\",\n\t\t\"16\":\t\"0\",\n\t\t\"17\":\t\"0\",\n\t\t
\"18\":\t\"0\",\n\t\t\"19\":\t\"0\",\n\t\t\"20\":\t\"0\",\n\t\t\"21\":\t\"0\",
\n\t\t\"22\":\t\"0\",\n\t\t\"23\":\t\"0\",\n\t\t\"24\":\t\"0\",\n\t\t\"25\":\t
\"0\",\n\t\t\"26\":\t\"0\",\n\t\t\"27\":\t\"0\",\n\t\t\"28\":\t\"0\"\n\t},\n\t
\"tier1\":\t{\n\t\t\"2\":\t\"3924749047\",\n\t\t\"3\":\t\"3924749047\",\n\t\t
\"4\":\t\"3924749047\",\n\t\t\"5\":\t\"3924749047\",\n\t\t\"6\":\t
\"3924749047\",\n\t\t\"7\":\t\"3924749047\",\n\t\t\"8\":\t\"3924749047\",\n\t
\t\"9\":\t\"3924749047\",\n\t\t\"10\":\t\"3924749047\",\n\t\t\"11\":\t
\"3924749047\",\n\t\t\"12\":\t\"3924749047\",\n\t\t\"13\":\t\"3924749047\",\n
\t\t\"14\":\t\"3772149778\",\n\t\t\"15\":\t\"3772149778\",\n\t\t\"16\":\t
\"3772149778\",\n\t\t\"17\":\t\"3772149778\",\n\t\t\"18\":\t\"3772149778\",\n
\t\t\"19\":\t\"3772149778\",\n\t\t\"20\":\t\"0\",\n\t\t\"21\":\t\"0\",\n\t\t
\"22\":\t\"0\",\n\t\t\"23\":\t\"0\",\n\t\t\"24\":\t\"0\",\n\t\t\"25\":\t\"0\",
\n\t\t\"26\":\t\"0\",\n\t\t\"27\":\t\"0\",\n\t\t\"28\":\t\"0\"\n\t},\n\t
\"tier2\":\t{\n\t\t\"2\":\t\"0\",\n\t\t\"3\":\t\"0\",\n\t\t\"4\":\t\"0\",\n\t
\t\"5\":\t\"0\",\n\t\t\"6\":\t\"0\",\n\t\t\"7\":\t\"0\",\n\t\t\"8\":\t\"0\",\n
\t\t\"9\":\t\"0\",\n\t\t\"10\":\t\"0\",\n\t\t\"11\":\t\"0\",\n\t\t\"12\":\t
\"0\",\n\t\t\"13\":\t\"0\",\n\t\t\"14\":\t\"0\",\n\t\t\"15\":\t\"0\",\n\t\t
\"16\":\t\"0\",\n\t\t\"17\":\t\"0\",\n\t\t\"18\":\t\"0\",\n\t\t\"19\":\t\"0\",
\n\t\t\"20\":\t\"0\",\n\t\t\"21\":\t\"0\",\n\t\t\"22\":\t\"0\",\n\t\t\"23\":\t
\"0\",\n\t\t\"24\":\t\"0\",\n\t\t\"25\":\t\"0\",\n\t\t\"26\":\t\"0\",\n\t\t
\"27\":\t\"0\",\n\t\t\"28\":\t\"0\"\n\t}\n}",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "NAME": "DiskDomain001",
            "NLSASDISKNUM": "0",
            "NLSASFREECAPACITY": "0",
            "NLSASHOTSPARESTRATEGY": "0",
            "NLSASSPARECAPACITY": "0",
            "NLSASTOTALCAPACITY": "0",
            "NLSASUSEDCAPACITY": "0",
            "NLSASUSEDSPARECAPACITY": "0",
            "RUNNINGSTATUS": "27",
            "SASDISKNUM": "19",
            "SASFREECAPACITY": "3924749047",
            "SASHOTSPARESTRATEGY": "2",
            "SASSPARECAPACITY": "1113666354",
            "SASTOTALCAPACITY": "10433338921",
            "SASUSEDCAPACITY": "5394923520",
            "SASUSEDSPARECAPACITY": "556833177",
            "SPARECAPACITY": "1113666354",
            "SSDDISKNUM": "0",
            "SSDFREECAPACITY": "0",
            "SSDHOTSPARESTRATEGY": "0",
            "SSDSPARECAPACITY": "0",
            "SSDTOTALCAPACITY": "0",
            "SSDUSEDCAPACITY": "0",
            "SSDUSEDSPARECAPACITY": "0",
            "TIER0DISKTYPE": "-1",
            "TIER1DISKTYPE": "1",
            "TIER2DISKTYPE": "-1",
            "TOTALCAPACITY": "10433338921",
            "TYPE": 266,
            "UPDATEENCRYPTKEY": "false",
```

```
            "USEDCAPACITY": "5394923520",
            "UNSPECIFIEDRAIDDISKNUM": "{\n\t\"tier0\":\t{\n\t\t\"raid0\":\t
\"0\",\n\t\t\"raid10\":\t\"0\"\n\t},\n\t\"tier1\":\t{\n\t\t\"raid0\":\t\"4\",
\n\t\t\"raid10\":\t\"4\"\n\t},\n\t\"tier2\":\t{\n\t\t\"raid0\":\t\"0\",\n\t\t
\"raid10\":\t\"0\"\n\t}\n}",
            "USEDSPARECAPACITY": "556833177"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.3.3 Interface for Deleting a Disk Domain

Function

This interface is used to delete a disk domain.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/diskpool/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Disk domain ID.
DEEPLYDELETE	Optional	bool	Deletes a disk domain and erases data. Only applies to a disk domain consisting of encrypted disks. **The value is described as follows:** true: yes false: no **Default:**false: no

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Result

N/A

Example

- Deleting a disk domain.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/diskpool/2

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.3.4 Interface for Querying the Number of Disk Domains

Function

This interface is used to query the number of disk domains.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/diskpool/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.

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Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried disk domains.

Example

- Querying the number of diskpool pools.

```
Request: GET /deviceManager/rest/210235843910E6000009/diskpool/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.3.5 Interface for Expanding Disk Domains by Manually Adding Disks

Function

This interface is used to expand disk domains by manually adding disks.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/expand/diskpool

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Disk domain ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJIDLIST	Mandatory	array	IDs of manually selected disks. **The value is described as follows:** for example, ["32", "33", "34", "38"].
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 10: disk **Default:**10: disk

Result

N/A

Example

- Expanding disk domains by manually adding disks.

```
Request: PUT /deviceManager/rest/1016964156/expand/diskpool
{
    "ASSOCIATEOBJIDLIST": ["33"],
    "ASSOCIATEOBJTYPE": 10,
    "ID": "2",
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.10.3.6 Interface for Querying Disk Domain Information

Function

This interface is used to query basic information about disk domains.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/diskpool/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Disk domain ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 266: disk domain
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.).
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 14: pre-copy 16: reconstruction 27: online 28: offline 32: balancing 53: initializing
DESCRIPTION	Mandatory	string	Description. **The value is described as follows:** Which contains 0 to 255 characters.
TOTALCAPACITY	Mandatory	string(uint64)	Total available raw capacity. **Unit:**sectors
SPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw capacity. **Unit:**sectors
USEDSPARECAPACI-TY	Mandatory	string(uint64)	Used hot spare raw capacity. **Unit:**sectors
FREECAPACITY	Mandatory	string(uint64)	Free capacity. **Unit:**sectors
SSDTOTALCAPACITY	Mandatory	string(uint64)	Total available raw SSD capacity. **Unit:**sectors
SSDSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw SSD capacity. **Unit:**sectors
SSDUSEDSPARECAPA CITY	Mandatory	string(uint64)	Used hot spare raw SSD capacity. **Unit:**sectors
SSDFREECAPACITY	Mandatory	string(uint64)	Free raw SSD capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
SASTOTALCAPACITY	Mandatory	string(uint64)	Total available raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SASFREECAPACITY	Mandatory	string(uint64)	Free raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASTOTALCAPACITY	Mandatory	string(uint64)	Total available raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASSPARECAPACITY	Mandatory	string(uint64)	Total available hot spare raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
NLSASUSEDSPARECAPACITY	Mandatory	string(uint64)	Used hot spare raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASFREECAPACITY	Mandatory	string(uint64)	Free raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
SSDHOTSPARESTRATEGY	Mandatory	string(enum)	SSD hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:**0 is returned if this field is invalid.
SASHOTSPARESTRATEGY	Mandatory	string(enum)	SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASHOTSPARESTRATEGY	Mandatory	string(enum)	NL-SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:** 0 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
SSDDISKNUM	Mandatory	string(uint32)	Number of SSDs.
SASDISKNUM	Mandatory	string(uint32)	Number of SAS disks. **Note:**This field is not supported by V3 all-flash array series.
NLSASDISKNUM	Mandatory	string(uint32)	Number of NL-SAS disks. **Note:**This field is not supported by V3 all-flash array series.
USEDCAPACITY	Mandatory	string(uint64)	Allocated raw capacity. **Unit:**sectors
SSDUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw SSD capacity. **Unit:**sectors
SASUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
NLSASUSEDCAPACITY	Mandatory	string(uint64)	Allocated raw NL-SAS capacity. **Unit:**sectors **Note:**This field is not supported by V3 all-flash array series.
ASSOCIATEOBJID	Mandatory	string(array)	Invalid to a single object. It applies only to batch creating association relationships. For example, associate several disks with a pool at a time.
ENCRYPTDISKTYPE	Mandatory	string(enum)	Disk encryption type. **The value is described as follows:** 0: Normal Disk 1: Encrypt disk **Note:**2600-V do not support Encrypt disk.
FREECAPACITYLIST	Mandatory	string(json)	List of free capacities for the member disks at each tier. **Note:**This field is not supported by V3 all-flash array series.
TIER0DISKTYPE	Mandatory	string(enum)	High performance tier (SSD tier). **The value is described as follows:** 3: SSD 10: SSD SED **Note:**Can be made of SSDs or SSD SEDs. The two disk types are mutually exclusive.-1 is returned if this field is invalid.

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Parameter	Mandatory/ Conditional	Type	Description
TIER1DISKTYPE	Mandatory	string(enum)	Performance tier (SAS tier). **The value is described as follows:** 1: SAS 8: SAS SED **Note:** Can be made of SAS disks or SAS SEDs. The two disk types are mutually exclusive.-1 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
TIER2DISKTYPE	Mandatory	string(enum)	Capacity tier (NL-SAS tier). **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED **Note:** Can be made of NL-SAS disks or NL-SAS SED or SATA disks. The three disk types are mutually exclusive.-1 is returned if this field is invalid. This field is not supported by V3 all-flash array series.
FORMATPROGRESS	Conditional	string(uint32)	Progress of formatting. **Unit:**% **Note:**This field is returned only when formatting is performed.

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Parameter	Mandatory/ Conditional	Type	Description
FORMATREMAINTIME	Conditional	string(uint32)	Remaining time of formatting. **Unit:**seconds **Note:**This field is returned only when formatting is performed.
UNSPECIFIEDRAID-DISKNUM	Mandatory	string(json)	Actual number of RAID member disks of each tier when the number is not specified.

Example

- Querying basic information about the disk domain whose ID is 0.

```
Request: GET/deviceManager/rest/210235843710E7000007/diskpool/0

Response:
{
    "data": {
        "ASSOCIATEOBJID": "[\"2\",\"1\",\"4\",\"16\",\"7\",\"3\",\"6\",\"9\",
\"12\",\"8\",\"13\",\"11\",\"17\",\"18\",\"0\",\"10\",\"14\",\"15\",\"5\"]",
        "DEEPLYDELETE": "false",
        "DESCRIPTION": "",
        "ENCRYPTDISKTYPE": "0",
        "FORMATPROGRESS": "100",
        "FORMATREMAINTIME": "0",
        "FREECAPACITY": "3924749047",
        "FREECAPACITYLIST": "{\n\t\"tier0\":\t{\n\t\t\"2\":\t\"0\",\n\t\t
\"3\":\t\"0\",\n\t\t\"4\":\t\"0\",\n\t\t\"5\":\t\"0\",\n\t\t\"6\":\t\"0\",\n\t
\t\"7\":\t\"0\",\n\t\t\"8\":\t\"0\",\n\t\t\"9\":\t\"0\",\n\t\t\"10\":\t\"0\",
\n\t\t\"11\":\t\"0\",\n\t\t\"12\":\t\"0\",\n\t\t\"13\":\t\"0\",\n\t\t\"14\":\t
\"0\",\n\t\t\"15\":\t\"0\",\n\t\t\"16\":\t\"0\",\n\t\t\"17\":\t\"0\",\n\t\t
\"18\":\t\"0\",\n\t\t\"19\":\t\"0\",\n\t\t\"20\":\t\"0\",\n\t\t\"21\":\t\"0\",
\n\t\t\"22\":\t\"0\",\n\t\t\"23\":\t\"0\",\n\t\t\"24\":\t\"0\",\n\t\t\"25\":\t
\"0\",\n\t\t\"26\":\t\"0\",\n\t\t\"27\":\t\"0\",\n\t\t\"28\":\t\"0\"\n\t},\n\t
\"tier1\":\t{\n\t\t\"2\":\t\"3924749047\",\n\t\t\"3\":\t\"3924749047\",\n\t\t
\"4\":\t\"3924749047\",\n\t\t\"5\":\t\"3924749047\",\n\t\t\"6\":\t
\"3924749047\",\n\t\t\"7\":\t\"3924749047\",\n\t\t\"8\":\t\"3924749047\",\n\t
\t\"9\":\t\"3924749047\",\n\t\t\"10\":\t\"3924749047\",\n\t\t\"11\":\t
\"3924749047\",\n\t\t\"12\":\t\"3924749047\",\n\t\t\"13\":\t\"3924749047\",\n
\t\t\"14\":\t\"3772149778\",\n\t\t\"15\":\t\"3772149778\",\n\t\t\"16\":\t
\"3772149778\",\n\t\t\"17\":\t\"3772149778\",\n\t\t\"18\":\t\"3772149778\",\n
\t\t\"19\":\t\"3772149778\",\n\t\t\"20\":\t\"0\",\n\t\t\"21\":\t\"0\",\n\t\t
\"22\":\t\"0\",\n\t\t\"23\":\t\"0\",\n\t\t\"24\":\t\"0\",\n\t\t\"25\":\t\"0\",
\n\t\t\"26\":\t\"0\",\n\t\t\"27\":\t\"0\",\n\t\t\"28\":\t\"0\"\n\t},\n\t
\"tier2\":\t{\n\t\t\"2\":\t\"0\",\n\t\t\"3\":\t\"0\",\n\t\t\"4\":\t\"0\",\n\t
\t\"5\":\t\"0\",\n\t\t\"6\":\t\"0\",\n\t\t\"7\":\t\"0\",\n\t\t\"8\":\t\"0\",\n
\t\t\"9\":\t\"0\",\n\t\t\"10\":\t\"0\",\n\t\t\"11\":\t\"0\",\n\t\t\"12\":\t
\"0\",\n\t\t\"13\":\t\"0\",\n\t\t\"14\":\t\"0\",\n\t\t\"15\":\t\"0\",\n\t\t
\"16\":\t\"0\",\n\t\t\"17\":\t\"0\",\n\t\t\"18\":\t\"0\",\n\t\t\"19\":\t\"0\",
\n\t\t\"20\":\t\"0\",\n\t\t\"21\":\t\"0\",\n\t\t\"22\":\t\"0\",\n\t\t\"23\":\t
\"0\",\n\t\t\"24\":\t\"0\",\n\t\t\"25\":\t\"0\",\n\t\t\"26\":\t\"0\",\n\t\t
\"27\":\t\"0\",\n\t\t\"28\":\t\"0\"\n\t}\n}",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "NAME": "DiskDomain001",
        "NLSASDISKNUM": "0",
```

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```
        "NLSASFREECAPACITY": "0",
        "NLSASHOTSPARESTRATEGY": "0",
        "NLSASSPARECAPACITY": "0",
        "NLSASTOTALCAPACITY": "0",
        "NLSASUSEDCAPACITY": "0",
        "NLSASUSEDSPARECAPACITY": "0",
        "RUNNINGSTATUS": "27",
        "SASDISKNUM": "19",
        "SASFREECAPACITY": "3924749047",
        "SASHOTSPARESTRATEGY": "2",
        "SASSPARECAPACITY": "1113666354",
        "SASTOTALCAPACITY": "10433338921",
        "SASUSEDCAPACITY": "5394923520",
        "SASUSEDSPARECAPACITY": "556833177",
        "SPARECAPACITY": "1113666354",
        "SSDDISKNUM": "0",
        "SSDFREECAPACITY": "0",
        "SSDHOTSPARESTRATEGY": "0",
        "SSDSPARECAPACITY": "0",
        "SSDTOTALCAPACITY": "0",
        "SSDUSEDCAPACITY": "0",
        "SSDUSEDSPARECAPACITY": "0",
        "TIER0DISKTYPE": "-1",
        "TIER1DISKTYPE": "1",
        "TIER2DISKTYPE": "-1",
        "TOTALCAPACITY": "10433338921",
        "TYPE": 266,
        "UPDATEENCRYPTKEY": "false",
        "USEDCAPACITY": "5394923520",
        "UNSPECIFIEDRAIDDISKNUM": "{\n\t\"tier0\":\t{\n\t\t\"raid0\":\t\"0\",
\n\t\t\"raid10\":\t\"0\"\n\t},\n\t\"tier1\":\t{\n\t\t\"raid0\":\t\"4\",\n\t\t
\"raid10\":\t\"4\"\n\t},\n\t\"tier2\":\t{\n\t\t\"raid0\":\t\"0\",\n\t\t
\"raid10\":\t\"0\"\n\t}\n}",
        "USEDSPARECAPACITY": "556833177"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.10.3.7 Interface for Modifying Disk Domain Information

Function

This interface is used to modify Disk Domain information.

Applicable Model

Applicable to V3 all series.

HighRisk

You are going to reduce hot spare space in disk domain {0}.

This operation lowers data security of storage pool {0}.

Suggestion: Before you perform this operation, ensure that you have selected the correct policy.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/diskpool/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Disk domain ID.
NAME	Optional	string	Name. **The value is described as follows:** Which contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
SSDHOTSPARESTRATEGY	Optional	enum	SSD hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none
SASHOTSPARESTRATEGY	Optional	enum	SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
NLSASHOTSPARESTRATEGY	Optional	enum	NL-SAS hot spare policy. The hot spare policy of mission-critical storage devices cannot be "None". **The value is described as follows:** 1: low 2: high 3: none **Note:**This field is not supported by V3 all-flash array series.
SSDDISKNUM	Optional	uint32	Number of SSDs . **The value is described as follows:** The disks are automatically selected for disk domain creation and expansion. -1 indicates that all free SSDs are automatically selected.
SASDISKNUM	Optional	uint32	Number of SAS disks . **The value is described as follows:** The disks are automatically selected for disk domain creation and expansion. -1 indicates that all free SAS disks are automatically selected. **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
NLSASDISKNUM	Optional	uint32	Number of NL-SAS disks. **The value is described as follows:** The disks are automatically selected for disk domain creation and expansion. -1 indicates that all free NL-SAS disks are automatically selected. **Note:**This field is not supported by V3 all-flash array series.
TIER0DISKTYPE	Optional	enum	High performance tier (SSD tier) . **The value is described as follows:** 3: SSD 10: SSD SED **Note:**Can be made of SSDs or SSD SEDs. The two disk types are mutually exclusive.
TIER1DISKTYPE	Optional	enum	Performance tier (SAS tier) . **The value is described as follows:** 1: SAS 8: SAS SED **Note:** Can be made of SAS disks or SAS SEDs. The two disk types are mutually exclusive. This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIER2DISKTYPE	Optional	enum	Capacity tier (NL-SAS tier) . **The value is described as follows:** 2: SATA 4: NL-SAS 11: NL-SAS SED. **Note:** Can be made of NL-SAS disks or NL-SAS SED or SATA disks. The three disk types are mutually exclusive. This field is not supported by V3 all-flash array series.
UPDATEENCRYPTKEY	Optional	bool	Whether the key is updated. **The value is described as follows:** true: updated false: not updated **Default:**false: not updated

Result

N/A

Example

- Modifying Disk Domain Information.

```
Request: PUT /deviceManager/rest/210235843710E7000007/diskpool/0
{
    "DESCRIPTION": "default diskpool1234"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.11 Performance optimization

4.11.1 smart_partition

4.11.1.1 Interface for Creating a CachePartition

Function

This interface is used to create a CachePartition.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to create SmartPartition.

This operation may affect the performance of LUN or file system.

Before performing this operation, ensure that the preceding risk is acceptable and the SmartPartition is correctly configured.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cachepartition

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Optional	string	CachePartition ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 267: StorageEngine **Default:**267
PARENTID	Mandatory	string	ID of the parent object.
DESCRIPTION	Optional	string	Description. **Length:**0~255
MINREADSIZE	Optional	uint64	Minimal read cache size. **Default:**0 **Unit:**MB
EXPECTREADSIZE	Mandatory	uint64	Expect read cache size. **The value is described as follows:** The value is a multiple of 128 and must be larger than 256. **Unit:**MB
MAXREADSIZE	Optional	uint64	Maximal read cache size. **Default:**0 **Unit:**MB
MINWRITESIZE	Optional	uint64	Minimal write cache size. **Default:**0 **Unit:**MB
EXPECTWRITESIZE	Mandatory	uint64	Expect write cache size. **The value is described as follows:** The value is a multiple of 128 and must be larger than 256. **Unit:**MB

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Parameter	Mandatory/Optional/Conditional	Type	Description
MAXWRITESIZE	Optional	uint64	Maximal write cache size. **Default:**0 **Unit:**MB

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	uint64	Type number of the managed object. **The value is described as follows:** 268: CachePartition
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
DESCRIPTION	Mandatory	string	Description.
ISDEFAULT	Mandatory	string(bool)	Is default. **The value is described as follows:** true: yes false: no
MINREADSIZE	Mandatory	string(uint64)	Minimal read cache size. **Unit:**MB
EXPECTREADSIZE	Mandatory	string(uint64)	Expect read cache size. **Unit:**MB
MAXREADSIZE	Mandatory	string(uint64)	Maximal read cache size. **Unit:**MB
MINWRITESIZE	Mandatory	string(uint64)	Minimal write cache size. **Unit:**MB
EXPECTWRITESIZE	Mandatory	string(uint64)	Expect write cache size. **Unit:**MB

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Parameter	Mandatory/ Conditional	Type	Description
MAXWRITESIZE	Mandatory	string(uint64)	Maximal write cache size. **Unit:**MB

Example

- Creating a CachePartition.

```
Request: POST /deviceManager/rest/210235843710E7000007/cachepartition?
t=1478334122141
{
    "EXPECTREADSIZE": "1024",
    "EXPECTWRITESIZE": "256",
    "NAME": "SmartPartition003",
    "PARENTID": "0",
    "PARENTTYPE": 267
}

Response:
{
    "data": {
    "DESCRIPTION": "",
    "EXPECTREADSIZE": "1024",
    "EXPECTWRITESIZE": "256",
    "ID": "2",
    "ISDEFAULT": "false",
    "MAXREADSIZE": "0",
    "MAXWRITESIZE": "0",
    "MINREADSIZE": "0",
    "MINWRITESIZE": "0",
    "NAME": "SmartPartition003",
    "PARENTID": "0",
    "PARENTNAME": "StorageEngine000",
    "TYPE": 268
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.2 Interface for Batch Querying CachePartition Information

Function

This interface is used to batch query basic information about CachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cachepartition

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 268: CachePartition
ID	Mandatory	string	CachePartition ID.
NAME	Mandatory	string	Name.
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.

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Parameter	Mandatory/ Conditional	Type	Description
DESCRIPTION	Mandatory	string	Description.
ISDEFAULT	Mandatory	string(bool)	Is default. **The value is described as follows:** true: yes false: no
MINREADSIZE	Mandatory	string(uint64)	Minimal read cache size. **Unit:**MB
EXPECTREADSIZE	Mandatory	string(uint64)	Expect read cache size. **Unit:**MB
MAXREADSIZE	Mandatory	string(uint64)	Maximal read cache size. **Unit:**MB
MINWRITESIZE	Mandatory	string(uint64)	Minimal write cache size. **Unit:**MB
EXPECTWRITESIZE	Mandatory	string(uint64)	Expect write cache size. **Unit:**MB
MAXWRITESIZE	Mandatory	string(uint64)	Maximal write cache size. **Unit:**MB

Example

- Batch querying basic information about CachePartition.

```
Request: GET /deviceManager/rest/210235843710E7000007/cachepartition?
t=1478334122141

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "EXPECTREADSIZE": "256",
            "EXPECTWRITESIZE": "256",
            "ID": "0",
            "ISDEFAULT": "false",
            "MAXREADSIZE": "0",
            "MAXWRITESIZE": "0",
            "MINREADSIZE": "0",
            "MINWRITESIZE": "0",
            "NAME": "SmartPartition001",
            "PARENTID": "0",
            "PARENTNAME": "StorageEngine000",
            "TYPE": 268
        },
        {
            "DESCRIPTION": "",
            "EXPECTREADSIZE": "256",
```

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```
            "EXPECTWRITESIZE": "256",
            "ID": "1",
            "ISDEFAULT": "false",
            "MAXREADSIZE": "0",
            "MAXWRITESIZE": "0",
            "MINREADSIZE": "0",
            "MINWRITESIZE": "0",
            "NAME": "SmartPartition002",
            "PARENTID": "0",
            "PARENTNAME": "StorageEngine000",
            "TYPE": 268
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.3 Interface for Deleting a CachePartition

Function

This interface is used to delete a CachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cachepartition/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.

Result

N/A

Example

- Deleting a CachePartition.

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```
Request: DELETE /deviceManager/rest/210235843710E7000007/cachepartition/2?
t=1478334122141

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.4 Interface for Adding a FileSystem to a CachePartition

Function

This interface is used to add a FileSystem to a CachePartition.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to add file system into SmartPartition.

This operation may affect file system performance. During the operation, this file system cannot process new I/O requests. The file system can process new I/O requests when its health status is "Normal" and its running status is "Online".

Before performing this operation, ensure that the preceding risk is acceptable and the correct SmartPartition and file system are selected.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smartPartition/addFs

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 40: FileSystem
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Example

- Adding a FileSystem to a CachePartition.

```
Request: PUT/deviceManager/rest/2102350BSE10F30000F1/smartPartition/addFs?
t=1482740990554
{
    "ASSOCIATEOBJID": "1014",
    "ASSOCIATEOBJTYPE": 40,
    "ID": "1",
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.5 Interface for Adding a LUN to a CachePartition

Function

This interface is used to add a LUN to a CachePartition.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add LUN into SmartPartition.

This operation may affect LUN performance.

Before performing this operation, ensure that the preceding risk is acceptable and the correct SmartPartition and LUN are selected.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/associate/cachepartition

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11: LUN
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 268: CachePartition

Example

- Adding a LUN to a CachePartition.

```
Request: POST /deviceManager/rest/2102350BSE10F30000F1/lun/associate/
cachepartition?t=1482737037550
{
    "ASSOCIATEOBJID": "6",
    "ASSOCIATEOBJTYPE": 11,
    "ID": "0"
}

Response:
{
    "data": {
    "TYPE": 268
},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.6 Interface for Removing a LUN from a CachePartition

Function

This interface is used to remove a LUN from a CachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/lun/associate/cachepartition

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11: LUN
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Example

- Removing a LUN from a CachePartition.

```
Request: DELETE /deviceManager/rest/2102350BSE10F30000F1/lun/associate/
cachepartition?t=1482741366628
{
    "ASSOCIATEOBJID": "5",
```

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```
    "ASSOCIATEOBJTYPE": 11,
    "ID": "0"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.7 Interface for Removing a FileSystem from a CachePartition

Function

This interface is used to remove a FileSystem from a CachePartition.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to remove file system from SmartPartition.

This operation may affect file system performance. During the operation, this file system cannot process new I/O requests. The file system can process new I/O requests when its health status is "Normal" and its running status is "Online".

Before performing this operation, ensure that the preceding risk is acceptable and the correct SmartPartition and file system are selected.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smartPartition/removeFs

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 40: FileSystem
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 268: CachePartition

Example

- Removing a FileSystem from a CachePartition.

```
Request: PUT /deviceManager/rest/2102350BSE10F30000F1/smartPartition/removeFs?
t=1482741366628
{
    "ASSOCIATEOBJID": "1014",
    "ASSOCIATEOBJTYPE": 40,
    "ID": "1",
}

Response:
{
    "data": {
    "TYPE": 268
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.8 Interface for Querying a CachePartition

Function

This interface is used to query a CachePartition.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cachepartition/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 268: CachePartition
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
DESCRIPTION	Mandatory	string	Description.
ISDEFAULT	Mandatory	string(bool)	Is default. **The value is described as follows:** true: yes false: no
MINREADSIZE	Mandatory	string(uint64)	Minimal read cache size. **Unit:**MB
EXPECTREADSIZE	Mandatory	string(uint64)	Expect read cache size. **Unit:**MB

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Parameter	Mandatory/ Conditional	Type	Description
MAXREADSIZE	Mandatory	string(uint64)	Maximal read cache size. **Unit:**MB
MINWRITESIZE	Mandatory	string(uint64)	Minimal write cache size. **Unit:**MB
EXPECTWRITESIZE	Mandatory	string(uint64)	Expect write cache size. **Unit:**MB
MAXWRITESIZE	Mandatory	string(uint64)	Maximal write cache size. **Unit:**MB

Example

- Querying a CachePartition.

```
Request: GET /deviceManager/rest/210235843710E7000007/cachepartition/0?
t=1478334122141

Response:
{
    "data":
        {
            "DESCRIPTION": "",
            "EXPECTREADSIZE": "256",
            "EXPECTWRITESIZE": "256",
            "ID": "0",
            "ISDEFAULT": "false",
            "MAXREADSIZE": "0",
            "MAXWRITESIZE": "0",
            "MINREADSIZE": "0",
            "MINWRITESIZE": "0",
            "NAME": "SmartPartition001",
            "PARENTID": "0",
            "PARENTNAME": "StorageEngine000",
            "TYPE": 268
        },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.1.9 Interface for Modifying a CachePartition

Function

This interface is used to modify a CachePartition.

Applicable Model

Applicable to V3 all series.

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HighRisk

You are about to change the read partition size or write partition size of SmartPartition.

This operation may affect the performance of LUN or file system.

Suggestion: Before performing this operation, ensure that the preceding risk is acceptable and the correct SmartPartition is selected.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cachepartition

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CachePartition ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
MINREADSIZE	Optional	uint64	Minimal read cache size. **Unit:**MB
EXPECTREADSIZE	Optional	uint64	Expect read cache size. **The value is described as follows:** The value is a multiple of 128 and must be larger than 256. **Unit:**MB
MAXREADSIZE	Optional	uint64	Maximal read cache size. **Unit:**MB

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Parameter	Mandatory/Optional/Conditional	Type	Description
MINWRITESIZE	Optional	uint64	Minimal write cache size. **Unit:**MB
EXPECTWRITESIZE	Optional	uint64	Expect write cache size. **The value is described as follows:** The value is a multiple of 128 and must be larger than 256. **Unit:**MB
MAXWRITESIZE	Optional	uint64	Maximal write cache size. **Unit:**MB

Result

N/A

Example

- Modifying a CachePartition.

```
Request: PUT /deviceManager/rest/210235843710E7000007/cachepartition?
t=1478334122141
{
    "ID": "0",
    "DESCRIPTION": "devicemanager"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2 smart_qos

4.11.2.1 Interface for Deleting an I/O Class Template

Function

This interface is used to delete I/O class template information.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclasstemplate/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	I/O class template ID.

Result

N/A

Example

- Delete I/O class template information.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/ioclasstemplate/2
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.2 Interface for Querying I/O Class Template Information

Function

This interface is used to query basic information about an I/O class template.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclasstemplate/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Template ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 269: IO class template
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
IOTYPE	Mandatory	string(enum)	I/O property information in I/O classes. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O

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Parameter	Mandatory/ Conditional	Type	Description
MAXBANDWIDTH	Conditional	string(uint32)	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX. Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX.
MINBANDWIDTH	Conditional	string(uint32)	Min BandWidth of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when the parameter is configured during template creation.

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Parameter	Mandatory/ Conditional	Type	Description
MAXIOPS	Conditional	string(uint32)	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**This field is returned only when the parameter is configured during template creation.
MINIOPS	Conditional	string(uint32)	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when the parameter is configured during template creation.
LATENCY	Mandatory	string(uint32)	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms

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Parameter	Mandatory/ Conditional	Type	Description
PRIORITY	Mandatory	string(enum)	Priority of an I/O class. **The value is described as follows:** When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. The default value is normal. 0: normal 1: high
CLASSTYPE	Mandatory	string(enum)	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os 1: controls the upper limit of I/Os **Note:**Sending enumeration value 2 and receiving 0 both mean that the lower limit of I/Os is controlled.

Example

- Querying basic information about an I/O class template.

```
Request: GET /deviceManager/rest/210235843710E7000007/ioclasstemplate/0
Response:
{
    "data": {
        "CLASSTYPE": "1",
        "DESCRIPTION": "Limit the maximum IOPS of read and write I/O to
50000.",
        "ID": "0",
        "IOTYPE": "2",
        "LATENCY": "0",
        "MAXIOPS": "50000",
        "NAME": "max_iops_50000_policy",
        "PRIORITY": "0",
        "TYPE": 269
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.11.2.3 Interface for Deleting a SmartQoS

Function

This interface is used to delete a SmartQoS.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	SmartQoS policy ID.

Result

N/A

Example

- Delete a SmartQoS.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/ioclass/1
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.4 Interface for Creating a SmartQoS

Function

This interface is used to create a SmartQoS.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
IOTYPE	Optional	enum	I/O property information in I/O classes. **The value is described as follows:** 0: read I/O 1: write I/O 2: read and write I/Os **Default:**2: read and write I/Os
LUNLIST	Optional	array	List of LUN IDs in an I/O class.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MAXBANDWIDTH	Conditional	uint32	Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest priority. **Unit:**Mbit/s **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
MINBANDWIDTH	Conditional	uint32	Minimum bandwidth when the performance objective of an I/O class is bandwidth, which has a high priority. **Unit:**Mbit/s **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
MAXIOPS	Conditional	uint32	Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
MINIOPS	Conditional	uint32	Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LATENCY	Conditional	uint32	Latency requirement of an I/O class. This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
PRIORITY	Optional	enum	Priority of an I/O class. When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. **The value is described as follows:** 0: normal 1: high **Default:**0: normal
SCHEDULEPOLICY	Mandatory	enum	Scheduling policy. **The value is described as follows:** 0: once 1: daily 2: weekly
SCHEDULESTARTTIME	Mandatory	uint64	Scheduling start time (UTC time).
STARTTIME	Mandatory	string	Time for I/O class settings to take effect. The time is returned in the hh:mm format.
DURATION	Mandatory	uint32	Validity period of I/O class settings. The value is smaller than 24 hours.

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Parameter	Mandatory/Optional/Conditional	Type	Description
CYCLESET	Conditional	array	Cycle period of an I/O class, which is an int array. The cycle period is expressed in days when schedulePolicy is set to weekly. 0 to 6 map to Sunday to Saturday. **Note:**This field is mandatory when schedule Policy is set to weekly.
CLASSTYPE	Mandatory	enum	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os. 1: controls the upper limit of I/Os.
FSLIST	Optional	array	List of file systems in an I/O class. This field is mutually exclusive with No. 66 LUN list. File systems and LUNs/LUN snapshots cannot coexist in one SmartQoS.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 230:IO Class.
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 2: running 45: inactive 46: idle
IOTYPE	Mandatory	string(enum)	I/O property information in I/O classes. **The value is described as follows:** There are three properties: read, write, and read/write. The default value is read. 0: read I/O 1: write I/O 2: read and write I/Os
ENABLESTATUS	Mandatory	string(bool)	Status. **The value is described as follows:** false: inactive true: active
LUNLIST	Mandatory	string(array)	List of LUN IDs in an I/O class.

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Parameter	Mandatory/ Conditional	Type	Description
MAXBANDWIDTH	Conditional	string(uint32)	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX.

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Parameter	Mandatory/ Conditional	Type	Description
MINBANDWIDTH	Conditional	string(uint32)	Min BandWidth of an I/O class. **The value is described as follows:** Minimum bandwidth when the performance objective of an I/O class is bandwidth, which has a high priority. **Note:**This parameter is returned only when this parameter is configured during policy creation.
MAXIOPS	Conditional	string(uint32)	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**This parameter is returned only when this parameter is configured during policy creation.
MINIOPS	Conditional	string(uint32)	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This parameter is returned only when this parameter is configured during policy creation.

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Parameter	Mandatory/ Conditional	Type	Description
LATENCY	Mandatory	string(uint32)	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value.
PRIORITY	Mandatory	string(enum)	Priority of an I/O class. **The value is described as follows:** When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. The default value is normal. 0: normal 1: high
SCHEDULEPOLICY	Mandatory	string(enum)	Scheduling policy. **The value is described as follows:** The default value is 2. 0: once 1: daily 2: weekly
SCHEDULESTARTTIME	Mandatory	string(uint64)	Scheduling start time (UTC time). **The value is described as follows:** The hour, minute, and second are ignored, and only the values of year, month, and day are effective.

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string	Time for I/O class settings to take effect. **The value is described as follows:** The time is returned in the hh:mm format.
DURATION	Mandatory	string(uint32)	Validity period of I/O class settings. **The value is described as follows:** The value is smaller than 24 hours.
CYCLESET	Mandatory	array	Cycle period of an I/O class. **The value is described as follows:** Cycle period of an I/O class, which is an int array. The cycle period is expressed in days when schedulePolicy is set to weekly. 0 to 6 map to Sunday to Saturday.
FSLIST	Mandatory	array	List of file systems in an I/O class. **The value is described as follows:** This field is mutually exclusive with No. 66 LUN list. File systems and LUNs/LUN snapshots cannot coexist in one SmartQoS.
CLASSTYPE	Mandatory	string	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os. 1: controls the upper limit of I/Os.

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Example

- Creating a SmartQoS.

```
Request: POST /deviceManager/rest/210235843710E7000007/ioclass
{
    "CLASSTYPE": "1",
    "CYCLESET": [ ],
    "DESCRIPTION": "sdfsf",
    "DURATION": 86400,
    "IOTYPE": "2",
    "LUNLIST": ["1"],
    "MAXIOPS": "50000",
    "NAME": "SmartQoS002",
    "SCHEDULEPOLICY": 1,
    "SCHEDULESTARTTIME": 1454601600,
    "STARTTIME": "08:00"
}

Response:
{
    "data": {
        "CLASSTYPE": "1",
        "CYCLESET": "[]",
        "DESCRIPTION": "sdfsf",
        "DURATION": "86400",
        "ENABLESTATUS": "false",
        "FSLIST": "[\"\"]",
        "HEALTHSTATUS": "1",
        "ID": "1",
        "IOTYPE": "2",
        "LATENCY": "0",
        "LUNLIST": "[\"1\"]",
        "MAXIOPS": "50000",
        "NAME": "SmartQoS002",
        "PRIORITY": "0",
        "RUNNINGSTATUS": "45",
        "SCHEDULEPOLICY": "1",
        "SCHEDULESTARTTIME": "1454630400",
        "STARTTIME": "08:00",
        "TYPE": 230
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.5 Interface for Batch Querying SmartQoS Information

Function

This interface is used to batch query basic information about SmartQoS policies.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 230: IO Class
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: Running 45: Inactive 46: Idle
IOTYPE	Mandatory	string(enum)	I/O property information in I/O classes. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O
ENABLESTATUS	Mandatory	string(bool)	Status. **The value is described as follows:** false: inactive true: active
LUNLIST	Mandatory	string(array)	List of LUN IDs in an I/O class.

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Parameter	Mandatory/ Conditional	Type	Description
MAXBANDWIDTH	Conditional	string(uint32)	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX.
MINBANDWIDTH	Conditional	string(uint32)	Min BandWidth of an I/O class. **The value is described as follows:** Minimum bandwidth when the performance objective of an I/O class is bandwidth, which has a high priority.

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Parameter	Mandatory/ Conditional	Type	Description
MAXIOPS	Conditional	string(uint32)	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority.
MINIOPS	Conditional	string(uint32)	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority.
LATENCY	Mandatory	string(uint32)	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value.
PRIORITY	Mandatory	string(enum)	Priority of an I/O class. **The value is described as follows:** When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. The default value is normal. 0: normal 1: high

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Parameter	Mandatory/ Conditional	Type	Description
SCHEDULEPOLICY	Mandatory	string(enum)	Scheduling policy. **The value is described as follows:** The default value is 2. 0: once 1: daily 2: weekly
SCHEDULESTARTTIME	Mandatory	string(uint64)	Scheduling start time (UTC time). **The value is described as follows:** The hour, minute, and second are ignored, and only the values of year, month, and day are effective.
STARTTIME	Mandatory	string	Time for I/O class settings to take effect. **The value is described as follows:** The time is returned in the hh:mm format.
DURATION	Mandatory	string(uint32)	Validity period of I/O class settings. **The value is described as follows:** The value is smaller than 24 hours.
CYCLESET	Mandatory	array	Cycle period of an I/O class. **The value is described as follows:** Cycle period of an I/O class, which is an int array. The cycle period is expressed in days when schedulePolicy is set to weekly. 0 to 6 map to Sunday to Saturday.

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Parameter	Mandatory/ Conditional	Type	Description
FSLIST	Mandatory	array	List of file systems in an I/O class. **The value is described as follows:** This field is mutually exclusive with No. 66 LUN list. File systems and LUNs/LUN snapshots cannot coexist in one SmartQoS.
CLASSTYPE	Mandatory	string	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os. 1: controls the upper limit of I/Os.

Example

- Batch querying basic information about SmartQoS policies.

```
Request: GET /deviceManager/rest/210235843710E7000007/ioclass?range=[0-100]
Response:
 {
    "data": [
        {
            "CLASSTYPE": "1",
            "CYCLESET": "[]",
            "DESCRIPTION": "111",
            "DURATION": "86400",
            "ENABLESTATUS": "false",
            "FSLIST": "[\"\"]",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "IOTYPE": "2",
            "LATENCY": "0",
            "LUNLIST": "[\"9\"]",
            "MAXIOPS": "50000",
            "NAME": "SmartQoS001",
            "PRIORITY": "0",
            "RUNNINGSTATUS": "45",
            "SCHEDULEPOLICY": "1",
            "SCHEDULESTARTTIME": "1454630400",
            "STARTTIME": "08:00",
            "TYPE": 230
        },
        {
            "CLASSTYPE": "1",
            "CYCLESET": "[]",
            "DESCRIPTION": "sdfsf",
            "DURATION": "86400",
            "ENABLESTATUS": "true",
            "FSLIST": "[\"\"]",
            "HEALTHSTATUS": "1",
            "ID": "1",
```

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```
            "IOTYPE": "2",
            "LATENCY": "0",
            "LUNLIST": "[\"1\"]",
            "MAXIOPS": "50000",
            "NAME": "SmartQoS002",
            "PRIORITY": "0",
            "RUNNINGSTATUS": "2",
            "SCHEDULEPOLICY": "1",
            "SCHEDULESTARTTIME": "1454630400",
            "STARTTIME": "08:00",
            "TYPE": 230
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.6 Interface for Querying the Number of SmartQoS

Function

This interface is used to query the number of SmartQoS policies.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried SmartQoS.

Example

- Querying the number of SmartQoS policies.

```
Request: GET /deviceManager/rest/210235843910E6000009/ioclass/count
Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.7 Interface for Modifying SmartQoS Information

Function

This interface is used to modify a SmartQoS.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to add file system into traffic control policy({0}). This operation may affect file system performance. Suggestion:Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy and file system are selected.
You are about to remove file system from traffic control policy ({0}). This operation may affect file system performance. Suggestion:Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy and file system are selected.
You are about to remove snapshot from traffic control policy ({0}), this operation may affect snapshot performance. Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy and snapshot are selected.

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You are about to add snapshot into traffic control policy({0}), this operation may affect snapshot performance. Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy and snapshot are selected.
You are about to add LUN into traffic control policy, this operation may affect LUN performance. Suggestion:Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy and LUN are selected.
You are about to remove LUN from traffic control policy, this operation may affect LUN performance. Suggestion:Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy and LUN are selected.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	SmartQoS policy ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
IOTYPE	Optional	enum	I/O property information in I/O classes. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O
LUNLIST	Optional	array	List of LUN IDs in an I/O class.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MAXBANDWIDTH	Optional	uint32	Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest priority. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX.
MINBANDWIDTH	Optional	uint32	Min BandWidth of an I/O class. **The value is described as follows:** Minimum bandwidth when the performance objective of an I/O class is bandwidth, which has a high priority.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MAXIOPS	Optional	uint32	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority.
MINIOPS	Optional	uint32	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority.
LATENCY	Optional	uint32	Priority of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms
PRIORITY	Optional	enum	Priority of an I/O class. **The value is described as follows:** 0: normal 1: high
SCHEDULEPOLICY	Optional	enum	Scheduling policy. **The value is described as follows:** 0: once 1: daily 2: weekly

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Parameter	Mandatory/Optional/Conditional	Type	Description
SCHEDULESTARTTIME	Optional	uint64	Scheduling start time (UTC time). **The value is described as follows:** The hour, minute, and second are ignored, and only the values of year, month, and day are effective.
STARTTIME	Optional	string	Time for I/O class settings to take effect. **The value is described as follows:** The time is returned in the hh:mm format.
DURATION	Optional	uint32	Validity period of I/O class settings. **The value is described as follows:** The value is smaller than 24 hours.
CYCLESET	Optional	array	Cycle period of an I/O class. **The value is described as follows:** Cycle period of an I/O class, which is an int array. The cycle period is expressed in days when schedulePolicy is set to weekly. 0 to 6 map to Sunday to Saturday.
FSLIST	Optional	array	List of file systems in an I/O class. **The value is described as follows:** This field is mutually exclusive with No. 66 LUN list. File systems and LUNs/LUN snapshots cannot coexist in one SmartQoS.

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Result

N/A

Example

- Modifying a SmartQoS.

```
Request: PUT /deviceManager/rest/210235843710E7000007/ioclass/0
{
    "DESCRIPTION": "zxmnbcccv"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.8 Interface for Modifying an I/O Class Template

Function

This interface is used to modify I/O class template information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclasstemplate/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	I/O class template ID.
DESCRIPTION	Optional	string	Description. **Length:**0-255

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Parameter	Mandatory/Optional/Conditional	Type	Description
IOTYPE	Optional	enum	Max BandWidth of an I/O class. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O
MAXBANDWIDTH	Optional	uint32	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s
MINBANDWIDTH	Optional	uint32	Min BandWidth of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Unit:**Mbit/s
MAXIOPS	Optional	uint32	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority.
MINIOPS	Optional	uint32	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LATENCY	Optional	uint32	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms
CLASSTYPE	Optional	enum	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os. 1: controls the upper limit of I/Os. **Note:**Sending enumeration value 2 and receiving 0 both mean that the lower limit of I/Os is controlled.

Result

N/A

Example

- Modify I/O class template information.

```
Request: PUT/deviceManager/rest/210235843710E7000007/ioclasstemplate/2
{
    "CLASSTYPE": "0",
    "IOTYPE": "2",
    "LATENCY": 60,
    "MINBANDWIDTH": 600,
    "MINIOPS": 6000
}
Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.11.2.9 Interface for Batch Querying I/O Class Template Information

Function

This interface is used to batch query I/O class templates.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclasstemplate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 269: IO class template
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
IOTYPE	Mandatory	string(enum)	I/O property information in I/O classes. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O

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Parameter	Mandatory/ Conditional	Type	Description
MAXBANDWIDTH	Conditional	string(uint32)	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX.
MINBANDWIDTH	Conditional	string(uint32)	Min BandWidth of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when the parameter is configured during template creation.

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Parameter	Mandatory/ Conditional	Type	Description
MAXIOPS	Conditional	string(uint32)	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**This field is returned only when the parameter is configured during template creation.
MINIOPS	Conditional	string(uint32)	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when the parameter is configured during template creation.
LATENCY	Mandatory	string(uint32)	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms

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Parameter	Mandatory/ Conditional	Type	Description
PRIORITY	Mandatory	string(enum)	Priority of an I/O class. **The value is described as follows:** When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. The default value is normal. 0: normal 1: high
CLASSTYPE	Mandatory	string(enum)	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os 1: controls the upper limit of I/Os **Note:**Sending enumeration value 2 and receiving 0 both mean that the lower limit of I/Os is controlled.

Example

- Batch querying I/O class templates.

```
Request: GET /deviceManager/rest/210235843710E7000007/ioclasstemplate
Response:
{
    "data": [
        {
            "CLASSTYPE": "1",
            "DESCRIPTION": "Limit the maximum IOPS of read and write I/O to
50000.",
            "ID": "0",
            "IOTYPE": "2",
            "LATENCY": "0",
            "MAXIOPS": "50000",
            "NAME": "max_iops_50000_policy",
            "PRIORITY": "0",
            "TYPE": 269
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.11.2.10 Interface for Creating an I/O Class Template

Function

This interface is used to create an I/O class template.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclasstemplate

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
IOTYPE	Mandatory	enum	Max BandWidth of an I/O class. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O

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Parameter	Mandatory/Optional/Conditional	Type	Description
MAXBANDWIDTH	Conditional	uint32	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
MINBANDWIDTH	Conditional	uint32	Min BandWidth of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Unit:**Mbit/s **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
MAXIOPS	Conditional	uint32	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MINIOPS	Conditional	uint32	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
LATENCY	Conditional	uint32	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms **Note:**Select at least one from MAXBANDWIDTH, MINBANDWIDTH, MAXIOPS, MINIOPS, or LATENCY.
CLASSTYPE	Mandatory	enum	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os 1: controls the upper limit of I/Os **Note:**Sending enumeration value 2 and receiving 0 both mean that the lower limit of I/Os is controlled.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 269: IO class template
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
IOTYPE	Mandatory	string(enum)	I/O property information in I/O classes. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O

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Parameter	Mandatory/ Conditional	Type	Description
MAXBANDWIDTH	Conditional	string(uint32)	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX. Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX.
MINBANDWIDTH	Conditional	string(uint32)	Min BandWidth of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when the parameter is configured during template creation.

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Parameter	Mandatory/ Conditional	Type	Description
MAXIOPS	Conditional	string(uint32)	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**This field is returned only when the parameter is configured during template creation.
MINIOPS	Conditional	string(uint32)	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when the parameter is configured during template creation.
LATENCY	Mandatory	string(uint32)	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value. **Unit:**ms

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Parameter	Mandatory/ Conditional	Type	Description
PRIORITY	Mandatory	string(enum)	Priority of an I/O class. **The value is described as follows:** When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. The default value is normal. 0: normal 1: high
CLASSTYPE	Mandatory	string(enum)	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os 1: controls the upper limit of I/Os **Note:**Sending enumeration value 2 and receiving 0 both mean that the lower limit of I/Os is controlled.

Example

- Creating an I/O class template.

```
Request: POST /deviceManager/rest/210235843710E7000007/ioclasstemplate
{
    "CLASSTYPE": "0",
    "IOTYPE": "2",
    "LATENCY": 50,
    "MINBANDWIDTH": 500,
    "MINIOPS": 5000,
    "NAME": "template1"
}
Response:
{
    "data": {
        "CLASSTYPE": "0",
        "DESCRIPTION": "",
        "ID": "2",
        "IOTYPE": "2",
        "LATENCY": "50",
        "MINBANDWIDTH": "500",
        "MINIOPS": "5000",
        "NAME": "template1",
        "PRIORITY": "0",
        "TYPE": 269
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.11 Interface for Activating a SmartQoS

Function

This interface is used to activate a SmartQoS policy.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to activate traffic control policy, this operation may affect the performance of storage objects.

Before performing this operation, ensure that the preceding risk is acceptable and the traffic control policy is correctly configured.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass/active

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	SmartQoS policy ID.
ENABLESTATUS	Mandatory	bool	Status. **The value is described as follows:** true: activated

Result

N/A

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Example

- Activating a SmartQoS policy.

```
Request: PUT /deviceManager/rest/210235843710E7000007/ioclass/active
{
    "ID": 0,
    "ENABLESTATUS": true
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.12 Interface for Deactivating a SmartQoS

Function

This interface is used to deactivate a SmartQoS policy.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to deactivate traffic control policy, this operation may affect the performance of storage objects.

Before performing this operation, ensure that the preceding risk is acceptable and the correct traffic control policy is selected.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass/active

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	SmartQoS policy ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLESTATUS	Mandatory	bool	Status. **The value is described as follows:** false: deactivated

Result

N/A

Example

- Deactivating a SmartQoS policy.

```
Request: PUT /deviceManager/rest/210235843710E7000007/ioclass/active
{
    "ID": 0,
    "ENABLESTATUS": false
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.2.13 Interface for Querying SmartQoS Information

Function

This interface is used to query basic information about a SmartQoS task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ioclass/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartQoS policy ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 230: IO class
ID	Mandatory	string	SmartQoS policy ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 2: Running 45: Inactive 46: Idle
IOTYPE	Mandatory	string(enum)	I/O property information in I/O classes. **The value is described as follows:** 0: Read I/O 1: Write I/O 2: Read/Write I/O
ENABLESTATUS	Mandatory	string(bool)	Status. **The value is described as follows:** false: inactive true: active

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Parameter	Mandatory/ Conditional	Type	Description
LUNLIST	Mandatory	string(array)	List of LUN IDs in an I/O class.
MAXBANDWIDTH	Conditional	string(uint32)	Max BandWidth of an I/O class. **The value is described as follows:** Maximum bandwidth when the performance objective of an I/O class is bandwidth, which has the lowest. **Unit:**Mbit/s **Note:** The bandwidth and IOPS are mutually exclusive. 1. From H1 version, the bandwidth and IOPS can be configured independently or jointly. For assurance configuration, the IOPS, bandwidth, and latency can be selected (all or one or two of the three). 2. From H1 version, the assurance and restriction configurations are mutually exclusive. Restriction configuration: Bandwidth ≤ XXX and IOPS ≤ XXX Assurance configuration: Bandwidth ≥ XXX, IOPS ≥ XXX, and latency ≤ XXX

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Parameter	Mandatory/ Conditional	Type	Description
MINBANDWIDTH	Conditional	string(uint32)	Min BandWidth of an I/O class. **The value is described as follows:** Minimum bandwidth when the performance objective of an I/O class is bandwidth, which has a high priority. **Note:**This field is returned only when this parameter is configured during policy creation.
MAXIOPS	Conditional	string(uint32)	Max IOPS of an I/O class. **The value is described as follows:** Maximum IOPS when the performance objective of an I/O class is IOPS, which has the lowest priority. **Note:**This field is returned only when this field is configured during policy creation.
MINIOPS	Conditional	string(uint32)	Minimum IOPS of an I/O class. **The value is described as follows:** Minimum IOPS when the performance objective of an I/O class is IOPS, which has a high priority. **Note:**This field is returned only when this field is configured during policy creation.

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Parameter	Mandatory/ Conditional	Type	Description
LATENCY	Mandatory	string(uint32)	Latency requirement of an I/O class. **The value is described as follows:** This parameter is valid when lower limits of bandwidth and IOPS are configured. I/O class response is triggered only when a latency exceeds the configured value.
PRIORITY	Mandatory	string(enum)	Priority of an I/O class. **The value is described as follows:** When the priority of an I/O class is set to high, the performance objective of the I/O class is ensured first. The default value is normal. 0: normal 1: high
SCHEDULEPOLICY	Mandatory	string(enum)	Scheduling policy. **The value is described as follows:** 0: once 1: daily 2: weekly
SCHEDULESTARTTIME	Mandatory	string(uint64)	Scheduling start time (UTC time). **The value is described as follows:** The hour, minute, and second are ignored, and only the values of year, month, and day are effective.

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string	Time for I/O class settings to take effect. **The value is described as follows:** The time is returned in the hh:mm format.
DURATION	Mandatory	string(uint32)	Validity period of I/O class settings. **The value is described as follows:** The value is smaller than 24 hours.
CYCLESET	Mandatory	array	Cycle period of an I/O class. **The value is described as follows:** Cycle period of an I/O class, which is an int array. The cycle period is expressed in days when schedulePolicy is set to weekly. 0 to 6 map to Sunday to Saturday.
FSLIST	Mandatory	array	List of file systems in an I/O class. **The value is described as follows:** This field is mutually exclusive with No. 66 LUN list. File systems and LUNs/LUN snapshots cannot coexist in one SmartQoS.
CLASSTYPE	Mandatory	string	I/O class control type. **The value is described as follows:** 0: controls the lower limit of I/Os. 1: controls the upper limit of I/Os.

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Example

- Querying basic information about a SmartQoS.

```
Request: GET/deviceManager/rest/210235843710E7000007/ioclass/0
Response: {
    "data": {
        "CLASSTYPE": "1",
        "CYCLESET": "[]",
        "DESCRIPTION": "111",
        "DURATION": "86400",
        "ENABLESTATUS": "false",
        "FSLIST": "[\"\"]",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "IOTYPE": "2",
        "LATENCY": "0",
        "LUNLIST": "[\"9\"]",
        "MAXIOPS": "50000",
        "NAME": "SmartQoS001",
        "PRIORITY": "0",
        "RUNNINGSTATUS": "45",
        "SCHEDULEPOLICY": "1",
        "SCHEDULESTARTTIME": "1454630400",
        "STARTTIME": "08:00",
        "TYPE": 230
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.3 smart_migration

4.11.3.1 Interface for Batch Querying SmartMigration Task Information

Function

This interface is used to batch query basic information about SmartMigration tasks.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Conditional	string	Query criteria. **The value is described as follows:** Parameters PARENTID, PARENTNAME, TARGETLUNID and TARGETLUNNAME are supported. **Note:**For two parameters "filter" and "range", either or both must be selected to deliver.
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:** For two parameters "filter" and "range", either or both must be selected to deliver. A maximum of 10000 results can be returned.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 253: LUN Migration
ID	Mandatory	string	Object ID.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 34: interrupted 37: queuing 74: migration fault 75: migrating 76: migration completed
PARENTID	Mandatory	string	Source LUN ID.
PARENTNAME	Mandatory	string	Source LUN name.
PROCESS	Mandatory	string(uint32)	Task progress. **The value is described as follows:** The value ranges from 0 to 100.
STARTTIME	Mandatory	string(uint64)	Start time for a task. **Unit:**seconds
ENDTIME	Mandatory	string(uint64)	End time for a task. **Unit:**seconds
TARGETLUNID	Mandatory	string	Target LUN ID.
TARGETLUNNAME	Mandatory	string	Target LUN name.
SPEED	Mandatory	string(enum)	Migration rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/ Conditional	Type	Description
WORKMODE	Mandatory	string(enum)	Work mode. **The value is described as follows:** 0: Auto Split 1: Manual Split

Example

- Batch querying basic information about SmartMigration tasks.

```
Request: GET /deviceManager/rest/210235843910E6000009/LUN_MIGRATION?
range=[0-100]
response: {
     "data": {
          "ENDTIME": "-1",
          "ID": "18",
          "PARENTID": "18",
          "PARENTNAME": "fff0000",
          "PROCESS": "-1",
          "RUNNINGSTATUS": "1",
          "SPEED": "2",
          "STARTTIME": "1442866449",
          "TARGETLUNID": "19",
          "TARGETLUNNAME": "fff0001",
          "TYPE": 253,
          "WORKMODE": "1"
     },
     "error": {
          "code": 0,
          "description": "0"
     }
}
```

4.11.3.2 Interface for Consistently Splitting a SmartMigration Task

Function

This interface is used to consistently split a SmartMigration task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION/SPLIT_MULTI_LUNMIGRATION

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PAIRID	Mandatory	string	Source LUN ID. Use commas (,) to separate multiple LUN IDs from one other.

Result

N/A

Example

- Consistently split a SmartMigration task.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUN_MIGRATION/
SPLIT_MULTI_LUNMIGRATION
{
     "PAIRID": "80,90"
}

Response:
{
     "data": {},
     "error": {
          "code": 0,
          "description": "0"
     }
}
```

4.11.3.3 Interface for Creating a SmartMigration Task

Function

This interface is used to create a SmartMigration task.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to create a migration relationship between source LUN and target LUN.

Migration starts immediately after the relationship is established, and the data on the target LUN will be overwritten by that on the source LUN after the migration.

Suggestion:Before performing this operation, ensure that the selected source LUN and target LUN are correct and the target LUN is not being read or written by hosts. If the capacity of

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the target LUN is larger than that of the source LUN, scan for the source LUN again after the migration is complete.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTID	Mandatory	string	Source LUN ID.
TARGETLUNID	Mandatory	string	Target LUN ID.
SPEED	Mandatory	enum	Migration rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
WORKMODE	Mandatory	enum	Work mode. **The value is described as follows:** 0: Auto Split 1: Manual Split

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 253:LUN Migration
ID	Mandatory	string	Object ID.

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 1: normal 34: interrupted 37: queuing 74: migration fault 75: migrating 76: migration completed
PARENTID	Mandatory	string	Source LUN ID.
PARENTNAME	Mandatory	string	Source LUN name.
PROCESS	Mandatory	string(uint32)	Task progress. **The value is described as follows:** The value ranges from 0 to 100.
STARTTIME	Mandatory	string(uint64)	Start time for a task. **Unit:**seconds
ENDTIME	Mandatory	string(uint64)	End time for a task. **Unit:**seconds
TARGETLUNID	Mandatory	string	Target LUN ID.
TARGETLUNNAME	Mandatory	string	Target LUN name.
SPEED	Mandatory	string(enum)	Migration rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
WORKMODE	Mandatory	string(enum)	Work mode. **The value is described as follows:** 0: Auto Split 1: Manual Split

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Example

- Create a SmartMigration task.

```
Request: POST/deviceManager/rest/210235843910E6000009/LUN_MIGRATION
{
    "PARENTID": "80",
    "TARGETLUNID": "81",
    "SPEED": "1",
    "WORKMODE": "0"
}
Response: {
    "data": {
        "ENDTIME": "-1",
        "ID": "80",
        "PARENTID": "80",
        "PARENTNAME": "miglun0000",
        "PROCESS": "0",
        "RUNNINGSTATUS": "75",
        "SPEED": "1",
        "STARTTIME": "1442936357",
        "TARGETLUNID": "81",
        "TARGETLUNNAME": "miglun0001",
        "TYPE": 253,
        "WORKMODE": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.3.4 Interface for Querying SmartMigration Task Information

Function

This interface is used to query basic information about a SmartMigration task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN Migration ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 253:LUN Migration
ID	Mandatory	string	LUN Migration ID.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 1: normal 34: interrupted 37: queuing 74: migration fault 75: migrating 76: migration completed
PARENTID	Mandatory	string	Source LUN ID.
PARENTNAME	Mandatory	string	Source LUN name.
PROCESS	Mandatory	string(uint32)	Task progress. **The value is described as follows:** The value ranges from 0 to 100.
STARTTIME	Mandatory	string(uint64)	Start time for a task. **Unit:**seconds

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Parameter	Mandatory/ Conditional	Type	Description
ENDTIME	Mandatory	string(uint64)	End time for a task. **Unit:**seconds
TARGETLUNID	Mandatory	string	Target LUN ID.
TARGETLUNNAME	Mandatory	string	Target LUN name.
SPEED	Mandatory	string(enum)	Migration rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
WORKMODE	Mandatory	string(enum)	Work mode. **The value is described as follows:** 0: Auto Split 1: Manual Split

Example

- Querying basic information about the SmartMigration task whose ID is 18.

```
Request: GET /deviceManager/rest/210235843910E6000009/LUN_MIGRATION/18
Response: {
    "data": {
        "ENDTIME": "-1",
        "ID": "18",
        "PARENTID": "18",
        "PARENTNAME": "fff0000",
        "PROCESS": "-1",
        "RUNNINGSTATUS": "1",
        "SPEED": "2",
        "STARTTIME": "1442866449",
        "TARGETLUNID": "19",
        "TARGETLUNNAME": "fff0001",
        "TYPE": 253,
        "WORKMODE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.3.5 Interface for Splitting a SmartMigration Task

Function

This interface is used to split a SmartMigration task.

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Applicable Model

Applicable to V3 all series.

HighRisk

You are about to split LUN migrations. Only source LUN can be read and written after splitting.

Suggestion: Before performing this operation, ensure that the current service load is light.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION/SPLIT_MULTI_LUNMIGRATION

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PAIRID	Mandatory	string	Source LUN ID.

Result

N/A

Example

- Splitting a SmartMigration task.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUN_MIGRATION/
SPLIT_MULTI_LUNMIGRATION
{
     "PAIRID": "80"
}

Response:
{
     "data": {},
     "error": {
          "code": 0,
          "description": "0"
     }
}
```

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4.11.3.6 Interface for Deleting a SmartMigration Task

Function

This interface is used to delete a SmartMigration task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.

Result

N/A

Example

- Deleting the SmartMigration task whose ID is 80.

```
Request: DELETE/deviceManager/rest/210235843910E6000009/LUN_MIGRATION/80
Response: {
    "data": {

    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.3.7 Interface for Querying the Number of SmartMigration Tasks

Function

This interface is used to query the number of SmartMigration tasks.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters PARENTID, PARENTNAME, TARGETLUNID, and TARGETLUNNAME are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 253:LUN Migration
COUNT	Mandatory	string(uint32)	Number of queried SmartMigration.

Example

- Querying the number of SmartMigration tasks.

```
Request: GET /deviceManager/rest/210235843910E6000009/LUN_MIGRATION/count
Response:
{
```

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```
    "data": {
        "COUNT": "1",
        "TYPE": 253
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.3.8 Interface for Modifying SmartMigration Task Information

Function

This interface is used to modify a SmartMigration task.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUN_MIGRATION/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
SPEED	Optional	enum	Migration rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
WORKMODE	Optional	enum	Work mode. **The value is described as follows:** 0: Auto Split 1: Manual Split

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Result

N/A

Example

- Modifying the SmartMigration whose ID is 18.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUN_MIGRATION/18
{
     "ID": "18",
     "WORKMODE": "1"
}

response:
{
     "data": {},
     "error": {
          "code": 0,
          "description": "0"
     }
}
```

4.11.4 smart_cache

4.11.4.1 Interface for Querying a SmartCachePartition

Function

This interface is used to query a SmartCachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SmartCachePartition/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePartition ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 273: SmartCachePartition
ID	Mandatory	string	SmartCachePartition ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 267: Engine
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
DESCRIPTION	Mandatory	string	Description.
ASSOCIATEOBJTYPE	Mandatory	string	Associated object type.
ISDEFAULT	Mandatory	string(bool)	Is default. **The value is described as follows:** true: yes false: no
TOTALCAPACITY	Mandatory	string(uint64)	Capacity of a partition. **Unit:**bytes
CACHEDCAPACITY	Mandatory	string(uint64)	Capacity that has been consumed by cache. **Unit:**bytes
FREECAPACITY	Mandatory	string(uint64)	Free capacity in a partition. **Unit:**bytes
SSDHITRATE	Mandatory	string(uint64)	SSD hit rate of a partition. **The value is described as follows:** 0~100 **Unit:**%

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Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Querying a SmartCachePartition.

```
Request: GET/deviceManager/rest/210235843710E7000007/SmartCachePartition/0
Response: {
    "data": {
        "ASSOCIATEOBJTYPE": "0",
        "CACHEDCAPACITY": "0",
        "DESCRIPTION": "",
        "FREECAPACITY": "0",
        "ID": "0",
        "ISDEFAULT": "true",
        "NAME": "StorageEngine00DefaultPartition",
        "PARENTID": "0",
        "PARENTNAME": "StorageEngine000",
        "PARENTTYPE": 267,
        "SSDHITRATE": "0",
        "TOTALCAPACITY": "20613695537152",
        "TYPE": 273
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.2 Interface for Creating a SmartCachePartition

Function

This interface is used to create a SmartCachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SmartCachePartition

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 267: Engine **Default:**267: Engine
PARENTID	Mandatory	uint64	ID of the parent object.
DESCRIPTION	Optional	string	Description. **Length:**0~255
TOTALCAPACITY	Optional	uint64	Capacity of a partition. **Default:**0 **Unit:**bytes

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 273: SmartCachePartition
ID	Mandatory	string	SmartCachePartition ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type of the parent object.
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	string	Associated object type.
ISDEFAULT	Mandatory	string(bool)	Is default. **The value is described as follows:** true: yes false: no
TOTALCAPACITY	Mandatory	string(uint64)	Capacity of a partition. **Unit:**bytes
CACHEDCAPACITY	Mandatory	string(uint64)	Capacity that has been consumed by cache. **Unit:**bytes
FREECAPACITY	Mandatory	string(uint64)	Free capacity in a partition. **Unit:**bytes
SSDHITRATE	Mandatory	string(uint64)	SSD hit rate of a partition. **The value is described as follows:** 0~100 **Unit:**%

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Creating a SmartCachePartition.

```
Request: POST/deviceManager/rest/210235982510G2000015/SmartCachePartition
{
    "DESCRIPTION": "",
    "NAME": "StorageEngine00DefaultPartition",
    "PARENTID": "0",
    "PARENTTYPE": 267,
    "TOTALCAPACITY": "20613695537152"
}
Response: {
    "data": {
        "ASSOCIATEOBJTYPE": "0",
        "CACHEDCAPACITY": "0",
        "DESCRIPTION": "",
        "FREECAPACITY": "0",
        "ID": "0",
        "ISDEFAULT": "true",
        "NAME": "StorageEngine00DefaultPartition",
        "PARENTID": "0",
        "PARENTNAME": "StorageEngine000",
```

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```
        "PARENTTYPE": 267,
        "SSDHITRATE": "0",
        "TOTALCAPACITY": "20613695537152",
        "TYPE": 273
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.3 Interface for Deleting a SmartCachePartition

Function

This interface is used to delete a SmartCachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SmartCachePartition

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePartition ID.

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Deleting a SmartCachePartition.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/
SmartCachePartition/1?t=1478334122141
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.4 Interface for Modifying a SmartCachePartition

Function

This interface is used to modify a SmartCachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SmartCachePartition

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePartition ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
TOTALCAPACITY	Optional	uint64	Capacity of a partition. **Default:**0 **Unit:**bytes

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Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Modifying a SmartCachePartition.

```
Request: PUT /deviceManager/rest/210235843710E7000007/SmartCachePartition/1?
t=1478334122141
{
            "NAME": "modifysmartcache"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.5 Interface for Querying a SmartCachePool

Function

This interface is used to query a SmartCachePool.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smartcachepool/${Id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 218:SmartCachePool
ID	Mandatory	string	Object ID.
ASSOCIATEOBJTYPE	Mandatory	string(enum)	Associated object type. **The value is described as follows:** 10: Disk
CONTROLLERID	Mandatory	string	ID of owning controller.
TOTALCAPACITY	Mandatory	string(uint64)	Total capacity. **Unit:**bytes
FREECAPACITY	Mandatory	string(uint64)	Free Capacity. **Unit:**bytes
TOTALPHYSICSCAP	Mandatory	string(uint64)	Total physical capacity. **Unit:**bytes
SPECCAPACITY	Mandatory	string(uint64)	Nominal capacity. **Unit:**bytes
ENGINEID	Mandatory	string	Engine ID.
ENGINENAME	Mandatory	string	Engine name.
ENCLOSUREID	Mandatory	string	Enclosure ID.

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Querying a SmartCachePool.

```
Request: GET /deviceManager/rest/210235982510G2000015/smartcachepool/1?
t=14785282438599

Response:
{
    "data": {
        "ASSOCIATEOBJTYPE": "10",
        "CONTROLLERID": "0B",
        "ENCLOSUREID": "0",
        "ENGINEID": "0",
```

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```
        "ENGINENAME": "StorageEngine000",
        "FREECAPACITY": "0",
        "ID": "1",
        "SPECCAPACITY": "10307921510400",
        "TOTALCAPACITY": "0",
        "TOTALPHYSICSCAP": "0",
        "TYPE": 218
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.6 Interface for Batch Querying SmartCachePool Information

Function

This interface is used to batch query basic information about SmartCachePool policies.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smartcachepool

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 218:SmartCachePool
ID	Mandatory	string	Object ID.

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Parameter	Mandatory/ Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	string(enum)	Associated object type. **The value is described as follows:** 10: Disk
CONTROLLERID	Mandatory	string	ID of owning controller.
TOTALCAPACITY	Mandatory	string(uint64)	Total capacity. **Unit:**bytes
FREECAPACITY	Mandatory	string(uint64)	Free Capacity. **Unit:**bytes
TOTALPHYSICSCAP	Mandatory	string(uint64)	Total physical capacity. **Unit:**bytes
SPECCAPACITY	Mandatory	string(uint64)	Nominal capacity. **Unit:**bytes
ENGINEID	Mandatory	string	Engine ID.
ENGINENAME	Mandatory	string	Engine name.
ENCLOSUREID	Mandatory	string	Enclosure ID.

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Batch querying basic information about SmartCachePool policies.

```
Request: GET /deviceManager/rest/210235982510G2000015/smartcachepool?
t=14785282438599

Response:
{
    "data":  [
        {
            "ASSOCIATEOBJTYPE": "10",
            "CONTROLLERID": "0A",
            "ENCLOSUREID": "0",
            "ENGINEID": "0",
            "ENGINENAME": "StorageEngine000",
            "FREECAPACITY": "0",
            "ID": "0",
            "SPECCAPACITY": "10307921510400",
            "TOTALCAPACITY": "0",
            "TOTALPHYSICSCAP": "0",
            "TYPE": 218
        },
        {
            "ASSOCIATEOBJTYPE": "10",
            "CONTROLLERID": "0B",
            "ENCLOSUREID": "0",
```

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```
            "ENGINEID": "0",
            "ENGINENAME": "StorageEngine000",
            "FREECAPACITY": "0",
            "ID": "1",
            "SPECCAPACITY": "10307921510400",
            "TOTALCAPACITY": "0",
            "TOTALPHYSICSCAP": "0",
            "TYPE": 218
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.7 Interface for Adding an Associated Object to a SmartCachePartition

Function

This interface is used to add an associated object to a SmartCachePartition.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SMARTCACHEPARTITION/CREATE_ASSOCIATE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePartition ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11: LUN 40: file system
ASSOCIATEOBJID	Mandatory	enum	Associated object ID.

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Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Adding an associated object to a SmartCachePartition.

```
Request: PUT /deviceManager/rest/23456789234567891234/SMARTCACHEPARTITION/
CREATE_ASSOCIATE?t=1482895342462
{
ASSOCIATEOBJID: "0",
ASSOCIATEOBJTYPE: 11,
ID: "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.8 Interface for Removing an Associated Object to a SmartCachePartition

Function

This interface is used to remove an associated object to a SmartCachePartition.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to remove file system XXX from the SmartCache partition XXX. The deletion is irreversible. This operation deletes the relation-ship of the file system and the SmartCache partition from the system, and may affect file system performance. Suggestion: Before you perform this operation, ensure that you have selected the correct file system which is considered unnecessary.
You are about to remove LUN XXX from the SmartCache partition XXX. The deletion is irreversible. This operation deletes the relation-ship of the LUN and the SmartCache partition from the system, and may affect LUN performance. Suggestion: Before you perform this operation, ensure that you have selected the correct LUN which is considered unnecessary.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SMARTCACHEPARTITION/REMOVE_ASSOCIATE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePartition ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11: LUN 40: file system
ASSOCIATEOBJID	Mandatory	enum	Associated object ID.

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Removing an associated object to a SmartCachePartition.

```
Request: PUT/deviceManager/rest/23456789234567891234/SMARTCACHEPARTITION/
REMOVE_ASSOCIATE?t=1482896413583
{
    ASSOCIATEOBJID: "0",
    ASSOCIATEOBJTYPE: 11,
    ID: "1"
}
Response: {
    "data": {

    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.11.4.9 Interface for Adding an Associated Object to a SmartCachePool

Function

This interface is used to add an associated object to a SmartCachePool.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smartcachepool/addssd

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePool ID.
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 10: Disk
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Adding an associated object to a SmartCachePool.

```
Request: PUT /deviceManager/rest/210235843710E7000007/smartcachepool/addssd?
t=1483079453099
{

    "ID": "0",
```

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```
    "ASSOCIATEOBJID": "19",
    "ASSOCIATEOBJTYPE": 10
}

Response:
{
    "data": {
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.10 Interface for Removing an Associated Object to a SmartCachePool

Function

This interface is used to remove an associated object to a SmartCachePool.

Applicable Model

Applicable to V3 all series.

HighRisk

You are about to remove SSD {1} from the SmartCache pool {0} . The deletion is irreversible.

This operation deletes the relation-ship of the SSD and the SmartCache pool from the system, and may affect LUN or file system performance.

Suggestion: Before you perform this operation, ensure that you have selected the correct SSD which is considered unnecessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/smartcachepool/removessd

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	SmartCachePool ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 10: Disk
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

N/A

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Removing an associated object to a SmartCachePool.

```
Request: PUT /deviceManager/rest/210235843710E7000007/smartcachepool/
removessd?t=1483080357097
{

    "ID": "0",
    "ASSOCIATEOBJID": "19",
    "ASSOCIATEOBJTYPE": 10
}

Response:
{
    "data": {
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.11 Interface for Querying the Number of SmartCachePartition

Function

This interface is used to query the number of SmartCachePartition policies.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SmartCachePartition/count

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried Smartcache partition.

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Querying the number of SmartCachePartition policies.

```
Request: GET /deviceManager/rest/210235843910E6000009/SmartCachePartition/
count
Response:
{
    "data": {
        "COUNT": "3"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.11.4.12 Interface for Batch Querying SmartCachePartition Information

Function

This interface is used to batch query SmartCachePartition Information.

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Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SmartCachePartition

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 273: SmartCachePartition

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	SmartCachePartition ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 267: Engine
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
DESCRIPTION	Mandatory	string	Description.
ASSOCIATEOBJTYPE	Mandatory	string	Associated object type.
ISDEFAULT	Mandatory	string(bool)	Is default. **The value is described as follows:** true: yes false: no
TOTALCAPACITY	Mandatory	string(uint64)	Minimal read cache size. **Unit:**bytes
CACHEDCAPACITY	Mandatory	string(uint64)	Expect read cache size. **Unit:**bytes
FREECAPACITY	Mandatory	string(uint64)	Maximal read cache size. **Unit:**bytes
SSDHITRATE	Mandatory	string(uint64)	Minimal write cache size. **The value is described as follows:** 0~100 **Unit:**%

Usage Guidelines

This interface is not supported by V3 all-flash array series.

Example

- Batch Querying SmartCachePartition Information.

```
Request: GET /deviceManager/rest/2102350BSE10F3000088/smartcachepartition?
range=[0-3]&t=1484621751087
Response:
{
```

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```
    "data": [
        {
            "ASSOCIATEOBJTYPE": "0",
            "CACHEDCAPACITY": "0",
            "DESCRIPTION": "",
            "FREECAPACITY": "0",
            "ID": "0",
            "ISDEFAULT": "true",
            "NAME": "StorageEngine00DefaultPartition",
            "PARENTID": "0",
            "PARENTNAME": "StorageEngine000",
            "PARENTTYPE": 267,
            "SSDHITRATE": "0",
            "TOTALCAPACITY": "854698491904",
            "TYPE": 273
        },
        {
            "ASSOCIATEOBJTYPE": "0",
            "CACHEDCAPACITY": "0",
            "DESCRIPTION": "",
            "FREECAPACITY": "0",
            "ID": "1",
            "ISDEFAULT": "false",
            "NAME": "SmartCachePartition002",
            "PARENTID": "0",
            "PARENTNAME": "StorageEngine000",
            "PARENTTYPE": 267,
            "SSDHITRATE": "0",
            "TOTALCAPACITY": "2147483648",
            "TYPE": 273
        },
        {
            "ASSOCIATEOBJTYPE": "0",
            "CACHEDCAPACITY": "0",
            "DESCRIPTION": "",
            "FREECAPACITY": "0",
            "ID": "2",
            "ISDEFAULT": "false",
            "NAME": "SmartCachePartition003",
            "PARENTID": "0",
            "PARENTNAME": "StorageEngine000",
            "PARENTTYPE": 267,
            "SSDHITRATE": "0",
            "TOTALCAPACITY": "2147483648",
            "TYPE": 273
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12 Data protection management

4.12.1 lun_snapshot

4.12.1.1 Interface for Activating Snapshots

Function

This interface is used to activate snapshots.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to activate snapshot ({0}).

Before performing this operation, ensure that the storage pool capacity is sufficient.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/activate

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SNAPSHOTLIST	Mandatory	array	IDs of snapshot. **Note:** List of snapshots to be batch activated. T series V200R001 supports a maximum of 64 snapshots. Versions later than T series V200R002C10 support a maximum of 3072 snapshots. If you want to activate a snapshot, deliver the ID of the snapshot, for example, [ID1]. If you want to activate multiple snapshots consistently, deliver the IDs of the snapshots in the format of [ID1,ID2,ID3,...].

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Parameter	Mandatory/Optional/Conditional	Type	Description
SNAPSHOT2LIST	Optional	array	IDs of snapshot. **Note:** This field is used when more than 3072 snapshots need to be activated. Versions later than T series V200R002C10 support a maximum of 3072 snapshots.
SNAPSHOT3LIST	Optional	array	IDs of snapshot. **Note:** This field is used when more than 6144 snapshots need to be activated. Versions later than T series V200R002C10 support a maximum of 2048 snapshots.

Result

N/A

Example

- Activating snapshots.

```
Request: POST /deviceManager/rest/210235843910E6000009/snapshot/activate
{
    "SNAPSHOTLIST": [8,9]
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.2 Interface for Querying the Number of Snapshots

Function

This interface is used to query the number of snapshots.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SNAPSHOT/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID, HEALTHSTATUS, RUNNINGSTATUS, PARENTID and SUBTYPE are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried snapshots.

Example

- Querying the number of snapshots.

```
Request: GET /deviceManager/rest/1016964156/SNAPSHOT/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.12.1.3 Interface for Creating a Snapshot

Function

This interface is used to create a LUN snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Cannot be empty and contains only letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
PARENTID	Mandatory	string	ID of the parent object(LUN ID or Snapshot ID).
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 27: snapshot
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	string(enum)	Type of the parent object. **The value is described as follows:** 11: LUN 27: snapshot

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 43: activated 44: rolling back 45: unactivated 53: initializing
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN snapshot
SNAPSHOTUSER	Mandatory	string(enum)	Snapshot type. **The value is described as follows:** 1: public snapshot 2: private snapshot
TIMESTAMP	Mandatory	string(uint64)	Snapshot point in time.
ROLLBACKSTARTTIME	Mandatory	string(uint64)	Time when the rollback starts.
ROLLBACKENDTIME	Mandatory	string(uint64)	Time when the rollback ends.

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Parameter	Mandatory/ Conditional	Type	Description
ROLLBACKSPEED	Mandatory	string(enum)	Rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**"-1" indicates a invalid value.
ROLLBACKRATE	Mandatory	string(uint32)	Rollback progress. **The value is described as follows:** 0 to 100.
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapping status. **The value is described as follows:** true: mapped false: unmapped
WWN	Mandatory	string	WWN.
USERCAPACITY	Mandatory	string(uint64)	Snapshot user capacity, expressed in sectors. **Unit:**sectors
CONSUMEDCAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots, expressed in sectors. **Unit:**sectors
WORKINGCONTROLLER	Mandatory	string	Working controller.
IOCLASSID	Mandatory	string	ID of the I/O class object.
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
replicationCapacity	Mandatory	string(uint64)	Data Protection Capacity. **Unit:**sectors

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Example

- Creating a common LUN snapshot.

```
Request: POST /deviceManager/rest/210235843910E6000009/snapshot
{
    "PARENTID": "5",
    "NAME": "LUN0030003_Snap_1512220702575",
    "DESCRIPTION": ""
}

Response:
{
    "data": {
        "CONSUMEDCAPACITY": "262144",
        "DESCRIPTION": "",
        "EXPOSEDTOINITIATOR": "false",
        "HEALTHSTATUS": "1",
        "ID": "7",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "NAME": "LUN0030003_Snap_1512220702575",
        "PARENTID": "1",
        "PARENTNAME": "LUN002",
        "PARENTTYPE": 11,
        "ROLLBACKENDTIME": "-1",
        "ROLLBACKRATE": "-1",
        "ROLLBACKSPEED": "-1",
        "ROLLBACKSTARTTIME": "-1",
        "RUNNINGSTATUS": "43",
        "SNAPSHOTUSER": "1",
        "TIMESTAMP": "1450698804",
        "TYPE": 27,
        "SUBTYPE": "0",
        "USERCAPACITY": "2097152",
        "WORKINGCONTROLLER": "0A",
        "WWN": "630d17e100b4f76104de7aff00000007",
        "replicationCapacity": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.4 Interface for Deactivating Snapshots

Function

This interface is used to deactivate a snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to deactivate snapshot ({0}).

This operation will delete the snapshot data.

When a timing snapshot is used, it is converted to a common snapshot.

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Suggestion: Before performing this operation, ensure that the selected snapshot is correct and considered to have no useful data.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/stop

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.

Result

N/A

Example

- Deactivating a snapshot.

```
Request: PUT /deviceManager/rest/210235843910E6000009/snapshot/stop
{
    "ID": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.5 Interface for Canceling Rollback a Snapshot

Function

This interface is used to cancel snapshot rollback.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

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HighRisk

You are about to stop rolling back the data on snapshot ({0}) to target object ({1}). The snapshot is activated at ({2}). This operation will cause the data on the target object to be unavailable.

Suggestion: Before performing this operation, ensure that data on the target object is no longer necessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/cancelrollback

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.

Result

N/A

Example

- Canceling snapshot rollback.

```
Request: PUT /deviceManager/rest/210235843910E6000009/snapshot/cancelrollback
{
    "ID": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.6 Interface for Modifying a Snapshot

Function

This interface is used to modify a snapshot.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.
NAME	Optional	string	Name. **The value is described as follows:** Cannot be empty and contains 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Desciption. **Length:**0~255
ROLLBACKSPEED	Optional	enum	Snapshot rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**The default rollback speed is medium. Only the rollback speed of virtual snapshots that are being rolled back can be changed.

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Parameter	Mandatory/Optional/Conditional	Type	Description
IOPRIORITY	Optional	enum	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

N/A

Example

- Modifying a snapshot.

```
Request: PUT /deviceManager/rest/210235843910E6000009/snapshot/2
{
      "NAME":"test123",
      "DESCRIPTION":"TEST"
}

Response:
{
```

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```
    "data":{},
    "error":{
        "code":0,
        "description":"0"
    }
}
```

4.12.1.7 Interface for Batch Querying Snapshot Information

Function

This interface is used to batch query basic information about snapshots.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SNAPSHOT

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, RUNNINGSTATUS, HEALTHSTATUS, TIMESTAMP, PARENTID and SUBTYPE are supported. **Note:**The value of parameter TIMESTAMP is an interval, e.g. : [1471490000,1471535000], [1471490000,), (,1471535000].

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 27: snapshot
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	string(enum)	Type of the parent object. **The value is described as follows:** 11: LUN 27: snapshot
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object(LUN name or Snapshot name).

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 43: activated 44: rolling back 45: unactivated 53: initializing
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN snapshot
SNAPSHOTUSER	Mandatory	string(enum)	Snapshot type. **The value is described as follows:** 1: public snapshot 2: private snapshot
TIMESTAMP	Mandatory	string(uint64)	Snapshot point in time.
ROLLBACKSTARTTIME	Mandatory	string(uint64)	Time when the rollback starts.
ROLLBACKENDTIME	Mandatory	string(uint64)	Time when the rollback ends.
ROLLBACKSPEED	Mandatory	string(enum)	Rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**"-1" indicates a invalid value.

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Parameter	Mandatory/ Conditional	Type	Description
ROLLBACKRATE	Mandatory	string(uint32)	Rollback progress. **The value is described as follows:** 0 to 100.
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapping status. **The value is described as follows:** true: mapped false: unmapped
WWN	Mandatory	string	WWN.
USERCAPACITY	Mandatory	string(uint64)	Snapshot user capacity, expressed in sectors. **Unit:**sectors
CONSUMEDCAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots, expressed in sectors. **Unit:**sectors
WORKINGCONTROLLER	Mandatory	string	Working controller.
IOCLASSID	Mandatory	string	ID of the I/O class object.
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
replicationCapacity	Mandatory	string(uint64)	Data Protection Capacity. **Unit:**sectors

Example

- Batch querying basic information about snapshots.

```
Request: GET /deviceManager/rest/210235843910E6000009/SNAPSHOT?range=[0-100]

Response:
{
    "data": [
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "7",
```

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```
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN002_Snap_1512210352201",
            "PARENTID": "1",
            "PARENTNAME": "LUN002",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "43",
            "SNAPSHOTUSER": "1",
            "SUBTYPE": "0",
            "TIMESTAMP": "1450698804",
            "TYPE": 27,
            "USERCAPACITY": "2097152",
            "WORKINGCONTROLLER": "0A",
            "WWN": "630d17e100b4f76104de7aff00000007",
            "replicationCapacity": "0"
        },
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "8",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN0030000_Snap_1512210352202",
            "PARENTID": "2",
            "PARENTNAME": "LUN0030000",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "43",
            "SNAPSHOTUSER": "1",
            "SUBTYPE": "0",
            "TIMESTAMP": "1450698804",
            "TYPE": 27,
            "USERCAPACITY": "20971520",
            "WORKINGCONTROLLER": "0B",
            "WWN": "630d17e100b4f76104de7b3100000008",
            "replicationCapacity": "0"
        },
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "9",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN0030001_Snap_1512210352203",
            "PARENTID": "3",
            "PARENTNAME": "LUN0030001",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "45",
            "SNAPSHOTUSER": "1",
            "TIMESTAMP": "-1",
            "TYPE": 27,
            "USERCAPACITY": "20971520",
            "WORKINGCONTROLLER": "0A",
            "WWN": "630d17e100b4f76104de7b6600000009",
```


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```
            "replicationCapacity": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Batch querying snapshots by name.

```
Request: GET /deviceManager/rest/210235843910E6000009/SNAPSHOT?filter=NAME:
004&range=[0-100]

Response:
{
    "data": [
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "7",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN004_Snap_1512210352201",
            "PARENTID": "1",
            "PARENTNAME": "LUN002",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "43",
            "SNAPSHOTUSER": "1",
            "TIMESTAMP": "1450698804",
            "SUBTYPE": "0",
            "TYPE": 27,
            "USERCAPACITY": "2097152",
            "WORKINGCONTROLLER": "0A",
            "WWN": "630d17e100b4f76104de7aff00000007",
            "replicationCapacity": "0"
        },
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "8",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN0040000_Snap_1512210352202",
            "PARENTID": "2",
            "PARENTNAME": "LUN0030000",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "43",
            "SNAPSHOTUSER": "1",
            "TIMESTAMP": "1450698804",
            "SUBTYPE": "0",
            "TYPE": 27,
            "USERCAPACITY": "20971520",
            "WORKINGCONTROLLER": "0B",
            "WWN": "630d17e100b4f76104de7b3100000008",
            "replicationCapacity": "0"
        }
    ],
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.8 Interface for Querying a Snapshot Information

Function

This interface is used to query basic information about a snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 27: snapshot
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	string(enum)	Type of the parent object. **The value is described as follows:** 11: LUN 27: snapshot
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 43: activated 44: rolling back 45: unactivated 53: initializing
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN snapshot

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Parameter	Mandatory/ Conditional	Type	Description
SNAPSHOTUSER	Mandatory	string(enum)	Snapshot type. **The value is described as follows:** 1: public snapshot 2: private snapshot
TIMESTAMP	Mandatory	string(uint64)	Snapshot point in time.
ROLLBACKSTARTTIME	Mandatory	string(uint64)	Time when the rollback starts.
ROLLBACKENDTIME	Mandatory	string(uint64)	Time when the rollback ends.
ROLLBACKSPEED	Mandatory	string(enum)	Rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**"-1" indicates a invalid value.
ROLLBACKRATE	Mandatory	string(uint32)	Rollback progress. **The value is described as follows:** 0~100.
EXPOSEDTOINITIATOR	Mandatory	string(bool)	Mapping status. **The value is described as follows:** true: mapped false: unmapped
WWN	Mandatory	string	WWN.
USERCAPACITY	Mandatory	string(uint64)	Snapshot user capacity, expressed in sectors. **Unit:**sectors
CONSUMEDCAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots, expressed in sectors. **Unit:**sectors
WORKINGCONTROLLER	Mandatory	string	Working controller.

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Parameter	Mandatory/ Conditional	Type	Description
IOCLASSID	Mandatory	string	ID of the I/O class object.
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
replicationCapacity	Mandatory	string(uint64)	Data Protection Capacity. **Unit:**sectors

Example

- Querying basic information about a snapshot.

```
Request: GET /deviceManager/rest/210235843910E6000009/snapshot/7

Response:
{
    "data": {
        "CONSUMEDCAPACITY": "262144",
        "DESCRIPTION": "",
        "EXPOSEDTOINITIATOR": "false",
        "HEALTHSTATUS": "1",
        "ID": "7",
        "SUBTYPE":"0",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "NAME": "LUN002_Snap_1512210352201",
        "PARENTID": "1",
        "PARENTNAME": "LUN002",
        "PARENTTYPE": 11,
        "ROLLBACKENDTIME": "-1",
        "ROLLBACKRATE": "-1",
        "ROLLBACKSPEED": "-1",
        "ROLLBACKSTARTTIME": "-1",
        "RUNNINGSTATUS": "43",
        "SNAPSHOTUSER": "1",
        "TIMESTAMP": "1450698804",
        "TYPE": 27,
        "USERCAPACITY": "2097152",
        "WORKINGCONTROLLER": "0A",
        "WWN": "630d17e100b4f76104de7aff00000007",
        "replicationCapacity": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.9 Interface for Implementing Associated Query of Snapshot Information

Function

This interface is used to implement associated query of basic information about snapshots.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 245: mapping view 256: LUN group 21: host 230: IO class 275: snapshot group 216: storage pool
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description

ASSOCIATEMETADATA	Optional	array	Additional data generated by the creation of an association relationship.
			The value is described as follows:
			1. When the associated object is a host, the service port list can be used in the parameters:
			{
			"ports":
			{
			"fc": ["PORT_ID1","PORT_ID2","PORT_ID3"],
			"iscsi": ["PORT_ID1","PORT_ID2","PORT_ID3"]
			}
			}
			The previous data can be used to query snapshots that can be accessed by a host through the ports.

range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID,PARENTNAME, HEALTHSTATUS and RUNNINGSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 27: snapshot
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	string(enum)	Type of the parent object. **The value is described as follows:** 11: LUN
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 43: activated 44: rolling back 45: unactivated 53: initializing
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN snapshot
SNAPSHOTUSER	Mandatory	string(enum)	Snapshot type. **The value is described as follows:** 1: public snapshot 2: private snapshot
TIMESTAMP	Mandatory	string(uint64)	Snapshot point in time.
ROLLBACKSTARTTIME	Mandatory	string(uint64)	Time when the rollback starts.
ROLLBACKENDTIME	Mandatory	string(uint64)	Time when the rollback ends.
ROLLBACKSPEED	Mandatory	string(enum)	Rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**"-1" indicates a invalid value.
ROLLBACKRATE	Mandatory	string(uint32)	Rollback progress. **The value is described as follows:** 0 to 100.
EXPOSEDTOINITIATOR	Mandatory	string(bool)	Mapping status. **The value is described as follows:** true: mapped false: unmapped
WWN	Mandatory	string	WWN.
USERCAPACITY	Mandatory	string(uint64)	Snapshot user capacity, expressed in sectors. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
CONSUMEDCAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots, expressed in sectors. **Unit:**sectors
WORKINGCONTROLLER	Mandatory	string	Working controller.
IOCLASSID	Mandatory	string	ID of the I/O class object.
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
ASSOCIATETYPE	Conditional	string	Host LUN ID of the snapshot. **The value is described as follows:** 0 to 511. **Note:**This field is returned only when the object type is HOST or Mapping view.
ASSOCIATEMETADATA	Conditional	string	Additional data generated by the creation of an association relationship. **The value is described as follows:** When the associated object is a mapping, the following data is returned: {"HostLUNID":XX}. **Note:**Note: The previous data is a complete string. XX indicates the host LUN ID.
replicationCapacity	Mandatory	string(uint64)	Data Protection Capacity. **Unit:**sectors

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Example

- Querying snapshots associated with LUN groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/snapshot/associate?
ASSOCIATEOBJTYPE=256&ASSOCIATEOBJID=2&range=[0-100]

Response:
{
    "data": [
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "7",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN002_Snap_1512210352201",
            "PARENTID": "1",
            "PARENTNAME": "LUN002",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "43",
            "SNAPSHOTUSER": "1",
            "TIMESTAMP": "1450698804",
            "TYPE": 27,
            "SUBTYPE":"0",
            "USERCAPACITY": "2097152",
            "WORKINGCONTROLLER": "0A",
            "WWN": "630d17e100b4f76104de7aff00000007",
            "replicationCapacity": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

- Querying snapshots that can be accessed by some ports.

```
Request: GET /deviceManager/rest/210235843910E6000009/snapshot/associate?
ASSOCIATEOBJTYPE=21&ASSOCIATEOBJID=0&ASSOCIATEMETADATA={%22ports%22:{%22fc%22:
[%221114368%22,%221114369%22,%221114370%22,%221114371%22],%22fcoe%22:[],
%22iscsi%22:
[%22139267%22,%22139268%22,%22139269%22,%22139270%22,%22549772730371%22,%22549
772730372%22,%22549772730373%22,%22549772730374%22,%22549772722176%22,%22549772
722177%22,%22549772722178%22,%22549772722179%22],%22ib%22:[]}}&range=[0-100]

Response:
{
    "data": [
        {
            "CONSUMEDCAPACITY": "262144",
            "DESCRIPTION": "",
            "EXPOSEDTOINITIATOR": "false",
            "HEALTHSTATUS": "1",
            "ID": "7",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "NAME": "LUN002_Snap_1512210352201",
            "PARENTID": "1",
            "PARENTNAME": "LUN002",
            "PARENTTYPE": 11,
            "ROLLBACKENDTIME": "-1",
            "ROLLBACKRATE": "-1",
            "ROLLBACKSPEED": "-1",
```

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```
            "ROLLBACKSTARTTIME": "-1",
            "RUNNINGSTATUS": "43",
            "SNAPSHOTUSER": "1",
            "TIMESTAMP": "1450698804",
            "TYPE": 27,
            "SUBTYPE":"0",
            "USERCAPACITY": "2097152",
            "WORKINGCONTROLLER": "0A",
            "WWN": "630d17e100b4f76104de7aff00000007",
            "replicationCapacity": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.10 Interface for Deleting a Snapshot

Function

This interface is used to delete a snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MSGRETURNTYPE	Optional		Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

N/A

Example

- Deleting a snapshot.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/snapshot/1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.11 Interface for Rolling Back a Snapshot

Function

This interface is used to roll back a snapshot.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to use snapshot ({0}) to roll back target object ({1}). The snapshot is activated at ({2}). This operation will overwrite data on the target object with that on the snapshot. Before performing this operation, ensure that the target object is not being read or written by hosts, no data is saved on the cache of hosts and the source object is not written by hosts. When a timing snapshot is used, it is converted to a common snapshot.

Suggestion:

1. Before performing this operation, back up the data on the target object.

2. Ensure that the free capacity of the storage pool is larger than the capacity occupied by the target object.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/rollback

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.
ROLLBACKSPEED	Optional	enum	Rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Default:**2: medium

Result

N/A

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Example

- Rolling back a snapshot.

```
Request: PUT /deviceManager/rest/210235843910E6000009/snapshot/rollback
{
    "ID": "1",
    "ROLLBACKSPEED": "2"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.1.12 Interface for Creating Snapshot Copy

Function

This interface is used to create a snapshot copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/snapshot/createcopy

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Cannot be empty and contains only letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Snapshot ID.
DESCRIPTION	Optional	string	Description. **Length:**0~255
MSGRETURNTYPE	Optional	enum	Labels whether the response to this request is returned until the synchronization is complete. **The value is described as follows:** 0: ASYNC 1: SYNC **Default:**1: SYNC **Note:** Asynchronous: After a command is delivered, a message is returned to the system immediately. The operation object can be used only after its status changes to normal. Synchronous: After a command is delivered, a message is returned to the system after the operation is executed successfully. Then the operation object can be used normally.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 27: snapshot
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	string(enum)	Type of the parent object. **The value is described as follows:** 11: LUN 27: snapshot
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 43: activated 44: rolling back 45: unactivated 53: initializing
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN snapshot
SNAPSHOTUSER	Mandatory	string(enum)	Snapshot type. **The value is described as follows:** 1: public snapshot 2: private snapshot
TIMESTAMP	Mandatory	string(uint64)	Snapshot point in time.
ROLLBACKSTARTTIME	Mandatory	string(uint64)	Time when the rollback starts.
ROLLBACKENDTIME	Mandatory	string(uint64)	Time when the rollback ends.

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Parameter	Mandatory/ Conditional	Type	Description
ROLLBACKSPEED	Mandatory	string(enum)	Rollback speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**"-1" indicates a invalid value.
ROLLBACKRATE	Mandatory	string(uint32)	Rollback progress. **The value is described as follows:** 0 to 100.
EXPOSEDTOINITIA-TOR	Mandatory	string(bool)	Mapping status. **The value is described as follows:** true: mapped false: unmapped
WWN	Mandatory	string	WWN.
USERCAPACITY	Mandatory	string(uint64)	Snapshot user capacity, expressed in sectors. **Unit:**sectors
CONSUMEDCAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots, expressed in sectors. **Unit:**sectors
WORKINGCONTROLLER	Mandatory	string	Working controller.
IOCLASSID	Mandatory	string	ID of the I/O class object.
IOPRIORITY	Mandatory	string(enum)	I/O priority. **The value is described as follows:** 1: low 2: medium 3: high
replicationCapacity	Mandatory	string(uint64)	Data Protection Capacity. **Unit:**sectors

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Example

- Creating a snapshot copy.

```
Request: POST /deviceManager/rest/210235843910E6000009/snapshot/createcopy
{
    "ID": "175",
    "NAME": "snapShotCopy"
}

Response:
{
    "data": {
        "CONSUMEDCAPACITY": "0",
        "DESCRIPTION": "",
        "EXPOSEDTOINITIATOR": "false",
        "HEALTHSTATUS": "1",
        "ID": "175",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "NAME": "snapShotCopy",
        "PARENTID": "0",
        "PARENTNAME": "LUN001",
        "PARENTTYPE": 11,
        "ROLLBACKENDTIME": "-1",
        "ROLLBACKRATE": "-1",
        "ROLLBACKSPEED": "-1",
        "ROLLBACKSTARTTIME": "-1",
        "RUNNINGSTATUS": "53",
        "SNAPSHOTUSER": "1",
        "SUBTYPE": "0",
        "TIMESTAMP": "1469749158",
        "TYPE": 27,
        "USERCAPACITY": "0",
        "WORKINGCONTROLLER": "",
        "WWN": "630d17e100b4f761062ae8f5000000af",
        "replicationCapacity": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2 remote_replication

4.12.2.1 Interface for Creating a Remote Replication Pair

Function

This interface is used to create a remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to create a replication mapping between {0}. The data on the secondary resource will be overwritten by that on the primary resource after copy.

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Suggestion: Before performing this operation, ensure that you select the right primary and secondary resources and the secondary resource is not being accessed by the host.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LOCALRESID	Mandatory	string	ID of the local resource.
LOCALRESTYPE	Conditional	enum	Type of the local resource. **The value is described as follows:** 11: LUN 40: file system **Default:**11: LUN **Note:** This parameter must be delivered when remote replication pairs are created for file systems. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
REMOTEDEVICEID	Mandatory	string	ID of the remote device.
REMOTERESID	Mandatory	string	ID of the remote resource.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SYNCHRONIZETYPE	Optional	enum	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends 4: specified time policy (only file system) **Default:**1: manual **Note:** This field is valid for asynchronous replication only. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual **Default:**1: automatic
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Default:**2: medium

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIMINGVAL	Optional	uint32	Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. **The value is described as follows:** If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. **Default:**3600 **Unit:**seconds **Note:**This field can be delivered when the synchronization type is timing wait.
REPLICATIONMODEL	Mandatory	enum	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
ISDATASYNC	Optional	bool	Indicates whether data on the primary and secondary ends are consistent. **The value is described as follows:** true: consistent false: inconsistent **Default:**false: inconsistent

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLECOMPRESS	Optional	bool	Indicates whether the data is compressed during transmission. (only asynchronous). **The value is described as follows:** true: enables compression false: disables compression **Default:**false: disables compression **Note:**This field is valid for asynchronous replication only.
VSTOREPAIRID	Conditional	string	Remote replication vStore pair ID. **Note:**This field must be delivered when creating the remote replication pair through the remote replication vStore pair.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
REMTIMEOUTPERIOD	Conditional	uint32	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled. **Unit:**seconds **Note:**This field must be delivered when setting I/O timeout threshold for synchronous replication.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SYNCHRONIZESCHEDULE	Conditional	json	Timing rule. **The value is described as follows:** Format: every week: "{\"WEEK\":{\"WEEKDAY\":\"[4]\",\"TIME\":\"11:00\"}}" every day: "{\"DAY\":\"01:00\"}" every hour: "{\"HOUR\":\"9\"}" **Note:** In this field, WEEK, DAY, and HOUR indicate the unit of the scheduled policy. If Value is left blank, the scheduled policy is not configured. Note that only one unit can be specified in the scheduled policy. This field must be delivered when the file system remote replication and synchronization adopt a specific scheduled policy. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 263: replication pair
ID	Mandatory	string	REPLICATION PAIR ID.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: split 35: invalid
ISPRIMARY	Mandatory	string(bool)	Indicates whether the local end is a primary end. **The value is described as follows:** true: yes false: no
LOCALRESID	Mandatory	string	ID of the local resource.
LOCALRESNAME	Mandatory	string	Name of the local resource.
LOCALRESTYPE	Mandatory	string(enum)	Type of the local resource. Type number of the managed object. The value can be FS or LUN. **The value is described as follows:** 11:LUN 40:file system **Note:**2600 V3 for Video, 2200 V3（8G）and 2800 V5 do not support file systems.
REMOTEDEVICEID	Mandatory	string	ID of the remote device.
REMOTEDEVICESN	Mandatory	string	Serial number of the remote device.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEDEVICENAME	Mandatory	string	Name of the remote device.
REMOTERESID	Mandatory	string	ID of the remote resource.
REMOTERESNAME	Mandatory	string	Name of the remote resource.
SYNCHRONIZETYPE	Conditional	string(enum)	Synchronization type. The default value is manual. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends 4: specified time policy(only file system) **Note:** This field is returned for asynchronous replication. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
CAPACITY	Mandatory	string(uint64)	Capacity of the primary resource.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. The default value is automatic. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONPROGRESS	Conditional	string(uint32)	Progress. **Note:**This field is returned for LUN replication.

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
TIMINGVAL	Conditional	string(uint32)	Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. **Unit:**seconds **Note:**This field must be returned when the synchronization type is timing wait.
ISROLLBACK	Conditional	string(bool)	Indicates whether the secondary resources are rolling back. **The value is described as follows:** true: yes false: no **Note:**This field is returned for asynchronous replication.
SECRESDATASTATUS	Mandatory	string(enum)	Data status of the secondary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete

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Parameter	Mandatory/ Conditional	Type	Description
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. The default value is asynchronous replication. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
PRIRESDATASTATUS	Mandatory	string(enum)	Data status of the primary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete
SECRESACCESS	Mandatory	string(enum)	Read/write setting for a secondary LUN, used to set write protection for the secondary LUN. **The value is described as follows:** 1: access denied 2: read-only 3: read/write
ISINCG	Mandatory	string(bool)	Indicates whether a remote replication pair is in a consistency group. **The value is described as follows:** true: yes false: no
CGID	Conditional	string	Consistency group ID. **Note:**This field is returned after a pair is added to a consistency group.
CGNAME	Conditional	string	Consistency group name. **Note:**This field is returned after a pair is added to a consistency group.

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Parameter	Mandatory/ Conditional	Type	Description
ISDATASYNC	Mandatory	string(bool)	Indicates whether data on the primary and secondary ends are consistent. **The value is described as follows:** true: consistent false: inconsistent
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression. false: disables compression. **Note:**This field is valid for asynchronous replication only.
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled or not supported. **Unit:**seconds
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned for asynchronous replication.

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Parameter	Mandatory/ Conditional	Type	Description
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.
VSTOREPAIRID	Mandatory	string	Remote replication vStore pair ID. **Note:**"----" indicates a invalid value.
SYNCHRONIZESCHEDULE	Conditional	json	Timing rule. **Note:** This field must be delivered when the file system remote replication and synchronization adopt a specific scheduled policy. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
SYNCLEFTTIME	Conditional	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:** "-1" indicates a invalid value. This field is returned for LUN replication.

Example

- Creating a remote replication pair.

```
Request: POST /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR

{
    "REPLICATIONMODEL": "2",
    "RECOVERYPOLICY": "1",
    "SPEED": "2",
    "ISDATASYNC": false,
    "SYNCHRONIZETYPE": "1",
    "ENABLECOMPRESS": false,
```

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```
    "LOCALRESID": "34",
    "REMOTEDEVICEID": "0",
    "REMOTERESID": "198"
}

Response: {
    "data": {
        "CAPACITY": "1048576",
        "COMPRESSVALID": "false",
        "ENABLECOMPRESS": "false",
        "HEALTHSTATUS": "1",
        "ID": "4846fb8ca15c0004",
        "ISDATASYNC": "false",
        "ISINCG": "false",
        "ISPRIMARY": "true",
        "ISROLLBACK": "false",
        "LOCALRESID": "34",
        "LOCALRESNAME": "test0009",
        "LOCALRESTYPE": "11",
        "SYNCLEFTTIME":"-1",
        "PRIRESDATASTATUS": "2",
        "RECOVERYPOLICY": "1",
        "REMOTEDEVICEID": "0",
        "REMOTEDEVICENAME": "STORAGE-DEVICE45",
        "REMOTEDEVICESN": "5345A4C89612455DA54B",
        "REMOTERESID": "198",
        "REMOTERESNAME": "LUN199",
        "REPLICATIONMODEL": "2",
        "REPLICATIONPROGRESS": "0",
        "RUNNINGSTATUS": "26",
        "SECRESACCESS": "2",
        "SECRESDATASTATUS": "5",
        "SPEED": "2",
        "SYNCHRONIZETYPE": "1",
        "TYPE": 263,
        "TIMEDIFFERENCE": "-1",
        "REMTIMEOUTPERIOD": "255",
        "VSTOREPAIRID":"----"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.2 Interface for Performing a Primary_Secondary Switchover on a Remote Replication Pair

Function

This interface is used to perform a primary_secondary switchover on a remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to perform a primary/secondary switchover for remote replication (primary{0},secondary{1}). This operation will switch over the roles of the primary and

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secondary resources.If the primary resource capacity is not equal to the secondary resource capacity, possible risks are as follows:

1. If the primary resource capacity is greater than the secondary resource capacity, remote replication I/Os may become abnormal, remote replication pairs may be in the abnormal interruption state, or data of the primary and secondary resources may be inconsistent.

2. If the primary resource capacity is smaller than the secondary resource capacity, remaining capacity of the secondary resource is not fully used.

Suggestion: Before performing this operation, ensure that the selected primary and secondary resources are correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/switch

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Performing a primary_secondary switchover on a remote replication pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/switch
{
    "ID": "4846fb8ca15c0004"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.12.2.3 Interface for Splitting a Remote Replication Pair

Function

This interface is used to split a remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to split the primary resource from the secondary resource in remote replication({0}). This operation causes the data on the secondary resource to become inconsistent with the data on the primary resource.

Suggestion: Before performing this operation, determine whether the split is necessary.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/split

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Splitting a remote replication pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/split
{
    "ID": "4846fb8ca15c0004"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.4 Interface for Synchronizing a Remote Replication Pair

Function

This interface is used to synchronize a remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to synchronize the data on the primary resource to the secondary resource({1}) in remote replication({0}). The secondary resource belongs to storage array({2}). This operation overwrites the data on the secondary resource with the data on the primary resource.

Suggestion: Before performing this operation, ensure that the correct secondary resource is selected and the data on the secondary resource can be overwritten.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/sync

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Synchronizing a remote replication pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/sync
{
    "ID": "4846fb8ca15c0004"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.5 Interface for Querying Remote Replication Pair Information

Function

This interface is used to query basic information about remote replication pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 263: replication pair
ID	Mandatory	string	REPLICATION PAIR ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: splited 35: invalid
ISPRIMARY	Mandatory	string(bool)	Indicates whether the local end is a primary end. **The value is described as follows:** true: yes false: no
LOCALRESID	Mandatory	string	ID of the local resource.
LOCALRESNAME	Mandatory	string	Name of the local resource.
LOCALRESTYPE	Mandatory	string(enum)	Type of the local resource. **The value is described as follows:** 11: LUN 40: file system **Note:**2600 V3 for Video, 2200 V3（8G）and 2800 V5 do not support file systems.
REMOTEDEVICEID	Mandatory	string	ID of the remote device.
REMOTEDEVICESN	Mandatory	string	Serial number of the remote device.
REMOTEDEVICENAME	Mandatory	string	Name of the remote device.
REMOTERESID	Mandatory	string	ID of the remote resource.
REMOTERESNAME	Mandatory	string	Name of the remote resource.

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZETYPE	Conditional	string(enum)	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends 4: specified time policy (only file system) **Note:** This field is returned for asynchronous replication. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
CAPACITY	Mandatory	string(uint64)	Capacity of the primary resource.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONPROGRESS	Conditional	string(uint32)	Progress. **Note:**This field is returned for LUN replication.
STARTTIME	Conditional	string(uint64)	Start time. **Note:**This field is returned if the replication pair has been synchronized.
ENDTIME	Conditional	string(uint64)	End time. **Note:**This field is returned if the replication pair has been synchronized.

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
TIMINGVAL	Conditional	string(uint32)	Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. 2200 : Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 900, it must be a multiple of 60. The value ranges from 900 to 86400 seconds. **Unit:**seconds **Note:**This field must be returned when the synchronization type is timing wait.
ISROLLBACK	Conditional	string(bool)	Indicates whether the secondary resources are rolling back. **The value is described as follows:** true: yes false: no **Note:**This field is returned for asynchronous replication.

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Parameter	Mandatory/ Conditional	Type	Description
SECRESDATASTATUS	Mandatory	string(enum)	Data status of the secondary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
PRIRESDATASTATUS	Mandatory	string(enum)	Data status of the primary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete
SECRESACCESS	Mandatory	string(enum)	Read/write setting for a secondary LUN, used to set write protection for the secondary LUN. **The value is described as follows:** 1: access denied 2: read-only 3: read/write **Note:**The other values returned are invalid.
ISINCG	Mandatory	string(bool)	Indicates whether a remote replication pair is in a consistency group. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/ Conditional	Type	Description
CGID	Conditional	string	Consistency group ID. **Note:**This field is returned after a pair is added to a consistency group.
CGNAME	Conditional	string	Consistency group name. **Note:**This field is returned after a pair is added to a consistency group.
ISDATASYNC	Mandatory	string(bool)	Indicates whether data on the primary and secondary ends are consistent. **The value is described as follows:** true: consistent false: inconsistent
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This field is valid for asynchronous replication only.
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.

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Parameter	Mandatory/ Conditional	Type	Description
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled or not supported. **Unit:**seconds
SYNCHRONIZESCHEDULE	Conditional	string(json)	Timing rule. **Note:** This field must be delivered when the file system remote replication and synchronization adopt a specific scheduled policy. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned for asynchronous replication.

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Parameter	Mandatory/ Conditional	Type	Description
DATACOPED	Conditional	string(uint64)	Amount of data that has been copied during the remote replication. **The value is described as follows:** Amount of data that has been copied during the remote replication. **Unit:**sectors **Note:**When the remote replication is a LUN asynchronous remote replication, this field is returned for all or one detailed information query at the primary end or one query the remote end.When the LUN is switched over, the controller is reset or powered on/off, this value will be obtained from the new controller. If the above scenarios occur not during synchronization, an invalid value(-1) will be returned. If the above scenarios occur during synchronization, the amount of data that has been copied on the new controller will be returned.
VSTOREPAIRID	Mandatory	string	Remote replication vStore pair ID. **Note:**"----" indicates a invalid value.

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Parameter	Mandatory/ Conditional	Type	Description
DATANEEDCOPY	Conditional	string(uint64)	Amount of data that need to be copyed of the remote replication. **The value is described as follows:** 1. When the state of remote replication is synchronizing, this field indicates the amount of data that needs to be copied by remote replication from the end of last synchronization to the start of this synchronization. 2. When the remote replication is normal, splitting, or abnormally interrupted, this field indicates the amount of data that needs to be copied by remote replication from the start of last synchronization to the query. **Note:** When the remote replication is a LUN asynchronous remote replication, this field is returned for all or one detailed information query at the primary end or one query the remote end.When the LUN is switched over, the controller is reset or powered on/off, this value will be obtained from the new controller. If the host keeps delivering read/write I/Os during this process, this value is the value obtained from the new controller. If there is no read/write I/Os on the new controller, this value is invalid(-1).

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Parameter	Mandatory/ Conditional	Type	Description
			When host I/Os keep overwriting the LUN, and the amount of delivered data after verification is still larger than the size of the LUN, update the amount of data to be copied to the size of the LUN.
SYNCLEFTTIME	Conditional	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:** "-1" indicates a invalid value. This field is returned for LUN replication.

Example

- Querying basic information about remote replication pairs.

```
Request: GET /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
4846fb8ca15c0002
Response:
{
    "data": {
        "CAPACITY": "1048576",
        "COMPRESSVALID": "false",
        "DATACOPED":"825152",
        "DATANEEDCOPY":"934890",
        "ENABLECOMPRESS": "false",
        "ENDTIME": "1451473647",
        "HEALTHSTATUS": "1",
        "ID": "4846fb8ca15c0002",
        "ISDATASYNC": "true",
        "ISINCG": "false",
        "ISPRIMARY": "true",
        "ISROLLBACK": "false",
        "LOCALRESID": "0",
        "LOCALRESNAME": "hujianjun0010",
        "LOCALRESTYPE": "11",
        "PRIRESDATASTATUS": "2",
        "RECOVERYPOLICY": "1",
        "REMOTEDEVICEID": "0",
        "REMOTEDEVICENAME": "STORAGE-DEVICE45",
        "REMOTEDEVICESN": "5345A4C89612455DA54B",
        "REMOTERESID": "182",
        "REMOTERESNAME": "zwlun0001",
        "REPLICATIONMODEL": "2",
        "REPLICATIONPROGRESS": "100",
        "RUNNINGSTATUS": "1",
        "SECRESACCESS": "2",
        "SECRESDATASTATUS": "2",
        "SPEED": "2",
        "STARTTIME": "1451473537",
```

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```
        "SYNCHRONIZETYPE": "1",
        "TYPE": 263,
        "TIMEDIFFERENCE": "-1",
        "SYNCLEFTTIME": "0",
        "REMTIMEOUTPERIOD": "255",
        "VSTOREPAIRID":"----"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.6 Interface for Disabling Secondary Resource Protection for a File System Remote Replication Pair

Function

This interface is used to disable secondary resource protection for a remote replication for file system. (Set the status of secondary resource protection to Read/write).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/CANCEL_SECODARY_WRITE_LOCK

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Disabling secondary resource protection for a remote replication for file system.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
CANCEL_SECODARY_WRITE_LOCK
{
   "ID": "0022A1068DFE0000"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.7 Interface for Disabling Secondary Resource Protection for a Remote Replication Pair

Function

This interface is used to disable secondary resource protection for a remote replication for LUN (Set the status of secondary resource protection to Read/write).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SECRESACCESS	Mandatory	enum	Read/write setting for a secondary LUN, used to set disabling write protection for the secondary LUN. **The value is described as follows:** 3: read/write
ID	Mandatory	string	Remote replication pair ID.

Result

N/A

Example

- Disabling secondary resource protection for a remote replication for LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
4846fb8c15c0001
{
    "SECRESACCESS": "3"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.8 Interface for Enabling Secondary Resource Protection for a Remote Replication Pair

Function

This interface is used to enable secondary resource protection for a remote replication pair for LUN (Set the status of secondary resource protection to Read-only).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SECRESACCESS	Mandatory	enum	Read/write setting for a secondary LUN, used to set enabling write protection for the secondary LUN. **The value is described as follows:** 2: read-only
ID	Mandatory	string	Remote replication pair ID.

Result

N/A

Example

- Enabling secondary resource protection for a remote replication pair for LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
4846fb8c15c0001
{
    "SECRESACCESS": "2"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.2.9 Interface for Batch Querying Remote Replication Pair Information

Function

This interface is used to batch query remote replication pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, LOCALRESNAME, LOCALRESID, REMOTERESID, HEALTHSTATUS, RUNNINGSTATUS, REPLICATIONMODEL, and ISPRIMARY are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 263: replication pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: splited 35: invalid
ISPRIMARY	Mandatory	string(bool)	Indicates whether the local end is a primary end. **The value is described as follows:** true: yes false: no
LOCALRESID	Mandatory	string	ID of the local resource.
LOCALRESNAME	Mandatory	string	Name of the local resource.
LOCALRESTYPE	Mandatory	string(enum)	Type of the local resource. **The value is described as follows:** 11: LUN 40: file system **Note:**2600 V3 for Video, 2200 V3（8G）and 2800 V5 do not support file systems.
REMOTEDEVICEID	Mandatory	string	ID of the remote device.
REMOTEDEVICESN	Mandatory	string	Serial number of the remote device.
REMOTEDEVICENAME	Mandatory	string	Name of the remote device.
REMOTERESID	Mandatory	string	ID of the remote resource.
REMOTERESNAME	Mandatory	string	Name of the remote resource.

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZETYPE	Conditional	string(enum)	Synchronization type. The default value is manual. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends 4: specified time policy (only file system) **Note:** This field is returned for asynchronous replication. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
CAPACITY	Mandatory	string(uint64)	Capacity of the primary resource.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONPROGRESS	Conditional	string(uint32)	Progress. **Note:**This field is returned for LUN replication.
STARTTIME	Conditional	string(uint64)	Start time. **Note:**This field is returned if the replication pair has been synchronized.
ENDTIME	Conditional	string(uint64)	End time. **Note:**This field is returned if the replication pair has been synchronized.

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
TIMINGVAL	Conditional	string(uint32)	Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. **Unit:**seconds **Note:**This field must be returned when the synchronization type is timing wait.
ISROLLBACK	Conditional	string(bool)	Indicates whether the secondary resources are rolling back. **The value is described as follows:** true: yes false: no **Note:**This field is returned for asynchronous replication.
SECRESDATASTATUS	Mandatory	string(enum)	Data status of the secondary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete

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Parameter	Mandatory/ Conditional	Type	Description
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
PRIRESDATASTATUS	Mandatory	string(enum)	Data status of the primary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete
SECRESACCESS	Mandatory	string(enum)	Read/write setting for a secondary LUN, used to set write protection for the secondary LUN. **The value is described as follows:** 1: access denied 2: read-only 3: read/write **Note:**The other values returned are invalid.
ISINCG	Mandatory	string(bool)	Indicates whether a remote replication pair is in a consistency group. **The value is described as follows:** true: yes false: no
CGID	Conditional	string	Consistency group ID. **Note:**This field is returned after a pair is added to a consistency group.
CGNAME	Conditional	string	Consistency group name. **Note:**This field is returned after a pair is added to a consistency group.

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Parameter	Mandatory/ Conditional	Type	Description
ISDATASYNC	Mandatory	string(bool)	Indicates whether data on the primary and secondary ends are consistent. **The value is described as follows:** true: consistent false: inconsistent
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This field is valid for asynchronous replication only.
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled or not supported. **Unit:**seconds

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZESCHEDULE	Conditional	string(json)	Timing rule. **Note:** This field must be delivered when the file system remote replication and synchronization adopt a specific scheduled policy. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned for asynchronous replication.

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Parameter	Mandatory/ Conditional	Type	Description
DATACOPED	Conditional	string(uint64)	Amount of data that has been copied during the remote replication. **The value is described as follows:** Amount of data that has been copied during the remote replication. **Note:**When the remote replication is a LUN asynchronous remote replication, this field is returned for all or one detailed information query at the primary end or one query the remote end.When the LUN is switched over, the controller is reset or powered on/off, this value will be obtained from the new controller. If the above scenarios occur not during synchronization, an invalid value will be returned. If the above scenarios occur during synchronization, the amount of data that has been copied on the new controller will be returned.

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Parameter	Mandatory/ Conditional	Type	Description
DATANEEDCOPY	Conditional	string(uint64)	Amount of data that need to be copyed of the remote replication. **The value is described as follows:** 1. When the state of remote replication is synchronizing, this field indicates the amount of data that needs to be copied by remote replication from the end of last synchronization to the start of this synchronization. 2. When the remote replication is normal, splitting, or abnormally interrupted, this field indicates the amount of data that needs to be copied by remote replication from the start of last synchronization to the query. **Note:** When the remote replication is a LUN asynchronous remote replication, this field is returned for all or one detailed information query at the primary end or one query the remote end.When the LUN is switched over, the controller is reset or powered on/off, this value will be obtained from the new controller. If the host keeps delivering read/write I/Os during this process, this value is the value obtained from the new controller. If there is no read/write I/Os on the new controller, this value is invalid.

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Parameter	Mandatory/ Conditional	Type	Description
			When host I/Os keep overwriting the LUN, and the amount of delivered data after verification is still larger than the size of the LUN, update the amount of data to be copied to the size of the LUN.
VSTOREPAIRID	Mandatory	string	Remote replication vStore pair ID. **Note:**"----" indicates a invalid value.
SYNCLEFTTIME	Conditional	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:** "-1" indicates a invalid value. This field is returned for LUN replication.

Example

- Batch querying remote replication pairs.

```
Request: GET /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR?
filter=REPLICATIONMODEL::2&range=[0-100]

Response:
{
    "data": [
        {
            "CAPACITY": "1048576",
            "COMPRESSVALID": "false",
            "DATACOPED":"825152",
            "DATANEEDCOPY":"934890",
            "ENABLECOMPRESS": "false",
            "ENDTIME": "1451473647",
            "HEALTHSTATUS": "1",
            "ID": "4846fb8ca15c0002",
            "ISDATASYNC": "true",
            "ISINCG": "false",
            "ISPRIMARY": "true",
            "ISROLLBACK": "false",
            "LOCALRESID": "0",
            "LOCALRESNAME": "hujianjun0010",
            "LOCALRESTYPE": "11",
            "PRIRESDATASTATUS": "2",
            "RECOVERYPOLICY": "1",
            "REMOTEDEVICEID": "0",
            "REMOTEDEVICENAME": "STORAGE-DEVICE45",
            "REMOTEDEVICESN": "5345A4C89612455DA54B",
```

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```
            "REMOTERESID": "182",
            "REMOTERESNAME": "zwlun0001",
            "REPLICATIONMODEL": "2",
            "REPLICATIONPROGRESS": "100",
            "RUNNINGSTATUS": "1",
            "SECRESACCESS": "2",
            "SECRESDATASTATUS": "2",
            "SPEED": "2",
            "STARTTIME": "1451473537",
            "SYNCHRONIZETYPE": "1",
            "TYPE": 263,
            "SYNCLEFTTIME": "0",
            "TIMEDIFFERENCE": "-1",
            "REMTIMEOUTPERIOD": "255",
            "VSTOREPAIRID":"----"
        },
        {
            "CAPACITY": "1048576",
            "COMPRESSVALID": "false",
            "DATACOPED":"825152",
            "DATANEEDCOPY":"934890",
            "ENABLECOMPRESS": "false",
            "ENDTIME": "1451494314",
            "HEALTHSTATUS": "1",
            "ID": "4846fb8ca15c0003",
            "ISDATASYNC": "true",
            "ISINCG": "false",
            "ISPRIMARY": "true",
            "ISROLLBACK": "false",
            "LOCALRESID": "4",
            "LOCALRESNAME": "FileSystem0050000",
            "LOCALRESTYPE": "40",
            "PRIRESDATASTATUS": "2",
            "RECOVERYPOLICY": "1",
            "REMOTEDEVICEID": "0",
            "REMOTEDEVICENAME": "STORAGE-DEVICE45",
            "REMOTEDEVICESN": "5345A4C89612455DA54B",
            "REMOTERESID": "75",
            "REMOTERESNAME": "Report_FileSystem01",
            "REPLICATIONMODEL": "2",
            "RUNNINGSTATUS": "1",
            "SECRESACCESS": "1",
            "SECRESDATASTATUS": "2",
            "SPEED": "2",
            "STARTTIME": "1451494304",
            "SYNCHRONIZETYPE": "1",
            "TYPE": 263,
            "SYNCLEFTTIME": "0",
            "TIMEDIFFERENCE": "-1",
            "REMTIMEOUTPERIOD": "255",
            "VSTOREPAIRID":"----"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.2.10 Interface for Querying the Number of Remote Replication Pairs

Function

This interface is used to query the number of remote replication pair.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, LOCALRESNAME, LOCALRESID, REMOTERESID, HEALTHSTATUS, RUNNINGSTATUS, REPLICATIONMODEL and ISPRIMARY are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried remote replication pair.

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Example

- Querying the number of Remote Replication Pair.

```
Request: GET /deviceManager/rest/1016964156/REPLICATIONPAIR/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.11 Interface for Modifying Remote Replication Pair Information

Function

This interface is used to modify remote replication pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication pair ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SYNCHRONIZETYPE	Optional	enum	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends 4: specified time policy (only file system) **Note:** This parameter is valid for asynchronous replication only. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIMINGVAL	Conditional	uint32	Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. 2200 : Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 900, it must be a multiple of 60. The value ranges from 900 to 86400 seconds. **The value is described as follows:** If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. 2200 : If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. **Unit:**seconds **Note:**This field must be delivered when the synchronization type is changed from manual to timed wait when synchronization begins or timed wait when synchronization ends.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLECOMPRESS	Optional	bool	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This parameter is valid for asynchronous replication only.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
REMTIMEOUTPERIOD	Conditional	uint32	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled. **Unit:**seconds **Note:**This field must be delivered when setting I/O timeout threshold for synchronous replication.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SYNCHRONIZESCHEDULE	Conditional	json	Timing rule. **The value is described as follows:** Format: every week: "{\"WEEK\":{\"WEEKDAY\":\"[4]\",\"TIME\":\"11:00\"}}" every day: "{\"DAY\":\"01:00\"}" every hour: "{\"HOUR\":\"9\"}" **Note:** In this field, WEEK, DAY, and HOUR indicate the unit of the scheduled policy. If Value is left blank, the scheduled policy is not configured. Note that only one unit can be specified in the scheduled policy. This field must be delivered when the file system remote replication and synchronization adopt a specific scheduled policy. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.

Result

N/A

Example

- Modifying remote replication pairs.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
4846fb8ca15c0004
{
    "SYNCHRONIZETYPE": "2",
    "TIMINGVAL": "3600"
}

Response:
{
    "data": {},
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.12 Interface for Deleting a Remote Replication Pair

Function

This interface is used to delete a remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ISLOCALDELETE	Optional	boolean	Indicates whether a remote replication task can be locally deleted when the link is disconnected. When this parameter is not delivered, the default value is no, indicating a remote replication task cannot be locally deleted. **The value is described as follows:** false: no true: yes **Default:**false: no

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Parameter	Mandatory/Optional/Conditional	Type	Description
TOSYNCSRWHENDELETE	Optional	boolean	Indicates whether to maintain the consistency of secondary LUNs when a remote replication pair is deleted. The default value is 1. If the default value is adopted and secondary LUNs are inconsistent, the secondary LUNs are forcibly rolled back before the remote replication pair is deleted. **The value is described as follows:** false: no true: yes **Default:**true: yes
ID	Mandatory	string	Remote replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a remote replication pair.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
4846fb8c15c0001?ISLOCALDELETE=false

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.2.13 Interface for Synchronizing Remote Status for a Remote Replication Pair

Function

This interface is used to synchronize remote status for a remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/replicationpair/refresh_rm_remote_info

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

N/A

Result

N/A

Example

- Synchronizing remote status for a remote replication pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/replicationpair/
refresh_rm_remote_info

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.14 Interface for Enabling Secondary Resource Protection for a File System Remote Replication Pair

Function

This Interface is used to enable secondary resource protection for a remote replication pair for file system (Set the status of secondary resource protection to Access prohibited.).

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/SET_SECODARY_WRITE_LOCK

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Enabling secondary resource protection for a remote replication pair for file system.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
SET_SECODARY_WRITE_LOCK
{
    "ID": "0022A1068DFE0000"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.2.15 Interface for Associate Querying Remote Replication Pair

Function

This interface is used to associated query basic information about remote replication pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/replicationpair/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 11: LUN 40: file system 2000: remote replication vstore pair **Note:**2600 V3 for Video, 2200 V3（8G）and 2800 V5 do not support file systems.
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 263: replication pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: splited 35: invalid

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Parameter	Mandatory/ Conditional	Type	Description
ISPRIMARY	Mandatory	string(bool)	Indicates whether the local end is a primary end. **The value is described as follows:** true: yes false: no
LOCALRESID	Mandatory	string	ID of the local resource.
LOCALRESNAME	Mandatory	string	Name of the local resource.
LOCALRESTYPE	Mandatory	string(enum)	Type of the local resource. **The value is described as follows:** 11: LUN 40: file system **Note:**2600 V3 for Video, 2200 V3（8G）and 2800 V5 do not support file systems.
REMOTEDEVICEID	Mandatory	string	ID of the remote device.
REMOTEDEVICESN	Mandatory	string	Serial number of the remote device.
REMOTEDEVICENAME	Mandatory	string	Name of the remote device.
REMOTERESID	Mandatory	string	ID of the remote resource.
REMOTERESNAME	Mandatory	string	Name of the remote resource.

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZETYPE	Conditional	string(enum)	Synchronization type. The default value is manual. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends 4: specified time policy(only file system) **Note:** This field is returned for asynchronous replication. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
CAPACITY	Mandatory	string(uint64)	Capacity of the primary resource.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONPROGRESS	Conditional	string(uint32)	Progress. **Note:**This field is returned for LUN replication.
STARTTIME	Conditional	string(uint64)	Start time. **Note:**This field is returned if the replication pair has been synchronized.
ENDTIME	Conditional	string(uint64)	End time. **Note:**This field is returned if the replication pair has been synchronized.

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
TIMINGVAL	Conditional	string(uint32)	Timing period (data synchronization period, expressed in seconds). If the value is greater than or equals to 60, it must be a multiple of 60. The value ranges from 3 to 59 seconds or 1 to 1440 minutes. **Unit:**seconds **Note:**This field must be returned when the synchronization type is timing wait.
ISROLLBACK	Conditional	string(bool)	Indicates whether the secondary resources are rolling back. **The value is described as follows:** true: yes false: no **Note:**This field is returned for asynchronous replication.
SECRESDATASTATUS	Mandatory	string(enum)	Data status of the secondary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete

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Parameter	Mandatory/ Conditional	Type	Description
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
PRIRESDATASTATUS	Mandatory	string(enum)	Data status of the primary resource. **The value is described as follows:** 1: synchronized 2: complete 5: incomplete
SECRESACCESS	Mandatory	string(enum)	Read/write setting for a secondary LUN, used to set write protection for the secondary LUN. **The value is described as follows:** 1: access denied 2: read-only 3: read/write
ISINCG	Mandatory	string(bool)	Indicates whether a remote replication pair is in a consistency group. **The value is described as follows:** true: yes false: no
CGID	Conditional	string	Consistency group ID. **Note:**This field is returned after a pair is added to a consistency group.
CGNAME	Conditional	string	Consistency group name. **Note:**This field is returned after a pair is added to a consistency group.

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Parameter	Mandatory/ Conditional	Type	Description
ISDATASYNC	Mandatory	string(bool)	Indicates whether data on the primary and secondary ends are consistent. **The value is described as follows:** true: consistent false: inconsistent
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This field is valid for asynchronous replication only.
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled or not supported. **Unit:**seconds

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZESCHEDULE	Conditional	json	Timing rule. **Note:** This field must be delivered when the file system remote replication and synchronization adopt a specific scheduled policy. 2600 V3 for Video,2200 V3（8G）and 2800 V5 do not support file systems.
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned for asynchronous replication.
VSTOREPAIRID	Mandatory	string	Remote replication vStore pair ID. **Note:**"----" indicates a invalid value.
SYNCLEFTTIME	Conditional	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:** "-1" indicates a invalid value. This field is returned for LUN replication.

Example

- Associated querying basic information about remote replication pair.

```
Request: GET /deviceManager/rest/210235843910E6000009/replicationpair/
associate?ASSOCIATEOBJTYPE=40&ASSOCIATEOBJID=10

Response:
{
    "data": [
        {
            "CAPACITY": "1048576",
            "COMPRESSVALID": "false",
            "ENABLECOMPRESS": "false",
            "ENDTIME": "1478440631",
            "HEALTHSTATUS": "1",
            "ID": "94dbda3ddda40000",
            "ISDATASYNC": "true",
            "ISINCG": "false",
            "ISPRIMARY": "true",
```

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```
            "ISROLLBACK": "false",
            "LOCALRESID": "0",
            "LOCALRESNAME": "LUN0010000",
            "LOCALRESTYPE": "11",
            "PRIRESDATASTATUS": "2",
            "RECOVERYPOLICY": "1",
            "REMOTEDEVICEID": "0",
            "REMOTEDEVICENAME": "Huawei.Storage",
            "REMOTEDEVICESN": "210235982510G2000016",
            "REMOTERESID": "0",
            "REMOTERESNAME": "LUN0010000",
            "REMTIMEOUTPERIOD": "255",
            "REPLICATIONMODEL": "2",
            "REPLICATIONPROGRESS": "100",
            "RUNNINGSTATUS": "1",
            "SECRESACCESS": "2",
            "SECRESDATASTATUS": "2",
            "SPEED": "2",
            "STARTTIME": "1478440589",
            "SYNCHRONIZETYPE": "1",
            "SYNCLEFTTIME": "0",
            "TIMEDIFFERENCE": "73936",
            "TYPE": 263,
            "VSTOREPAIRID":"----"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.2.16 Interface for Batch Querying Remote Replication Pair Connection Status Information

Function

This interface is used to batch query basic information about remote replication pairs connection status.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/replication_pairconn_status

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
remoteDeviceID	Mandatory	string	Remote Device ID.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID,localResName,remoteResName,remoteDeviceSN and connectStatus are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 427: replication connection status
ID	Mandatory	string	replication Pairs ID.
localResID	Mandatory	string	ID of the local resource.
localResName	Mandatory	string	Name of the local resource.
remoteDeviceID	Mandatory	string	ID of the remote device.
remoteDeviceSN	Mandatory	string	Serial number of the remote device.

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Parameter	Mandatory/ Conditional	Type	Description
remoteDeviceName	Mandatory	string	Name of the remote device.
remoteResID	Mandatory	string	ID of the remote resource.
remoteResName	Mandatory	string	Name of the remote resource.
connectStatus	Mandatory	string(enum)	connection status. **The value is described as follows:** 0: Some I/Os need to be forwarded 1: All I/Os need to be forwarded 2: No I/O needs to be forwarded **Note:**This field is returned for asynchronous replication.
recOwningController	Mandatory	string	recommend a controller to switch.
isPrimary	Mandatory	string(bool)	Indicates whether the local end is a primary end. **The value is described as follows:** true: yes false: no
isLunReplication	Mandatory	string(bool)	Indicates whether the replication end is a LUN replication end. **The value is described as follows:** true: yes false: no

Example

- Batch querying basic information about remote replication pairs connection status.

```
Request: GET /deviceManager/rest/210235843910E6000009/
replication_pairconn_status?remoteDeviceID=0&range=[0-100]

Response:
{
```

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```
    "data": [
        {
            "ID": "4846fb8ca1780000"
            "TYPE": 427
            "connectStatus": "2"
            "isLunReplication": "true"
            "isPrimary": "true"
            "localResID": "1"
            "localResName": "xxx0000"
            "recOwningController": "--"
            "remoteDeviceID": "0"
            "remoteDeviceName": "7576"
            "remoteDeviceSN": "2102350BSE10F3000088"
            "remoteResID": "10"
            "remoteResName": "xxx0000"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.17 Interface for Querying the Number of Remote Replication Pairs Connection Status

Function

This interface is used to query the number of remote replication pair connection status.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/replication_pairconn_status/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID,localResName,remoteResName,remoteDeviceSN and connectStatus are supported.
remoteDeviceID	Mandatory	string	Remote Device ID.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried remote replication pair connection status.

Example

- Querying the number of remote replication pair connection status.

```
Request: GET /deviceManager/rest/1016964156/replication_pairconn_status/count?
remoteDeviceID=0

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.2.18 Interface for Setting Secondary Resource Protection for a File System Remote Replication Pair to Read-only

Function

This interface is used to set the secondary resource protection for a remote replication pair for file system to Read-only.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/REPLICATIONPAIR/SET_SECODARY_FILESYSTEM_READ_ONLY

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Replication pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Setting the secondary resource protection for a remote replication pair for file system to Read-only.

```
Request: PUT /deviceManager/rest/210235843910E6000009/REPLICATIONPAIR/
SET_SECODARY_FILESYSTEM_READ_ONLY
{
    "ID": "0022A1068DFE0000"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.2.19 Interface for Querying the TimeCycle of LUN Remote Replication Pairs

Function

This interface is used to query the range of synchronization periods that can be set for LUN remote replication pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/pair_cycle_time

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Conditional	string	Remote replication pair ID. **Note:**This field must be delivered when the value of parameter OPERATETYPE delivered is 2.
OPERATETYPE	Mandatory	uint32	The operate type of remote replication pair. **The value is described as follows:** 1: Create a remote replication pair 2: Modify a remote replication pair

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Result

Parameter	Mandatory/ Conditional	Type	Description
TIMECYCLEMAX	Mandatory	string(uint32)	Maximum value of synchronization periods that can be set for the remote replication pairs. **Unit:**seconds
TIMECYCLEMIN	Mandatory	string(uint32)	Minimum value of synchronization periods that can be set for the remote replication pairs. **Unit:**seconds

Example

- Querying the range of synchronization periods that can be set for LUN remote replication pairs.

```
Request: GET/deviceManager/rest/210235843910E6000009/pair_cycle_time?
OPERATETYPE=2&ID=643e8c453ffa0000

Response:
{
    "data": [
        {
            "TIMECYCLEMAX": "86400",
            "TIMECYCLEMIN": "3"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3 consistency_group

4.12.3.1 Interface for Creating a Consistency Group of Remote Replication

Function

This interface is used to create a remote replication consistency group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** The value cannot be blank, can contain only letters, digits, underscores (_), hyphens (-), and periods (.), and must start with a letter or digit. **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~127
RECOVERYPOLICY	Mandatory	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONMODEL	Mandatory	enum	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication

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Parameter	Mandatory/Optional/Conditional	Type	Description
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Default:**2: medium
SYNCHRONIZETYPE	Conditional	enum	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends **Note:**This field must be delivered for asynchronous replication.
TIMINGVAL	Conditional	uint32	Timing period, Timing period takes effect when the synchronization type is not manual. **The value is described as follows:** 1 to 1440 min. **Unit:**minutes **Note:**This field must be delivered when the synchronization type is timing wait.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIMINGVALINSEC	Conditional	uint32	Timing period. Timing period takes effect when the synchronization type is not manual. **The value is described as follows:** 10 to 86400 sec,If the value is greater than or equals to 60, it must be a multiple of 60. **Unit:**seconds **Note:**This field must be delivered when the synchronization type is timing wait.This parameter and the parameter TIMINGVAL cannot be delivered at the same time.
ENABLECOMPRESS	Optional	bool	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Default:**false: disables compression **Note:**This parameter is valid for asynchronous replication only.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 221: Consistent Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: splited 35: invalid
DESCRIPTION	Mandatory	string	Description.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZETYPE	Mandatory	string(enum)	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends **Note:**This field is valid for asynchronous remote replication only."255" indicates a invalid value.
ISPRIMARY	Mandatory	string(bool)	Indicates whether it is a primary end. **The value is described as follows:** true: yes false: no
TIMINGVAL	Mandatory	string(uint32)	Timing period. Timing period takes effect when the synchronization type is not manual. **Unit:**minutes
TIMINGVALINSEC	Mandatory	string(uint32)	Timing period. Timing period takes effect when the synchronization type is not manual. **Unit:**seconds
ISEMPTY	Mandatory	string(bool)	Indicates whether a consistency group is empty. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This field is valid for asynchronous replication only.
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned for asynchronous replication.
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled or not supported. **Unit:**seconds

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Example

- Creating a remote replication consistency group.

```
Request: POST /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP
{
    "DESCRIPTION": "",
    "ENABLECOMPRESS": "false",
    "NAME": "ConsistentGroup001",
    "RECOVERYPOLICY": "1",
    "REPLICATIONMODEL": "2",
    "SPEED": "2",
    "SYNCHRONIZETYPE": "1"
}

Response:
{
    "data": {
        "COMPRESSVALID": "false",
        "DESCRIPTION": "",
        "ENABLECOMPRESS": "false",
        "HEALTHSTATUS": "1",
        "ID": "4846fb8ca15c0000",
        "ISEMPTY": "true",
        "ISPRIMARY": "true",
        "NAME": "ConsistentGroup001",
        "RECOVERYPOLICY": "1",
        "REPLICATIONMODEL": "2",
        "RUNNINGSTATUS": "1",
        "SPEED": "2",
        "SYNCHRONIZETYPE": "1",
        "TIMINGVAL": "-1",
        "TIMINGVALINSEC": "-1",
        "TYPE": 221,
        "TIMEDIFFERENCE": "-1",
        "REMTIMEOUTPERIOD": "255"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.2 Interface for Removing a Remote Replication Pair from a Consistency Group of Remote Replication

Function

This interface is used to remove a remote replication pair from a remote replication consistency group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to remove remote replication task ({1}) from consistency group ({0}).

After this operation, the status of the remote replication task becomes inconsistent with that of the consistency group.

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Before performing this operation, ensure that the selected remote replication task is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/DEL_MIRROR

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.
RMLIST	Mandatory	array	List of remote replication pair IDs. Only one remote replication pair can be removed every time.

Result

N/A

Example

- Removing a remote replication pair from a remote replication consistency group.

```
Request: PUT /deviceManager/rest/210235843910E6000009/DEL_MIRROR
{
    "ID": "4846fb8ca15c0000",
    "RMLIST": ["4846fb8ca15c0004"]
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.3 Interface for Synchronizing a Consistency Group of Remote Replication

Function

This interface is used to synchronize remote replication consistency groups.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to synchronize the data on the primary resources to the secondary resources in all remote replication tasks within consistency group ({0}). After this operation, the data on the secondary resource will be overwritten by the data on the primary resource, and the data on the secondary LUN is unrecoverable.

Suggestion: Before performing this operation, ensure that all data on the secondary resources can be overwritten.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SYNCHRONIZE_CONSISTENCY_GROUP

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.

Result

N/A

Example

- Synchronizing remote replication consistency groups.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
SYNCHRONIZE_CONSISTENCY_GROUP
{
    "ID": "4846fb8ca15c0000"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.12.3.4 Interface for Querying a Consistency Group of Remote Replication

Function

This interface is used to query a remote replication consistency group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 221: consistency group
ID	Mandatory	string	Remote replication consistency group ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: faulty 14: invalid
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: splited 35: invalid
DESCRIPTION	Mandatory	string	Description.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
SYNCHRONIZETYPE	Mandatory	string(enum)	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends **Note:**This field is valid for asynchronous remote replication only."255" indicates a invalid value.
ISPRIMARY	Mandatory	string(bool)	Indicates whether it is a primary end. **The value is described as follows:** true: yes false: no
TIMINGVAL	Mandatory	string(uint32)	Timing period. Timing period takes effect when the synchronization type is not manual. **Unit:**minutes
TIMINGVALINSEC	Mandatory	string(uint32)	Timing period. Timing period takes effect when the synchronization type is not manual. **Unit:**seconds
ISEMPTY	Mandatory	string(bool)	Indicates whether a consistency group is empty. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This field is valid for asynchronous replication only.
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled not supported. **Unit:**seconds
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned when replication mode is asynchronous and the consistency group has been synchronized.

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string(uint64)	Start time. **Note:**"-1" indicates a invalid value.
ENDTIME	Mandatory	string(uint64)	End time. **Note:**"-1" indicates a invalid value.

Example

- Querying a remote replication consistency group.

```
Request: GET /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP/
4846fb8ca15c0000

Response:
{
    "data": {
        "COMPRESSVALID": "false",
        "DESCRIPTION": "",
        "ENABLECOMPRESS": "false",
        "HEALTHSTATUS": "1",
        "ID": "4846fb8ca15c0000",
        "ISEMPTY": "false",
        "ISPRIMARY": "true",
        "NAME": "ConsistentGroup001",
        "RECOVERYPOLICY": "1",
        "REPLICATIONMODEL": "2",
        "RUNNINGSTATUS": "26",
        "SPEED": "2",
        "SYNCHRONIZETYPE": "1",
        "TIMINGVAL": "-1",
        "TIMINGVALINSEC": "-1",
        "TYPE": 221,
        "TIMEDIFFERENCE": "-1",
        "REMTIMEOUTPERIOD": "255",
        "STARTTIME":"1487859783",
        "ENDTIME":"1487859806"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.5 Interface for Performing a Primary_Secondary Switchover on a Consistency Group of Remote Replication

Function

This interface is used to perform primary_secondary switchover for remote replication consistency groups.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to switch over the primary and secondary resources in all remote replication tasks within consistency group {0}.

This operation will switch over roles of primary and secondary resources.

Suggestion: Before performing this operation, ensure that the selected consistency group is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SWITCH_GROUP_ROLE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.

Result

N/A

Example

- Performing primary_secondary switchover for remote replication consistency groups.

```
Request: PUT /deviceManager/rest/210235843910E6000009/SWITCH_GROUP_ROLE
{
    "ID": "4846fb8ca15c0000"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.12.3.6 Interface for Adding a Remote Replication Pair to a Consistency Group of Remote Replication

Function

This interface is used to add a remote replication pair to a remote replication consistency group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/ADD_MIRROR

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.
RMLIST	Mandatory	array	List of remote replication pair IDs. Only one remote replication pair can be added every time.

Result

N/A

Example

- Adding a remote replication pair to a remote replication consistency group.

```
Request: PUT /deviceManager/rest/210235843910E6000009/ADD_MIRROR
{
    "ID": "4846fb8ca15c0000",
    "RMLIST": ["4846fb8ca15c0004"]
```

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```
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.7 Interface for Modifying a Consistency Group of Remote Replication

Function

This interface is used to modify a remote replication consistency group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.
NAME	Optional	string	Name. **The value is described as follows:** The value cannot be blank, can contain only letters, digits, underscores (_), hyphens (-), and periods (.), and must start with a letter or digit. **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
DESCRIPTION	Optional	string	Description. **Length:**0~127
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
SYNCHRONIZETYPE	Optional	enum	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends **Note:**This field is used for asynchronous replication mode.
TIMINGVAL	Conditional	uint32	Timing period, Timing period takes effect when the synchronization type is not manual. **The value is described as follows:** 1 to 1440 min. 2200 : 15 to 1440 min. **Unit:**minutes **Note:**This field must be delivered when the synchronization type is changed from manual to timed wait when synchronization begins or timed wait when synchronization ends.

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Parameter	Mandatory/Optional/Conditional	Type	Description
TIMINGVALINSEC	Conditional	uint32	Timing period. Timing period takes effect when the synchronization type is not manual. **The value is described as follows:** 10 to 86400 sec,If the value is greater than or equals to 60, it must be a multiple of 60. 2200 : 900 to 86400 sec,If the value is greater than or equals to 900, it must be a multiple of 60. **Unit:**seconds **Note:**This field must be delivered when the synchronization type is changed from manual to timed wait when synchronization begins or timed wait when synchronization ends.
ENABLECOMPRESS	Optional	bool	Indicates whether the data is compressed during transmission. (only asynchronous). **The value is described as follows:** true: enables compression false: disables compression **Note:**This parameter is valid for asynchronous replication only.

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Parameter	Mandatory/Optional/Conditional	Type	Description
REMTIMEOUTPERIOD	Conditional	uint32	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled. **Unit:**seconds **Note:**This field must be delivered when setting I/O timeout threshold for synchronous replication.

Result

N/A

Example

- Modifying a remote replication consistency group.

```
Request: PUT /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP/
4846fb8c15c0001
{
    "SYNCHRONIZETYPE": "2",
    "TIMINGVALINSEC": "3600"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.8 Interface for Disabling Secondary Resource Protection for a Consistency Group of Remote Replication

Function

This interface is used to disable secondary resource protection fro a consistency group of remote replication.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SECRESACCESS	Mandatory	enum	Read/write setting for a secondary LUN, used to set disabling write protection for the secondary LUN. **The value is described as follows:** 3: read/write
ID	Mandatory	string	Remote replication consistency group ID.

Result

N/A

Example

- Disabling secondary resource protection fro a consistency group of remote replication.

```
Request: PUT /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP/
4846fb8c15c0001
{
    "SECRESACCESS": "3"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.3.9 Interface for Enabling Secondary Resource Protection for a Consistency Group of Remote Replication

Function

This interface is used to enable secondary resource protection for a consistency group of remote replication.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
SECRESACCESS	Mandatory	enum	Read/write setting for a secondary LUN, used to set enabling write protection for the secondary LUN. **The value is described as follows:** 2: read-only
ID	Mandatory	string	Remote replication consistency group ID.

Result

N/A

Example

- Enabling secondary resource protection for a consistency group of remote replication.

```
Request: PUT /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP/
4846fb8c15c0001
```

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```
{
    "SECRESACCESS": "2"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.10 Interface for Batch Querying a Consistency Group of Remote Replication

Function

This interface is used to batch query basic information about remote replication consistency groups.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, HEALTHSTATUS, REPLICATIONMODEL, and ISPRIMARY are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 221: consistent group
ID	Mandatory	string	Remote replication consistency group ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 23: synchronizing 33: to_be_recoverd 34: interrupted 26: splited 35: invalid
DESCRIPTION	Mandatory	string	Description.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
REPLICATIONMODEL	Mandatory	string(enum)	Replication model. **The value is described as follows:** 1: synchronous replication 2: asynchronous replication
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/ Conditional	Type	Description
SYNCHRONIZETYPE	Mandatory	string(enum)	Synchronization type. **The value is described as follows:** 1: manual 2: timed wait after synchronization begins 3: timed wait after synchronization ends **Note:**This field is valid for asynchronous remote replication only."255" indicates a invalid value.
ISPRIMARY	Mandatory	string(bool)	Indicates whether it is a primary end. **The value is described as follows:** true: yes false: no
TIMINGVAL	Mandatory	string(uint32)	Timing period, expressed in minutes. Timing period takes effect when the synchronization type is not manual. **Unit:**minutes
TIMINGVALINSEC	Mandatory	string(uint32)	Timing period, expressed in seconds. Timing period takes effect when the synchronization type is not manual. **Unit:**seconds
ISEMPTY	Mandatory	string(bool)	Indicates whether a consistency group is empty. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESS	Conditional	string(bool)	Link compression. **The value is described as follows:** true: enables compression false: disables compression **Note:**This field is valid for asynchronous replication only.
COMPRESSVALID	Conditional	string(bool)	Indicates whether compression has taken effect. **The value is described as follows:** true: valid false: invalid **Note:**This field is returned for asynchronous replication.
REMTIMEOUTPERIOD	Mandatory	string(uint32)	I/O timeout threshold for the secondary LUN. **The value is described as follows:** 10 to 30 indicates that the remote secondary LUN write I/O timeout function is enabled and the timeout threshold is set to the specified value. 255 indicates that the remote secondary LUN write I/O timeout function is not enabled or not supported. **Unit:**seconds
TIMEDIFFERENCE	Conditional	string	Time difference. **Note:**"-1" indicates a invalid value. This field is returned when replication mode is asynchronous and the consistency group has been synchronized.

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string(uint64)	Start time. **Note:**"-1" indicates a invalid value.
ENDTIME	Mandatory	string(uint64)	End time. **Note:**"-1" indicates a invalid value.

Example

- Batch querying a consistency group of remote replication.

```
Request: GET /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP?
filter=REPLICATIONMODEL::2&range=[0-100]

Response: {
    "data": [
        {
            "COMPRESSVALID": "false",
            "DESCRIPTION": "",
            "ENABLECOMPRESS": "false",
            "HEALTHSTATUS": "1",
            "ID": "4846fb8ca15c0000",
            "ISEMPTY": "false",
            "ISPRIMARY": "true",
            "NAME": "ConsistentGroup001",
            "RECOVERYPOLICY": "1",
            "REPLICATIONMODEL": "2",
            "RUNNINGSTATUS": "26",
            "SPEED": "2",
            "SYNCHRONIZETYPE": "1",
            "TIMINGVAL": "-1",
            "TIMINGVALINSEC": "-1",
            "TYPE": 221,
            "TIMEDIFFERENCE": "-1",
            "REMTIMEOUTPERIOD": "255",
            "STARTTIME": "1487859783",
            "ENDTIME": "1487859806"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.11 Interface for Querying the Number of Consistency Groups of Remote Replication

Function

This interface is used to query the number of remote replication consistency groups.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, ID, HEALTHSTATUS, REPLICATIONMODEL and ISPRIMARY are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried remote replication consistency groups.

Example

- Querying the number of remote replication consistency groups.

```
Request: GET /deviceManager/rest/1016964156/CONSISTENTGROUP/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.12 Interface for Deleting a Consistency Group of Remote Replication

Function

This interface is used to delete a consistency group of remote replication.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CONSISTENTGROUP/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ISLOCALDELETE	Optional	bool	Indicates whether a remote replication task can be locally deleted when the link is disconnected. When this parameter is not delivered, the default value is no, indicating a remote replication task cannot be locally deleted. **The value is described as follows:** false: no true: yes **Default:**false: no
ID	Mandatory	string	Remote replication consistency group ID.

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Result

N/A

Example

- Deleting a consistency group of remote replication.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/CONSISTENTGROUP/
4846fb8c15c0001?ISLOCALDELETE=false

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.13 Interface for Splitting a Consistency Group of Remote Replication

Function

This interface is used to split a remote replication consistency group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

HighRisk

You are about to split the primary and secondary resources in all remote replication tasks within consistency group ({0}).

After this operation, the data on the primary and secondary resources is not synchronized any longer.

Suggestion: Before performing this operation, ensure that the selected consistency group is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLIT_CONSISTENCY_GROUP

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote replication consistency group ID.

Result

N/A

Example

- Splitting a remote replication consistency group.

```
Request: PUT /deviceManager/rest/210235843910E6000009/SPLIT_CONSISTENCY_GROUP
{
    "ID": "4846fb8ca15c0000"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.3.14 Interface for Querying the TimeCycle of Asynchronous Remote Replication Consistency Groups

Function

This interface is used to query the range of synchronization periods that can be set for asynchronous remote replication consistency groups.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cg_cycle_time

Access Method

GET

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Conditional	string	Remote replication consitency group ID. **Note:**This field must be delivered when the value of parameter OPERATETYPE delivered is 2.
OPERATETYPE	Mandatory	uint32	The operate type of remote replication consistency group. **The value is described as follows:** 1: Create a remote replication consitency group 2: Modify a remote replication consitency group

Result

Parameter	Mandatory/Conditional	Type	Description
TIMECYCLEMAX	Mandatory	string(uint32)	Maximum value of synchronization periods that can be set for the remote replication consistency group. **Unit:**seconds
TIMECYCLEMIN	Mandatory	string(uint32)	Minimum value of synchronization periods that can be set for the remote replication consistency group. **Unit:**seconds

Example

- Querying the range of synchronization periods that can be set for asynchronous remote replication consistency groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/cg_cycle_time?
OPERATETYPE=2&ID=643e8c453ffa0000
```

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```
Response:
{
    "data":[
     {
         "TIMECYCLEMAX":"86400",
         "TIMECYCLEMIN":"10"
     }
   ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4 lun_copy

4.12.4.1 Interface for Removing a Target LUN of a LUN Copy

Function

This interface is used to remove a LUN copy target LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to remove target LUN ({1}) from LUN copy ({0}).

This operation will remove the LUN copy relationship between source LUN ({2}) and target LUN ({1}). This operation cannot be undone.

Before performing this operation, ensure that the selected LUN copy and target LUN are correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPYMEMBERLUN/REMOVE_LUNCOPY_MEMBERLUN

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Target LUN ID. **Note:**Object ID, in the format of ArrayID;LUNID;WWN;WWPN;HOSTLUN_ID.
LUNCOPYID	Mandatory	string	LUN copy ID.

Result

N/A

Example

- Removing a LUN copy target LUN.

```
Request: PUT /deviceManager/rest/210235843710E7000007/LUNCOPYMEMBERLUN/
REMOVE_LUNCOPY_MEMBERLUN
{
    "ID": "INVALID;5;INVALID;INVALID;INVALID",
    "LUNCOPYID": "0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.2 Interface for Querying Member LUN Information of a LUN Copy

Function

This interface is used to query LUN Copy member LUN information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPYMEMBERLUN/GET_BATCH_NEXT_LUNCOPY_MEMBERLUN

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
LUNCOPYID	Mandatory	string	LUN copy ID.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Object ID. **The value is described as follows:** in the format of ArrayID;LUNID;WWN;WWPN;HOSTLUN_ID Used to obtain and query member LUNs of a LUN copy, create a LUN copy, and remove member LUNs. For a LUN on the local disk array, the format is INVALID;LUNID;INVALID;INVALID;INVALID. For a LUN on a private external disk array, the format is ArrayID;LUNID;INVALID;INVALID;INVALID. For a third-party LUN, the format is INVALID;INVALID;WWN;INVALID;INVALID or INVALID;INVALID;INVALID;WWPN;HOSTLUNID.
NAME	Mandatory	string	Name.
LUNCOPYID	Mandatory	string	LUN copy ID.

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Parameter	Mandatory/ Conditional	Type	Description
LUNCLASSTYPE	Mandatory	string(enum)	LUN class type. **The value is described as follows:** 1: primary LUN or source LUN 2: secondary LUN or target LUN
CAPACITY	Mandatory	string(uint64)	LUN capacity. **Unit:**KB
LUNSCOPETYPE	Mandatory	string(enum)	Type of the owning device. **The value is described as follows:** 1: inside a devcie 2: across devices 3: third-party device
LUNDEVICEID	Mandatory	string	ID of the owning disk array.
LUNDEVICENAME	Mandatory	string	Name of the owning device.
CAPACITYBYTE	Mandatory	string(uint64)	LUN capacity. **Unit:**bytes

Example

- Querying LUN copy member LUN information.

```
Request: GET /deviceManager/rest/210235843910E6000009/LUNCOPYMEMBERLUN/
GET_BATCH_NEXT_LUNCOPY_MEMBERLUN?LUNCOPYID=0

Response:
 {
    "data": [
        {
            "CAPACITY": "1048576",
            "CAPACITYBYTE": "1073741824",
            "ID": "INVALID;82;INVALID;INVALID;INVALID",
            "LUNCLASSTYPE": "1",
            "LUNCOPYID": "1",
            "LUNDEVICEID": "INVALID",
            "LUNDEVICENAME": "Huawei.Storage",
            "LUNSCOPETYPE": "0",
            "NAME": "LUN0150063"
        },
        {
            "CAPACITY": "1048576",
            "CAPACITYBYTE": "1073741824",
            "ID": "1;85;INVALID;INVALID;INVALID",
            "LUNCLASSTYPE": "2",
```

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```
            "LUNCOPYID": "1",
            "LUNDEVICEID": "1",
            "LUNDEVICENAME": "Huawei.Storage",
            "LUNSCOPETYPE": "1",
            "NAME": "--"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.3 Interface for Querying the Number of LUN Copy Information

Function

This interface is used to query the number of lun copy information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPY/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried lun copy information.

Example

- Querying the number of lun copy information.

```
Request: GET /deviceManager/rest/1016964156/LUNCOPY/count

Response:{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.4 Interface for Adding a Target LUN of a LUN Copy

Function

This interface is used to add a target LUN to a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to build a LUN copy relationship between source LUN ({0}) and target LUN ({1}). The source device is ({2}) and the target device is ({3}).

After this operation, the data on the target LUN will be overwritten by the data on the source LUN.

Before performing this operation, ensure that the selected source and target LUNs are correct, and the target LUN is not being read or written by hosts.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPYMEMBERLUN/ADD_TGT_LUN

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Target LUN ID. **Note:**Object ID, in the format of ArrayID;LUNID;WWN;WWPN;HOSTLUN_ID.
LUNCOPYID	Mandatory	string	LUN copy ID.

Result

N/A

Example

- Adding a target LUN to a LUN copy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUNCOPYMEMBERLUN/
ADD_TGT_LUN
{
    "ID": "INVALID;5;INVALID;INVALID;INVALID",
    "LUNCOPYID": "0"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.5 Interface for Modifying LUN Copy Information

Function

This interface is used to modify LUN copy information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/luncopy/${id}

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN copy ID.
NAME	Optional	string	Name. **The value is described as follows:** Which cannot be empty, and contains only letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Desciption. **Length:**0~255
COPYSPEED	Optional	enum	LUN copy rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

Result

N/A

Example

- Modifying LUN copy information.

```
Request: PUT /deviceManager/rest/210235843910E6000009/luncopy/1
{
    "COPYSPEED": "3",
    "DESCRIPTION": "AAAA",
    "NAME": "LUNCOPY"
}

Response:
 {
```

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```
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.6 Interface for Creating a LUN Copy

Function

This interface is used to create a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

HighRisk

You are about to build a LUN copy relationship between source LUN ({0}) and target LUN ({1}). After this operation, the data on the target LUN will be overwritten by the data on the source LUN.

Suggestion: Before performing this operation, ensure that the selected source and target LUNs are correct, and the target LUN is not being read or written by hosts.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/luncopy

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Cannot be empty and contains only letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31

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Parameter	Mandatory/Optional/Conditional	Type	Description
DESCRIPTION	Optional	string	Description. **Length:**0~255
COPYSPEED	Mandatory	enum	LUN copy rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
SOURCELUN	Mandatory	string	Member LUN ID of the source LUN's LUN copy,Here the LUN ID is either a common LUN ID or a snapshot ID, because both snapshot IDs and LUN IDs are globally addressed. **Note:** For LUNs on the local storage array, the format is "INVALID;LUNID;INVALID;INVALID;INVALID"; for LUNs on the private external storage arrays, the format is "ArrayID;LUNID;INVALID;INVALID;INVALID"; for third-party LUNs, the format is "INVALID;INVALID;WWN;INVALID;INVALID" or "INVALID;INVALID;INVALID;WWPN;HOSTLUNID".

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Parameter	Mandatory/Optional/Conditional	Type	Description
TARGETLUN	Mandatory	string	Member LUN ID of the LUN copy of the target LUN. **Note:** For LUNs on the local storage array, the format is "INVALID;LUNID;INVALID;INVALID;INVALID"; for LUNs on the private external storage arrays, the format is "ArrayID;LUNID;INVALID;INVALID;INVALID"; for third-party LUNs, the format is "INVALID;INVALID;WWN;INVALID;INVALID" or "INVALID;INVALID;INVALID;WWPN;HOSTLUNID".

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 219: LUN copy
ID	Mandatory	string	LUN Copy ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 36: not start 37: queuing 38: stop 39: copying 40: copy completed 41: paused
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN copy
COPYSPEED	Mandatory	string(enum)	LUN copy rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
LUNCOPYTYPE	Mandatory	string(enum)	LUN copy type. **The value is described as follows:** 1: full copy
COPYPROGRESS	Mandatory	string(uint32)	LUN copy progress.
COPYSTARTTIME	Mandatory	string(uint64)	Start time, year-month-day:hour:minute:second; relative UTC time.
COPYSTOPTIME	Mandatory	string(uint64)	End time, year-month-day hour:minute:second; relative UTC time.

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Parameter	Mandatory/ Conditional	Type	Description
SOURCELUN	Mandatory	string	Member LUN ID of the source LUN's LUN copy,Here the LUN ID is either a common LUN ID or a snapshot ID, because both snapshot IDs and LUN IDs are globally addressed. **Note:**The LUN ID can be the ID of a common LUN or a snapshot, because the IDs of snapshots and LUNs are configured gloablly.
SOURCELUNNAME	Mandatory	string	Source LUN name.
SOURCELUNWWN	Mandatory	string	Source LUN WWN.
SOURCELUNWWPN	Mandatory	string	WWPN of the source LUN port.
SOURCELUNCAPACITY	Mandatory	string(uint64)	Source LUN capacity. **Unit:**KB
SOURCELUNCAPACITYBYTE	Mandatory	string(uint64)	Source LUN capacity. **Unit:**bytes
SOURCEDEVICEID	Mandatory	string	Source device ID.
SOURCEDEVICENAME	Mandatory	string	Source device name.

Example

- Creating a LUN copy.

```
Request: POST /deviceManager/rest/210235843910E6000009/luncopy
{
    "NAME": "LUNCopy002",
    "DESCRIPTION": "",
    "COPYSPEED": 2,
    "SOURCELUN": "INVALID;82;INVALID;INVALID;INVALID",
    "TARGETLUN": "1;85;INVALID;INVALID;INVALID"
}

Response:
 {
    "data": {
        "BASELUN": "-1",
        "COPYPROGRESS": "0",
        "COPYSPEED": "2",
        "COPYSTARTTIME": "-1",
        "COPYSTOPTIME": "-1",
        "DESCRIPTION": "",
```

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```
        "HEALTHSTATUS": "1",
        "ID": "1",
        "LUNCOPYTYPE": "1",
        "NAME": "LUNCopy002",
        "RUNNINGSTATUS": "36",
        "SOURCEDEVICEID": "INVALID",
        "SOURCEDEVICENAME": "Huawei.Storage",
        "SOURCELUN": "INVALID;82;INVALID;INVALID;INVALID",
        "SOURCELUNCAPACITY": "1048576",
        "SOURCELUNCAPACITYBYTE": "1073741824",
        "SOURCELUNNAME": "LUN0150063",
        "SOURCELUNWWN": "",
        "SOURCELUNWWPN": "INVALID",
        "SUBTYPE": "0",
        "TYPE": 219
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.4.7 Interface for Continuing a LUN Copy

Function

This interface is used to continue a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPY/continue

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN copy ID.

Result

N/A

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Example

- Continuing a LUN copy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUNCOPY/continue
{
    "ID": "1"
}
Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.8 Interface for Suspending a LUN Copy

Function

This interface is used to suspend a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPY/pause

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN copy ID.

Result

N/A

Example

- Suspending a LUN copy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUNCOPY/pause
{
```

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```
    "ID": "1"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.9 Interface for Deleting a LUN Copy

Function

This interface is used to delete a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3 for Video,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/luncopy/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN copy ID.

Result

N/A

Example

- Deleting a LUN copy.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/luncopy/1

Response:
 {
    "data": {},
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.10 Interface for Stopping a LUN Copy

Function

This interface is used to stop a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to stop copying data from source LUN ({0}) to target LUN ({1}).

This operation may cause the data on the target LUN unavailable.

Suggestion: Before performing this operation, ensure that the information about the LUN copy to be stopped is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPY/stop

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN copy ID.

Result

N/A

Example

- Stopping a LUN copy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LUNCOPY/stop
{
```

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```
    "ID": "1"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.11 Interface for Starting a LUN Copy

Function

This interface is used to start a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to copy the data from source LUN ({0}) to target LUN ({1}).

This operation will affect service continuity on the source LUN and data on the target LUN will be overwritten by the data on the source LUN.

Suggestion: Before performing this operation, ensure that:

1. All services on the source LUN and target LUN have been stopped. Otherwise, the host automatically does not have the permission to write the source LUN during the copy. As a result, host services are abnormal.

2. The information about the LUN copy is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LUNCOPY/start

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN copy ID.

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Result

N/A

Example

- Starting a LUN copy.

```
Request: PUT /deviceManager/rest/210235843710E7000007/LUNCOPY/start
{
    "ID": "1"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.12 Interface for Querying LUN Copy Information

Function

This interface is used to query basic information about a LUN copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/luncopy/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	LUN Copy ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 219: LUN copy
ID	Mandatory	string	LUN Copy ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 0: unknown 36: not start 37: queuing 38: stop 39: copying 40: copy completed 41: paused
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN copy

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Parameter	Mandatory/ Conditional	Type	Description
COPYSPEED	Mandatory	string(enum)	LUN copy rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
LUNCOPYTYPE	Mandatory	string(enum)	LUN copy type. **The value is described as follows:** 1: full copy
COPYPROGRESS	Mandatory	string(uint32)	LUN copy progress.
COPYSTARTTIME	Mandatory	string(uint64)	Start time, year-month-day:hour:minute:second.
COPYSTOPTIME	Mandatory	string(uint64)	End time, year-month-day hour:minute:second.
SOURCELUN	Mandatory	string	Member LUN ID of the source LUN's LUN copy,Here the LUN ID is either a common LUN ID or a snapshot ID, because both snapshot IDs and LUN IDs are globally addressed. **Note:**The LUN ID can be the ID of a common LUN or a snapshot, because the IDs of snapshots and LUNs are configured gloablly.
SOURCELUNNAME	Mandatory	string	Source LUN name.
SOURCELUNWWN	Mandatory	string	Source LUN WWN.
SOURCELUNWWPN	Mandatory	string	WWPN of the source LUN port.
SOURCELUNCAPACITY	Mandatory	string(uint64)	Source LUN capacity. **Unit:**KB
SOURCELUNCAPACITYBYTE	Mandatory	string(uint64)	Source LUN capacity. **Unit:**bytes
SOURCEDEVICEID	Mandatory	string	Source device ID.

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Parameter	Mandatory/ Conditional	Type	Description
SOURCEDEVICENAME	Mandatory	string	Source device name.

Example

- Querying basic information about a LUN copy.

```
Request: GET /deviceManager/rest/210235843910E6000009/luncopy/1

Response:
 {
    "data": {
       "BASELUN": "-1",
        "COPYPROGRESS": "0",
        "COPYSPEED": "2",
        "COPYSTARTTIME": "-1",
        "COPYSTOPTIME": "-1",
        "DESCRIPTION": "",
        "HEALTHSTATUS": "1",
        "ID": "1",
        "LUNCOPYTYPE": "1",
        "NAME": "LUNCopy002",
        "RUNNINGSTATUS": "36",
        "SOURCEDEVICEID": "INVALID",
        "SOURCEDEVICENAME": "Huawei.Storage",
        "SOURCELUN": "INVALID;82;INVALID;INVALID;INVALID",
        "SOURCELUNCAPACITY": "1048576",
        "SOURCELUNCAPACITYBYTE": "1073741824",
        "SOURCELUNNAME": "LUN0150063",
        "SOURCELUNWWN": "",
        "SOURCELUNWWPN": "INVALID",
        "SUBTYPE": "0",
        "TYPE": 219
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.4.13 Interface for Batch Querying LUN Copy Information

Function

This interface is used to batch query basic information about LUN copies.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/luncopy

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 219: LUN copy
ID	Mandatory	string	LUN Copy ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: faulty
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 36: not start 37: queuing 38: stop 39: copying 40: copy completed 41: paused
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(int)	Subtype. **The value is described as follows:** 0: common LUN copy
COPYSPEED	Mandatory	string(enum)	LUN copy rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
LUNCOPYTYPE	Mandatory	string(enum)	LUN copy type. **The value is described as follows:** 1: full copy
COPYPROGRESS	Mandatory	string(uint32)	LUN copy progress.
COPYSTARTTIME	Mandatory	string(uint64)	Start time, year-month-day:hour:minute:second.
COPYSTOPTIME	Mandatory	string(uint64)	End time, year-month-day hour:minute:second.

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Parameter	Mandatory/ Conditional	Type	Description
SOURCELUN	Mandatory	string	Member LUN ID of the source LUN's LUN copy,Here the LUN ID is either a common LUN ID or a snapshot ID, because both snapshot IDs and LUN IDs are globally addressed. **Note:**The LUN ID can be the ID of a common LUN or a snapshot, because the IDs of snapshots and LUNs are configured gloablly.
SOURCELUNNAME	Mandatory	string	Source LUN name.
SOURCELUNWWN	Mandatory	string	Source LUN WWN.
SOURCELUNWWPN	Mandatory	string	WWPN of the source LUN port.
SOURCELUNCAPACITY	Mandatory	string(uint64)	Source LUN capacity. **Unit:**KB
SOURCELUNCAPACITYBYTE	Mandatory	string(uint64)	Source LUN capacity. **Unit:**bytes
SOURCEDEVICEID	Mandatory	string	Source device ID.
SOURCEDEVICENAME	Mandatory	string	Source device name.

Example

- Batch querying basic information about LUN copies.

```
Request: GET /deviceManager/rest/210235843910E6000009/luncopy?range=[0-100]

Response:
{
    "data": [
        {
            "BASELUN": "-1",
            "COPYPROGRESS": "0",
            "COPYSPEED": "2",
            "COPYSTARTTIME": "-1",
            "COPYSTOPTIME": "-1",
            "DESCRIPTION": "",
            "HEALTHSTATUS": "1",
            "ID": "1",
            "LUNCOPYTYPE": "1",
            "NAME": "LUNCopy002",
            "RUNNINGSTATUS": "36",
            "SOURCEDEVICEID": "INVALID",
```

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```
            "SOURCEDEVICENAME": "Huawei.Storage",
            "SOURCELUN": "INVALID;82;INVALID;INVALID;INVALID",
            "SOURCELUNCAPACITY": "1048576",
            "SOURCELUNCAPACITYBYTE": "1073741824",
            "SOURCELUNNAME": "LUN0150063",
            "SOURCELUNWWN": "",
            "SOURCELUNWWPN": "INVALID",
            "SUBTYPE": "0",
            "TYPE": 219
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.5 lun_clone

4.12.5.1 Interface for Modifying a Clone Secondary LUN

Function

This interface is used to modify a clone secondary LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirrortargetlun/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Secondary LUN ID.
PARENTID	Mandatory	string	Clone ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
RESUMEPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

Result

N/A

Example

- Modifying a clone secondary LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/splitmirrortargetlun/2
{
    "PARENTID": "0",
    "SPEED": 2,
    "RESUMEPOLICY": 1
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.2 Interface for Modifying a Clone Information

Function

This interface is used to modify a clone information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror/${id}

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Name. **The value is described as follows:** which cannot be empty, and contains letter, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Desciption. **Length:**0~255
ID	Mandatory	string	Clone ID.

Result

N/A

Example

- Modifying a clone information.

```
Request: PUT /deviceManager/rest/210235843710E7000007/splitmirror/1
{
    "NAME": "HyperClone002xx",
    "DESCRIPTION": "aaaa"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.3 Interface for Batch Querying Clone Information

Function

This interface is used to batch query clone information.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 220: clone
ID	Mandatory	string	Clone ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 23: synchronizing 26:split 33:to_be_recoverd 34:interrupted 42: revsynchronizing 37: queuing
DESCRIPTION	Mandatory	string	Description.
PRILUNID	Mandatory	string	Source LUN ID.
PRILUNNAME	Mandatory	string	Source LUN name.
PRILUNCAPACITY	Mandatory	string(uint64)	Source LUN capacity. **Unit:**KB
PRILUNCAPACITYBYTE	Mandatory	string(uint32)	Source LUN capacity. **Unit:**bytes

Example

- Batch querying clone information.

```
Request: GET /deviceManager/rest/210235843910E6000009/splitmirror?
range=[0-100]
```

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```
Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "NAME": "HyperClone001",
            "PRILUNCAPACITY": "1048576",
            "PRILUNCAPACITYBYTE": "1073741824",
            "PRILUNID": "51",
            "PRILUNNAME": "LUN0150032",
            "RUNNINGSTATUS": "0",
            "TYPE": 220
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.4 Interface for Querying the Number of Clone Information

Function

This interface is used to query the number of clone information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and ID are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried clone information.

Example

- Querying the number of clone information.

```
Request: GET /deviceManager/rest/1016964156/splitmirror/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.5 Interface for Creating a Clone

Function

This interface is used to create a clone.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Name, which cannot be empty, and contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~255
PRILUNID	Mandatory	string	Source LUN ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 220: split mirror
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 23: synchronizing 26: split 33: to_be_recoverd 34: interrupted 42: revsynchronizing 37: queuing
DESCRIPTION	Mandatory	string	Description.
PRILUNID	Mandatory	string	Source LUN ID.
PRILUNNAME	Mandatory	string	Source LUN name.
PRILUNCAPACITY	Mandatory	string(uint64)	Source LUN capacity. **Unit:**KB
PRILUNCAPACITYBYTE	Mandatory	string(uint32)	Source LUN capacity. **Unit:**bytes
SILENTTIME	Mandatory	string(uint32)	Silent time. **Unit:**s **Note:**In HVS and later versions, the silentTime field is discarded.

Example

- Creating a clone.

```
Request: POST /deviceManager/rest/210235843910E6000009/splitmirror
{
    "NAME": "HyperClone002",
    "DESCRIPTION": "",
    "PRILUNID": "18"
}

Response:
 {
    "data": {
        "DESCRIPTION": "",
        "HEALTHSTATUS": "1",
        "ID": "1",
        "NAME": "HyperClone002",
        "PRILUNCAPACITY": "1048576",
        "PRILUNCAPACITYBYTE": "1073741824",
        "PRILUNID": "18",
        "PRILUNNAME": "reptest0003",
```

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```
        "RUNNINGSTATUS": "1",
        "SILENTTIME":"-1",
        "TYPE": 220
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.6 Interface for Deleting a Clone

Function

This interface is used to delete a clone.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Clone ID.

Result

N/A

Example

- Deleting a clone.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/splitmirror/1

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.12.5.7 Interface for Querying Clone Information

Function

This interface is used to query a clone information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Clone ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 220: clone
ID	Mandatory	string	Clone ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 23: synchronizing 26:split 33:to_be_recoverd 34: interrupted 42: revsynchronizing 37: queuing
DESCRIPTION	Mandatory	string	Description.
PRILUNID	Mandatory	string	Source LUN ID.
PRILUNNAME	Mandatory	string	Source LUN name.
PRILUNCAPACITY	Mandatory	string(uint64)	Source LUN capacity. **Unit:**KB
PRILUNCAPACITYBYTE	Mandatory	string(uint32)	Source LUN capacity. **Unit:**bytes

Example

- Querying a clone information.

```
Request: GET /deviceManager/rest/210235843910E6000009/splitmirror/0

Response:
{
    "data": {
        "DESCRIPTION": "",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "NAME": "HyperClone001",
        "PRILUNCAPACITY": "1048576",
        "PRILUNCAPACITYBYTE": "1073741824",
        "PRILUNID": "51",
        "PRILUNNAME": "LUN0150032",
        "RUNNINGSTATUS": "0",
        "TYPE": 220
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.8 Interface for Removing a Clone Secondary LUN

Function

This interface is used to remove a clone secondary LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to remove secondary LUN ({1}) of clone ({0}).

This operation will remove the mirror relationship between primary LUN ({2}) and secondary LUN ({3}).

Before performing this operation, ensure that the selected secondary LUN is correct to avoid misoperation.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLITMIRRORTARGETLUN/remove

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Secondary LUN ID.
PARENTID	Mandatory	string	Clone ID.

Result

N/A

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Example

- Removing a clone secondary LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/SPLITMIRRORTARGETLUN/
remove
{
    "ID":"6",
    "PARENTID":"0"
}

Response:
{
    "data":{},
    "error":{
        "code":0,
        "description":"0"
    }
}
```

4.12.5.9 Interface for Adding a Clone Secondary LUN

Function

This interface is used to add a clone secondary LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to add secondary LUN ({1}) to clone ({0}) without performing initial synchronization. Since this operation does not implement initial synchronization, the consistency of data on the primary and secondary LUNs cannot be ensured. Before performing this operation, ensure that the data on the primary LUN is consistent with the data on the secondary LUN. In this way, initial synchronization is not required.
You are about to add secondary LUN ({1}) to clone ({0}). This operation will cause the primary LUN data to overwrite the secondary LUn data. Before performing this operation, ensure that the selected is correct and secondary LUN can be overwritten.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLITMIRRORTARGETLUN/addTargetLUN

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	secondary LUN ID.
PARENTID	Mandatory	string	Clone ID.
SPEED	Mandatory	enum	Copying rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
RESUMEPOLICY	Mandatory	enum	Resume policy. **The value is described as follows:** 1: automatic 2: manual
FIRSTSYNC	Mandatory	enum	Indicates whether initial synchronization is performed. **The value is described as follows:** 0: no initial synchronization 1: initial synchronization

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Secondary LUN ID.
PARENTID	Mandatory	string	ID of the parent object.

Example

- Adding a clone secondary LUN.

```
Request: PUT /deviceManager/rest/210235843710E7000007/SPLITMIRRORTARGETLUN/
addTargetLUN
{
    "ID": "1",
    "SPEED": "2",
    "PARENTID": "0",
    "RESUMEPOLICY": "1",
```

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```
    "FIRSTSYNC": 1
}

Response:
{
    "data": {
        "ID":"1",
        "PARENTID":"0"
},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.10 Interface for Synchronizing Clone Secondary LUN

Function

This interface is used to synchronize a clone secondary LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to synchronize secondary LUN ({1}) of clone ({0}). This operation will overwrite data on the secondary LUN with that on the primary LUN. The secondary LUN will become read-only or cannot be read or written. Then services on the secondary LUN may be affected.

Suggestion: Before performing this operation, ensure that the selected secondary LUN is correct and there is no service on the secondary LUN, preventing impact on services.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLITMIRRORTARGETLUN/syn

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Secondary LUN ID.
PARENTID	Mandatory	string	Clone ID.

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Result

N/A

Example

- Synchronizing a clone secondary LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/SPLITMIRRORTARGETLUN/syn
{
    "ID": "6",
    "PARENTID": "0"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.11 Interface for Splitting a Clone Secondary LUN

Function

This interface is used to split a clone secondary LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to split clone pairs ({0}).

This operation removes the primary/secondary relationship, that is, stop copying data, and the data consistency between the primary and secondary LUNs will not be maintained anymore.

Before performing this operation, ensure that the primary/secondary synchronization has been completed. As a result, the data on the primary LUNs or secondary LUNs is available after split.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLITMIRRORTARGETLUN/split

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Secondary LUN ID.
PARENTID	Mandatory	string	Clone ID.

Result

N/A

Example

- Splitting a clone secondary LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/SPLITMIRRORTARGETLUN/
split
{
    "ID": "6",
    "PARENTID": "0"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.5.12 Interface for Reversely Synchronizing a Clone Secondary LUN

Function

This interface is used to reverse synchronize a clone secondary LUN.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to reversely synchronize a secondary LUN in clone ({0}). This operation will copy the data on secondary LUN ({1}) to primary LUN ({2}) to overwrite the original data on primary LUN.

Before performing this operation:

1. Ensure that data on the primary LUN has been backed up, and I/O requests to the primary LUN have been suspended.

2. Ensure that the data on primary LUN can be overwritten.

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3. During the reverse synchronization, the secondary LUN can be read only, host services on the secondary LUN will be stopped.

4. Ensure that you have selected correct primary LUN and secondary LUN to avoid misoperations.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLITMIRRORTARGETLUN/reversesyn

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Secondary LUN ID.
PARENTID	Mandatory	string	Clone ID.

Result

N/A

Example

- Reversely synchronizing a clone secondary LUN.

```
Request: PUT /deviceManager/rest/210235843910E6000009/SPLITMIRRORTARGETLUN/
reversesyn
{
    "ID":"6",
    "PARENTID":"0"
}

Response:
{
    "data":{},
    "error":{
        "code":0,
        "description":"0"
    }
}
```

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4.12.5.13 Interface for Batch Querying Clone Secondary LUN Information

Function

This interface is used to batch query clone secondary LUN information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/SPLITMIRRORTARGETLUN/targetLUN

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTID	Mandatory	string	Clone ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 228: split mirror secondary LUN
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 220: clone
PARENTID	Mandatory	string	ID of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: unknown 1: normal 23: synchronizing 26: split 33:to_be_recoverd 34: interrupted 42: revsynchronizing 37: queuing
DATASTATUS	Mandatory	string(enum)	Secondary LUN data status. **The value is described as follows:** 1: data inconsistent 2: inverse data inconsistent 3: synchronizing 4: reversely synchronizing 5: data consistent 6: synchronization completed 7: faulty

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	The copying rate is set to medium by default. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
PROCESS	Mandatory	string(uint32)	Copying process.
STARTTIME	Mandatory	string(uint32)	Start time.
ENDTIME	Mandatory	string(uint32)	End time.
SPLITTIME	Mandatory	string(uint32)	Splitting time.
RESUMEPOLICY	Mandatory	string(enum)	Resume policy. Automatic is set by default. **The value is described as follows:** 1: automatic 2: manual
LUNTYPE	Mandatory	string(enum)	LUN type. **The value is described as follows:** 1: primary LUN or source LUN 2: secondary LUN or target LUN
LUNCAPACITY	Mandatory	string(uint64)	LUN capacity (KB). **Unit:**KB
POOLNAME	Mandatory	string	Name of the owning pool.
PAIRID	Mandatory	string	Pair ID.
LUNCAPACITYBYTE	Mandatory	string(uint64)	LUN capacity. **Unit:**bytes
SYNCLEFTTIME	Mandatory	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:**"-1" indicates a invalid value.

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Example

- Batch querying clone secondary LUN information.

```
Request: GET /deviceManager/rest/210235843910E6000009/SPLITMIRRORTARGETLUN/
targetLun?PARENTID=0

Response:
 {
    "data": [
        {
            "DATASTATUS": "5",
            "ENDTIME": "1454320795",
            "HEALTHSTATUS": "1",
            "ID": "93",
            "LUNCAPACITY": "1048576",
            "LUNCAPACITYBYTE": "1073741824",
            "LUNTYPE": "2",
            "NAME": "LUN0150074",
            "PAIRID": "0",
            "PARENTID": "0",
            "PARENTTYPE": 220,
            "POOLNAME": "--",
            "PROCESS": "100",
            "RESUMEPOLICY": "1",
            "RUNNINGSTATUS": "1",
            "SPEED": "2",
            "SPLITTIME": "-1",
            "SYNCLEFTTIME":"0",
            "STARTTIME": "1454320728",
            "TYPE": 228
        },
        {
            "DATASTATUS": "5",
            "ENDTIME": "1454320830",
            "HEALTHSTATUS": "1",
            "ID": "63",
            "LUNCAPACITY": "1048576",
            "LUNCAPACITYBYTE": "1073741824",
            "LUNTYPE": "2",
            "NAME": "LUN0150044",
            "PAIRID": "1",
            "PARENTID": "0",
            "PARENTTYPE": 220,
            "POOLNAME": "--",
            "PROCESS": "100",
            "PROTECTMODEL": "1",
            "RESUMEPOLICY": "1",
            "RUNNINGSTATUS": "1",
            "SPEED": "2",
            "SYNCLEFTTIME":"0",
            "SPLITTIME": "-1",
            "STARTTIME": "1454320763",
            "TYPE": 228
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.5.14 Interface for Consistently Splitting Clone

Function

This interface is used to consistently split a clone.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to split clone pairs ({0}).

This operation removes the primary/secondary relationship, that is, stop copying data, and the data consistency between the primary and secondary LUNs will not be maintained anymore.

Before performing this operation, ensure that the primary/secondary synchronization has been completed. As a result, the data on the primary LUNs or secondary LUNs is available after split.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/splitmirror/split_multihyperclone_slave

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PAIRID	Mandatory	string	Clone ID. **The value is described as follows:** Pair ID and a string of comma splice, example:"1,2,3,4". **Note:**This field supports a maximum of 4096 clones.

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Parameter	Mandatory/Optional/Conditional	Type	Description
PAIRID2LIST	Optional	string	Clone ID. **The value is described as follows:** Pair ID and a string of comma splice, example:"1,2,3,4". **Note:**This field is used when more than 4096 clones need to be splitted and supports a maximum of 4096 clones.

Result

N/A

Example

- Consistently splitting a clone.

```
Request: PUT /deviceManager/rest/210235843910E6000009/splitmirror/
split_multihyperclone_slave
{
    "PAIRID": "0,1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6 remote_device

4.12.6.1 Interface for Batch Querying Remote Device Information

Function

This interface is used to batch query information about remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_device

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, RUNNINGSTATUS, HEALTHSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 224: remote device
ID	Mandatory	string	Remote Device ID.
NAME	Mandatory	string	Name.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: link_up 11: link_down 31: disabled 101: connecting
DESCRIPTION	Mandatory	string	Description.
WWN	Mandatory	string	Unique device identifier.
SN	Mandatory	string	Device serial number.
ARRAYTYPE	Mandatory	string(enum)	Identifies the type of the remote device. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
SERVICETYPE	Mandatory	string(enum)	Identifies the service type. **The value is described as follows:** 0: all 1: LUN copy 2: remote replication **Note:**Used for replication device.
LINKNUM	Mandatory	string(uint32)	Number of remote device links.
DEVICEMODEL	Mandatory	string	Remote device model.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEENCRYPT	Mandatory	string(bool)	Indicates whether data transmission encryption is enabled. **The value is described as follows:** true: yes false: no
CONSULTSTATUS	Mandatory	string(enum)	Negotiation status of data transmission. **The value is described as follows:** 0: key negotiation failed 1: key negotiation succeeded 2: encryption transmission is not supported
COMPRESSSTATUS	Mandatory	string(bool)	Status of data compression transmission. **The value is described as follows:** false: not supported true: supported
VENDOR	Mandatory	string	Vendor.
FCLINKNUM	Mandatory	string(uint32)	Number of FC links.
ISCSILINKNUM	Mandatory	string(uint32)	Number of iSCSI links.
COMPRESSALGORITHM	Mandatory	string(enum)	Compression algorithm used between arrays. **The value is described as follows:** 0: fast compression 1: depth compression

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Parameter	Mandatory/ Conditional	Type	Description
COMPRESSJUDGE	Mandatory	string(bool)	Indicates whether compression prejudging is enabled in the data transmission between arrays. **The value is described as follows:** true: enabled false: disabled
COMPRESSALGVALID	Mandatory	string(bool)	Indicates whether the compression computing has taken effect. **The value is described as follows:** true: yes false: no

Example

- Batch querying information about remote devices.

```
Request: GET /deviceManager/rest/210235843910E6000009/remote_device?
range=[0-100]

Response:
{
    "data": [
        {
            "ARRAYTYPE": "1",
            "COMPRESSALGORITHM": "0",
            "COMPRESSALGVALID": "false",
            "COMPRESSJUDGE": "true",
            "COMPRESSSTATUS": "false",
            "CONSULTSTATUS": "0",
            "DESCRIPTION": "",
            "DEVICEMODEL": "--",
            "ENABLEENCRYPT": "false",
            "FCLINKNUM": "0",
            "HEALTHSTATUS": "2",
            "ID": "0",
            "ISCSILINKNUM": "1",
            "LINKNUM": "1",
            "NAME": "Huawei.Storage",
            "RUNNINGSTATUS": "11",
            "SERVICETYPE": "0",
            "SN": "2102350DJV10EC000001",
            "TYPE": 224,
            "VENDOR": "--",
            "WWN": "2100643e8c453ffa"
        },
        {
            "ARRAYTYPE": "1",
            "COMPRESSALGORITHM": "0",
            "COMPRESSALGVALID": "false",
            "COMPRESSJUDGE": "true",
            "COMPRESSSTATUS": "false",
```

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```
            "CONSULTSTATUS": "0",
            "DESCRIPTION": "",
            "DEVICEMODEL": "--",
            "ENABLEENCRYPT": "false",
            "FCLINKNUM": "1",
            "HEALTHSTATUS": "14",
            "ID": "1",
            "ISCSILINKNUM": "0",
            "LINKNUM": "1",
            "NAME": "Huawei.Storage",
            "RUNNINGSTATUS": "31",
            "SERVICETYPE": "0",
            "SN": "456247AD4AD45235C481",
            "TYPE": 224,
            "VENDOR": "--",
            "WWN": "2100111545326912"
        },
        {
            "ARRAYTYPE": "2",
            "COMPRESSALGORITHM": "0",
            "COMPRESSALGVALID": "false",
            "COMPRESSJUDGE": "false",
            "COMPRESSSTATUS": "false",
            "CONSULTSTATUS": "0",
            "DESCRIPTION": "",
            "DEVICEMODEL": "XSG1            ",
            "ENABLEENCRYPT": "false",
            "FCLINKNUM": "0",
            "HEALTHSTATUS": "2",
            "ID": "513",
            "ISCSILINKNUM": "0",
            "LINKNUM": "0",
            "NAME": "HUAWEI_XSG1_513",
            "RUNNINGSTATUS": "11",
            "SERVICETYPE": "0",
            "SN": "65789AB65C7136CC98B5",
            "TYPE": 224,
            "VENDOR": "HUAWEI  ",
            "WWN": "--"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.6.2 Interface for Modifying Remote Device Information

Function

This interface is used to modify information about remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_device/${id}

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote device ID.
NAME	Conditional	string	Remote device name. **The value is described as follows:** Cannot be empty and contains only letters, digits, underscores (_),hyphens (-) and periods (.). **Length:**1~31 **Note:**Used for heterogeneous remote device.
REMOTEUSERNAME	Optional	string	Remote array username. **Length:**4~32 **Note:**Used for replication device.
REMOTEPASSWORD	Conditional	string	Remote array password. **Length:**6~32 **Note:**This field is mandatory for changing the username and password.
COMPRESSALGORITHM	Optional	enum	Inter-storage array compression algorithm. **The value is described as follows:** 0: high performance 1: high compression ratio **Note:**Used for replication device.

Result

N/A

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Example

- Modifying remote devices.

```
Request: PUT /deviceManager/rest/210235843910E6000009/remote_device/123
{
    "COMPRESSALGORITHM": "1",
    "REMOTEPASSWORD": "Admin@123",
    "REMOTEUSERNAME": "admin"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.3 Interface for Adding FC Links for Remote Devices

Function

This interface is used to add FC links for remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_link/add_fclink_to_remote_device

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FC link ID.

Result

N/A

Example

- Adding FC links for remote devices.

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```
Request: PUT /deviceManager/rest/210235843910E6000009/fc_link/
add_fclink_to_remote_device
{
    "ID":"1"
}

Response:
{
    "data":{},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.4 Interface for Batch Querying FC Link Information

Function

This interface is used to batch querying FC link information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_link

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, HEALTHSTATUS and RUNNINGSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LINKUSAGE	Optional	bool	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no **Note:**Used for replication remote device.
ARRAYTYPE	Optional	enum	Device type. **The value is described as follows:** 2: heterogeneity device 3: unknown device **Note:**Used for heterogeneous remote device.
DEVICEID	Optional	string	Remote device ID.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
ARRAYTYPE	Mandatory	enum	Device Type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device

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Parameter	Mandatory/ Conditional	Type	Description
DEVICEID	Mandatory	string	Remote device ID.
DEVICENAME	Mandatory	string	Remote Device Name.
DEVICEWWN	Mandatory	string	Remote Device WWN.
FCLINKLOCALPORTWWPN	Mandatory	string	Local port WWPN of the Fibre Channel link.
FCLINKREMOTEPORTWWPN	Mandatory	string	Remote port WWPN of the Fibre Channel link.
HEALTHSTATUS	Mandatory	enum	Health status. **The value is described as follows:** 1: normal 2: fault
ID	Mandatory	string	Link ID.
LINKUSAGE	Mandatory	bool	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
REMOTECONTROLID	Mandatory	string	Remote controller ID.
REMOTEPORTID	Mandatory	string	Remote port ID.
REMOTESN	Mandatory	string	Remote Device SN.
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 225: FC link
RUNNINGSTATUS	Mandatory	enum	Running Status. **The value is described as follows:** 10: Link up 11: Link down 31: disabled 101: connecting

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Parameter	Mandatory/ Conditional	Type	Description
DEVICEMODEL	Mandatory	string	Remote Device Type.
VENDOR	Mandatory	string	Manufacturer.
BANDWIDTHLIMITS-WITCH	Mandatory	string(uint32)	Restricted bandwidth switch. **The value is described as follows:** 0: close 1: open
BANDWIDTHLIMITSIZE	Conditional	string(uint64)	Restricted bandwidth size. **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
BANDWIDTHLIMITU-NIT	Conditional	string(uint32)	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	string(uint32)	Bandwidth usage. **Unit:**% **Note:**This field must be returned if Restricted bandwidth switch is open.
LUNNUM	Conditional	string(uint32)	Number of lun on the link. **Note:**This field is returned for heterogeneous remote device.
REMOTELOGINTYPE	Conditional	string	Remote array login type. **Note:**This field is returned for heterogeneous remote device.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEUSERNAME	Conditional	string	Remote array username. **Note:**This field is returned for heterogeneous remote device.

Example

- Batch querying FC link information.

```
Request: GET /deviceManager/rest/1016964156/fc_link?
DEVICEID=0&LINKUSAGE=true&filter=ID:0&range=[0-100]

Response:
{
    "data": [
        {
            "ARRAYTYPE": "1",
            "DEVICEID": "0",
            "DEVICENAME": "Huawei.Storage",
            "DEVICEWWN": "210030d17eb4f761",
            "FCLINKLOCALPORTWWPN": "20081051720c8a61",
            "FCLINKREMOTEPORTWWPN": "201030d17eb4f761",
            "HEALTHSTATUS": "1",
            "ID": "0",
            "LINKUSAGE": "true",
            "LOCALCONTROLID": "0A",
            "LOCALPORTID": "1114368",
            "REMOTECONTROLID": "0B",
            "REMOTEPORTID": "CTE0.B.IOM0.P0",
            "REMOTESN": "--",
            "RUNNINGSTATUS": "10",
            "TYPE": 225,
            "VENDOR":"--"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.5 Interface for Adding iSCSI Links for Remote Devices

Function

This interface is used to add iSCSI links for remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_link

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Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DEVICEID	Mandatory	string	Remote device ID.
IP	Mandatory	string	Remote IP.
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
RECOVERY_POLICY	Mandatory	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
PORT	Mandatory	string	Remote port.

Result

Parameter	Mandatory/Conditional	Type	Description
DEVICEID	Mandatory	string	Remote device ID.
IP	Mandatory	string	Remote IP.
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
PORT	Mandatory	string(uint32)	Remote port.
RECOVERY_POLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
ID	Mandatory	string	Link ID.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: Link up 11: Link down 31: disabled 101: connecting
REMOTECONTROLID	Conditional	string	Remote controller ID. **Note:**This field must be returned if the vendor is Huawei.
REMOTEPORTID	Conditional	string	Remote port ID. **Note:**This field must be returned if the vendor is Huawei.
TARGETNAME	Conditional	string	iSCSI target name. **Note:**This field must be returned if the vendor is Huawei.
BANDWIDTHLIMITU-NIT	Conditional	string(uint32)	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field must be returned if Restricted bandwidth switch is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	string(uint32)	Bandwidth usage. **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.

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Parameter	Mandatory/ Conditional	Type	Description
ARRAYTYPE	Mandatory	string(enum)	Remote device type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
BANDWIDTHLIMITSIZE	Conditional	string(uint64)	Restricted bandwidth size. **Note:**This field must be returned if Restricted bandwidth switch is open.
BANDWIDTHLIMITS-WITCH	Conditional	string(uint32)	Restricted bandwidth switch. **The value is described as follows:** 0: close 1: open **Note:**This field must be returned if Restricted bandwidth switch is open.
INITIATORNAME	Conditional	string	iSCSI initiator name. **Note:**This field must be returned if the vendor is Huawei.
ENABLECHAP	Mandatory	string(bool)	CHAP enabled or not. **The value is described as follows:** true: yes false: no
LINKUSAGE	Mandatory	string(bool)	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 243: iSCSI link

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Example

- Adding iSCSI links for remote devices.

```
Request: POST /deviceManager/rest/210235843910E6000009/iscsi_link

{
    "DEVICEID": "1",
    "IP": "100.130.242.202",
    "LOCALCONTROLID": "0A",
    "LOCALPORTID": "131328",
    "RECOVERY_POLICY": 1 ,
    "PORT":"3260"
}

Response:
{
    "data": {
        "ARRAYTYPE": "1",
        "BANDWIDTHLIMITSWITCH": "0",
        "DEVICEID": "0",
        "ENABLECHAP": "false",
        "HEALTHSTATUS": "1",
        "ID": "257",
        "INITIATORNAME": "iqn.2006-08.com.huawei:oceanstor:2100e4c2d1eaf02c::
1",
        "IP": "10.10.10.110",
        "LINKUSAGE": "true",
        "LOCALCONTROLID": "0B",
        "LOCALPORTID": "549772722432",
        "PORT": "3260",
        "RECOVERY_POLICY": "1",
        "REMOTECONTROLID": "0A",
        "REMOTEPORTID": "CTE0.R4.IOM0.P0",
        "RUNNINGSTATUS": "10",
        "TARGETNAME": "iqn.2006-08.com.huawei:oceanstor:
2100111545326912::20400:10.10.10.110",
        "TYPE": 243
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.6 Interface for Deleting Remote Device

Function

This interface is used to delete remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_device/${id}

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Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Remote device ID.

Result

N/A

Example

- Deleting remote devices.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/remote_device/123

Response:
{
    "data":{},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.7 Interface for Removing a FC Link of Remote Device

Function

This interface is used to remove a FC link of remote devicce.

Applicable Model

Applicable to V3 all series.

HighRisk

You are going to remove links for remote devices.

This operation removes all links but leaves one to bear replication services between storage arrays. If this link is faulty, all replication services between storage arrays are interrupted.

Suggestion: Before you perform this operation, ensure that you have selected correct links, which are removable.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_link/remove_fclink_from_remote_device

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Link ID.

Result

N/A

Example

- Removing a FC link of remote device.

```
Request: PUT /deviceManager/rest/210235843910E6000009/fc_link/
remove_fclink_from_remote_device

{
    "ID":"1"
}

Response:
{
    "data": { },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.8 Interface for Querying FC Link Information

Function

This interface is used to query a FC link information.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_link/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FC link ID.

Result

Parameter	Mandatory/Conditional	Type	Description
ARRAYTYPE	Mandatory	enum	Device Type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
DEVICEID	Mandatory	string	Remote device ID.
DEVICENAME	Mandatory	string	Remote Device Name.
DEVICEWWN	Mandatory	string	Remote Device WWN.
FCLINKLOCALPORTWWPN	Mandatory	string	Local port WWPN of the Fibre Channel link.
FCLINKREMOTEPORTWWPN	Mandatory	string	Remote port WWPN of the Fibre Channel link.
HEALTHSTATUS	Mandatory	enum	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
ID	Mandatory	string	Link ID.

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Parameter	Mandatory/ Conditional	Type	Description
LINKUSAGE	Mandatory	bool	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
REMOTECONTROLID	Mandatory	string	Remote controller ID.
REMOTEPORTID	Mandatory	string	Remote port ID.
REMOTESN	Conditional	string	Remote device SN. **Note:**This field is returned for heterogeneous remote device.
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 225: FC link
RUNNINGSTATUS	Mandatory	enum	Running Status. **The value is described as follows:** 10: Link up 11: Link down 31: disabled 101: connecting
DEVICEMODEL	Conditional	string	Remote device type. **Note:**This field is returned for heterogeneous remote device.
VENDOR	Mandatory	string	Manufacturer.

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Parameter	Mandatory/ Conditional	Type	Description
BANDWIDTHLIMITS-WITCH	Mandatory	string(uint32)	Restricted bandwidth switch. **The value is described as follows:** 0: close 1: open
BANDWIDTHLIMITSIZE	Conditional	string(uint64)	Restricted bandwidth size. **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
BANDWIDTHLIMITU-NIT	Conditional	string(uint32)	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	string(uint32)	Bandwidth usage. **Unit:**% **Note:**This field must be returned if Restricted bandwidth switch is open.
LUNNUM	Conditional	string(uint32)	Number of lun on the link. **Note:**This field is returned for heterogeneous remote device.
REMOTELOGINTYPE	Conditional	string	Remote array login type. **Note:**This field is returned for heterogeneous remote device.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEUSERNAME	Conditional	string	Remote array username. **Note:**This field is returned for heterogeneous remote device.

Example

- Querying a FC link information.

```
Request: GET /deviceManager/rest/1016964156/fc_link/0

Response:
{
    "data": {
        "ARRAYTYPE": "1",
        "BANDWIDTHLIMITSWITCH": "0",
        "DEVICEID": "0",
        "DEVICENAME": "Huawei.Storage",
        "DEVICEWWN": "21001051720c8a61",
        "FCLINKLOCALPORTWWPN": "201030d17eb4f761",
        "FCLINKREMOTEPORTWWPN": "20081051720c8a61",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "LINKUSAGE": "true",
        "LOCALCONTROLID": "0B",
        "LOCALPORTID": "549773705216",
        "REMOTECONTROLID": "0A",
        "REMOTEPORTID": "CTE0.A.IOM1.P0",
        "RUNNINGSTATUS": "10",
        "TYPE": 225,
        "VENDOR":"--"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.9 Interface for Creating Remote Device

Function

This interface is used to create remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remotedevice

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Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ARRAYTYPE	Mandatory	enum	Remote device type. **The value is described as follows:** 1: replication device
FCLINKID	Conditional	string	FC link ID. **Note:**Used to add FC links.
ISCSILINKLOCALCONTROLID	Conditional	string	Local controller ID of the iSCSI link. **Note:**Used to add iSCSI links.
ISCSILINKLOCALPORTID	Conditional	string	Local port ID of the iSCSI link. **Note:**Used to add iSCSI links.
ISCSILINKREMOTEIP	Conditional	string	Peer IP address of the iSCSI link. **Note:**Used to add iSCSI links.
ISCSILINKREMOTETCPPORT	Conditional	uint32	Remote port of the iSCSI link. **The value is described as follows:** 1~65535. **Note:**Used to add iSCSI links.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISCSILINKRECOVERY-POLICY	Conditional	enum	iSCSI link recovery policy. **The value is described as follows:** 1: automatic 2: manual **Note:**Used to add iSCSI links.
ISCSILINK_REMOTEUSERNAME	Conditional	string	Remote array user name. **Length:**4~32 **Note:**This field must be delivered when adding a remote device type of replication.
ISCSILINK_REMOTEPASSWORD	Conditional	string	Remote array password. **Length:**6~32 **Note:**This field must be delivered when adding a remote device type of replication.
FASTWRITEENABLED	Optional	bool	Enable immediate data or not. **The value is described as follows:** true: enable false: disable **Default:**true: enable **Note:**Used to add iSCSI links.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Remote device ID.

Example

- Creating remote devices.

```
Request: POST /deviceManager/rest/210235843910E6000009/remotedevice
{
```

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```
    "ARRAYTYPE": 1,
    "FCLINKID": "0",
    "ISCSILINK_REMOTEPASSWORD": "mm_user@storage",
    "ISCSILINK_REMOTEUSERNAME": "mm_user"
}

Response:
{
    "data": {
        "ID": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.10 Interface for Querying the Number of FC Links

Function

This interface is used to query the number of FC links.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_link/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, RUNNINGSTATUS, HEALTHSTATUS are supported.
DEVICEID	Optional	string	Remote device ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LINKUSAGE	Optional	bool	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no **Note:**Used for replication remote device.
ARRAYTYPE	Optional	enum	Device type. **The value is described as follows:** 2: heterogeneity device 3: unknown device **Note:**Used for heterogeneous remote device.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried FC links.

Example

- Querying the number of FC links.

```
Request: GET /deviceManager/rest/1016964156/fc_link/count?
LINKUSAGE=true&filter=ID::0

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.6.11 Interface for Modifying FC Link Information

Function

This interface is used to modify FC link information.

Applicable Model

Applicable to V3 all series.

HighRisk

You are going to modify the parameters of the link (source-target information). A link bandwidth above the threshold affects the performance of other services, and a link bandwidth below the threshold affects the performance of the current service. Changing the IP address information of the link or fast_write policy may cause link reconnection that interrupts services. Suggestion: Before you set the link threshold, determine the link bandwidth that is actually required and the bandwidth that can be allocated from the physical link to the current connection. Before you modify the IP address information and fast_write policy, check whether any standby replication link exists;Check detailed information about the link to determine whether the fast_write policy takes effect after the link is normal.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fc_link/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
BANDWIDTHLIMITS-WITCH	Optional	uint32	Restricted bandwidth switch. **The value is described as follows:** 0: off 1: on
ID	Mandatory	string	Link ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
BANDWIDTHLIMITSIZE	Conditional	uint64	Restricted bandwidth unit. **Note:** This field needs to be delivered if Restricted bandwidth switch is open. Set rule: Bandwidth × Bandwidth usage ≥ 1Mbit/s.
BANDWIDTHLIMITU-NIT	Conditional	uint32	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field needs to be delivered if Restricted bandwidth switch is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	uint32	Bandwidth usage. **Unit:**% **Note:** This field needs to be delivered if Restricted bandwidth switch is open. Set rule: Bandwidth × Bandwidth usage ≥ 1Mbit/s.

Result

N/A

Example

- Modifying FC link information.

```
Request: PUT /deviceManager/rest/1016964156/fc_link/0
{
    "BANDWIDTHLIMITSWITCH":0
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.12.6.12 Interface for Removing a iSCSI Link of Remote Device

Function

This interface is used to remove a iSCSI link of remote device.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_link/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Link ID.

Result

N/A

Example

- Removing a iSCSI link of remote device.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/iscsi_link/0

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.6.13 Interface for Batch Querying iSCSI Link Information

Function

This interface is used to batch query information about iSCSI links.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_link

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, RUNNINGSTATUS and HEALTHSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
DEVICEID	Optional	string	Remote device ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LINKUSAGE	Optional	bool	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no **Note:**Used for replication remote device.
ARRAYTYPE	Optional	enum	Device type. **The value is described as follows:** 2: heterogeneity device 3: unknown device **Note:**Used for heterogeneous remote device.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 243: iSCSI link
ID	Mandatory	string	Link ID.
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
IP	Mandatory	string	Remote IP.
PORT	Mandatory	string(uint32)	Remote port.
RECOVERY_POLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
DEVICEID	Mandatory	string	Remote device ID.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: Link up 11: Link down 31: disabled 101: connecting
REMOTECONTROLID	Conditional	string	Remote controller ID. **Note:**This field must be returned if the vendor is Huawei.
REMOTEPORTID	Conditional	string	Remote port ID. **Note:**This field must be returned if the vendor is Huawei.
TARGETNAME	Conditional	string	iSCSI target name. **Note:**This field must be returned if the vendor is Huawei.
BANDWIDTHLIMITU-NIT	Conditional	string(uint32)	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	string(uint32)	Bandwidth usage. **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.

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Parameter	Mandatory/ Conditional	Type	Description
ARRAYTYPE	Mandatory	string(enum)	Remote device type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
BANDWIDTHLIMITSIZE	Conditional	string(uint64)	Restricted bandwidth size. **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
BANDWIDTHLIMITS-WITCH	Mandatory	string(uint32)	Restricted bandwidth switch. **The value is described as follows:** 0: close 1: open
INITIATORNAME	Conditional	string	iSCSI initiator name. **Note:**This field must be returned if the vendor is Huawei.
LINKUSAGE	Mandatory	string(bool)	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no
ENABLECHAP	Mandatory	string(bool)	CHAP enabled or not. **The value is described as follows:** true: yes false: no
VENDOR	Mandatory	string	Vendor.
DEVICEMODEL	Mandatory	string	Remote device type.
DEVICENAME	Mandatory	string	Remote device name.
LOCALIP	Mandatory	string	Local IP.
LOCALISID	Mandatory	string	Initiator session ID.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTESN	Mandatory	string	Remote Device SN.
REMOTETGPT	Mandatory	string	Target session identifying handle.
REMOTEWWN	Mandatory	string	Remote device WWN.
CHAPUSER	Conditional	string	CHAP name. **Note:**This field is returned for heterogeneous remote device.
LUNNUM	Conditional	string(uint32)	Number of lun on the link. **Note:**This field is returned for heterogeneous remote device.
REMOTELOGINTYPE	Conditional	string	Remote array login type. **Note:**This field is returned for heterogeneous remote device.
REMOTEUSERNAME	Conditional	string	Remote array username. **Note:**This field is returned for heterogeneous remote device.
FASTWRITEENABLED	Conditional	string(bool)	Enable immediate data or not. **The value is described as follows:** true : enable false : disable **Note:**This field is returned for replication remote device.

Example

- Batch querying iSCSI link information.

```
Request: GET/deviceManager/rest/2102350FJF10F7000013/iscsi_link?
DEVICEID=0&LINKUSAGE=true&filter=ID:256&range=[0-100]

Response:
```

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```
{
    "data": [
        {
            "ARRAYTYPE": "1",
            "BANDWIDTHLIMITSIZE": "300000",
            "BANDWIDTHLIMITSWITCH": "1",
            "BANDWIDTHLIMITUNIT": "1",
            "BANDWIDTHLIMITUTILIZATION": "1",
            "DEVICEID": "0",
            "DEVICEMODEL": "--",
            "DEVICENAME": "Huawei.Storage",
            "ENABLECHAP": "false",
            "FASTWRITEENABLED": "false",
            "HEALTHSTATUS": "1",
            "ID": "256",
            "INITIATORNAME": "iqn.2006-08.com.huawei:oceanstor:
210000acbbe13ad2::1",
            "IP": "22.22.22.73",
            "LINKUSAGE": "true",
            "LOCALCONTROLID": "0B",
            "LOCALIP": "22.22.22.75",
            "LOCALISID": "--",
            "LOCALPORTID": "549772730372",
            "PORT": "3260",
            "RECOVERY_POLICY": "1",
            "REMOTECONTROLID": "0B",
            "REMOTEPORTID": "CTE0.B.H0",
            "REMOTESN": "23456789234567891234",
            "REMOTETGPT": "--",
            "REMOTEWWN": "2100e4c2d1ed4aba",
            "RUNNINGSTATUS": "10",
            "TARGETNAME": "iqn.2006-08.com.huawei:oceanstor:2100e4c2d1ed4aba::
1022003:22.22.22.73",
            "TYPE": 243,
            "VENDOR": "--"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.6.14 Interface for Querying a Single iSCSI Link Information

Function

This interface is used to query a iSCSI link information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_link/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Link ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 243: iSCSI link
ID	Mandatory	string	Link ID.
LOCALCONTROLID	Mandatory	string	Local controller ID.
LOCALPORTID	Mandatory	string	Local port ID.
IP	Mandatory	string	Remote IP.
PORT	Mandatory	string(uint32)	Remote port.
RECOVERY_POLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
DEVICEID	Mandatory	string	Remote device ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: Link up 11: Link down 31: disabled 101: connecting
REMOTECONTROLID	Mandatory	string	Remote controller ID.
REMOTEPORTID	Mandatory	string	Remote port ID.
TARGETNAME	Mandatory	string	iSCSI target name.
BANDWIDTHLIMITU-NIT	Conditional	string(uint32)	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field must be returned if Restricted bandwidth switch is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	string(uint32)	Bandwidth usage. **Note:**This field must be returned if BANDWIDTHLIMITS-WITCH is open.
ARRAYTYPE	Mandatory	string(enum)	Remote device type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
BANDWIDTHLIMITSIZ E	Conditional	string(uint64)	Restricted bandwidth size. **Note:**This field must be returned if Restricted bandwidth switch is open.

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Parameter	Mandatory/ Conditional	Type	Description
BANDWIDTHLIMITS-WITCH	Mandatory	string(uint32)	Restricted bandwidth switch. **The value is described as follows:** 0: close 1: open
INITIATORNAME	Mandatory	string	iSCSI initiator name.
LINKUSAGE	Mandatory	string(bool)	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no
ENABLECHAP	Mandatory	string(bool)	CHAP enabled or not. **The value is described as follows:** true: yes false: no
VENDOR	Mandatory	string	Vendor.
DEVICEMODEL	Mandatory	string	Remote device type.
DEVICENAME	Mandatory	string	Remote device name.
LOCALIP	Mandatory	string	Local IP.
LOCALISID	Mandatory	string	Initiator session ID.
REMOTESN	Mandatory	string	Remote device SN.
REMOTETGPT	Mandatory	string	Target session identifying handle.
REMOTEWWN	Mandatory	string	Remote device WWN.
CHAPUSER	Conditional	string	CHAP name. **Note:**This field is returned for heterogeneous remote device.

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Parameter	Mandatory/ Conditional	Type	Description
LUNNUM	Conditional	string(uint32)	Number of lun on the link. **Note:**This field is returned for heterogeneous remote device.
REMOTELOGINTYPE	Conditional	string	Remote array login type. **Note:**This field is returned for heterogeneous remote device.
REMOTEUSERNAME	Conditional	string	Remote array username. **Note:**This field is returned for heterogeneous remote device.
FASTWRITEENABLED	Conditional	string(bool)	Enable immediate data or not. **The value is described as follows:** true : enable false : disable **Note:**This field is returned for replication remote device.

Example

- Querying a iSCSI link information.

```
Request: GET /deviceManager/rest/2102350FJF10F7000013/iscsi_link/65792

Response: {
    "data": {
        "ARRAYTYPE": "1",
        "BANDWIDTHLIMITSIZE": "101000",
        "BANDWIDTHLIMITSWITCH": "1",
        "BANDWIDTHLIMITUNIT": "1",
        "BANDWIDTHLIMITUTILIZATION": "35",
        "DEVICEID": "1",
        "ENABLECHAP": "false",
        "HEALTHSTATUS": "2",
        "ID": "65792",
        "INITIATORNAME": "iqn.2006-08.com.huawei:oceanstor:2100e4c2d1eaf02c::
1",
        "IP": "10.10.10.143",
        "LINKUSAGE": "true",
        "LOCALCONTROLID": "0B",
        "LOCALPORTID": "549772722432",
        "PORT": "3260",
```

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```
        "RECOVERY_POLICY": "1",
        "REMOTECONTROLID": "0A",
        "REMOTEPORTID": "CTE0.A.IOM0.P1",
        "RUNNINGSTATUS": "11",
        "TARGETNAME": "iqn.2006-08.com.huawei:oceanstor:21004846fb8ca15d::
20001:10.10.10.11",
        "TYPE": 243
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.15 Interface for Querying the Number of iSCSI Links

Function

This interface is used to query the number of iSCSI links.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_link/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, RUNNINGSTATUS, HEALTHSTATUS are supported.
DEVICEID	Optional	string	Remote device ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
LINKUSAGE	Optional	bool	Identifies whether a link is added in the remote device. **The value is described as follows:** true: yes false: no **Note:**Used for replication remote device.
ARRAYTYPE	Optional	enum	Device type. **The value is described as follows:** 2: heterogeneity device 3: unknown device **Note:**Used for heterogeneous remote device.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried iSCSI links.

Example

- Querying the number of iSCSI links.

```
Request: GET /deviceManager/rest/2102350FJF10F7000013/iscsi_link/count?
DEVICEID=1&LINKUSAGE=true&filter=HEALTHSTATUS: 2&range=[0-100]

Response: {
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.16 Interface for Modifying a iSCSI Link information

Function

This interface is used to modify a iSCSI link information.

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Applicable Model

Applicable to V3 all series.

HighRisk

You are going to modify the parameters of the link (source-target information). A link bandwidth above the threshold affects the performance of other services, and a link bandwidth below the threshold affects the performance of the current service. Changing the IP address information of the link or fast_write policy may cause link reconnection that interrupts services. Suggestion: Before you set the link threshold, determine the link bandwidth that is actually required and the bandwidth that can be allocated from the physical link to the current connection. Before you modify the IP address information and fast_write policy, check whether any standby replication link exists;Check detailed information about the link to determine whether the fast_write policy takes effect after the link is normal.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/iscsi_link/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Link ID.
IP	Optional	string	Remote IP.
BANDWIDTHLIMITS-WITCH	Optional	uint32	Restricted bandwidth switch. **The value is described as follows:** 0: close 1: open

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Parameter	Mandatory/Optional/Conditional	Type	Description
BANDWIDTHLIMITSIZE	Conditional	uint64	Restricted bandwidth size. **Note:** This field needs to be delivered if Restricted bandwidth switch is open. Set rule: Bandwidth × Bandwidth usage ≥ 1Mbit/s.
BANDWIDTHLIMITU-NIT	Conditional	uint32	Restricted bandwidth unit. **The value is described as follows:** 0: Mbit/s 1: Kbit/s 2: Gbit/s **Note:**This field needs to be delivered if Restricted bandwidth switch is open.
BANDWIDTHLIMITU-TILIZATION	Conditional	uint32	Bandwidth usage. **Unit:**% **Note:** This field needs to be delivered if Restricted bandwidth switch is open. Set rule: Bandwidth × Bandwidth usage ≥ 1Mbit/s.
FASTWRITEENABLED	Optional	bool	Enable immediate data or not. **The value is described as follows:** true : enable false : disable

Result

N/A

Example

- Modifying a iSCSI link information.

```
Request: PUT /deviceManager/rest/210235843910E6000009/iscsi_link/65792
```

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```
{
    "IP":"10.10.10.143",
    "BANDWIDTHLIMITSWITCH":1,
    "BANDWIDTHLIMITSIZE":101,
    "BANDWIDTHLIMITUNIT":0,
    "BANDWIDTHLIMITUTILIZATION":35
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.17 Interface for Querying the Number of Remote Device

Function

This interface is used to query the number of remote device.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_device/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, RUNNINGSTATUS, HEALTHSTATUS are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried remote device.

Example

- Querying the number of remote device.

```
Request: GET /deviceManager/rest/1016964156/remote_device/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.6.18 Interface for Querying Remote Device Information

Function

This interface is used to query information about remote devices.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_device/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/ Conditional	Type	Description
ID	Mandatory	string	Remote Device ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
REQUIREMANAGEMENTIP	Optional	bool	Whether to obtain the management IP address. **The value is described as follows:** true:yes false:no

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 224: remote device
ID	Mandatory	string	Remote Device ID.
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
ARRAYTYPE	Mandatory	string(enum)	Identifies the type of the remote device. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
COMPRESSALGORITHM	Mandatory	string(enum)	Compression algorithm used between arrays. **The value is described as follows:** 0: fast compression 1: depth compression

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Parameter	Mandatory/ Conditional	Type	Description
COMPRESSALGVALID	Mandatory	string(bool)	Indicates whether the compression computing has taken effect. **The value is described as follows:** true: yes false: no
COMPRESSJUDGE	Mandatory	string(bool)	Indicates whether compression prejudging is enabled in the data transmission between arrays. **The value is described as follows:** true: enabled false: disabled
DESCRIPTION	Mandatory	string	Description.
FCLINKNUM	Mandatory	string(uint32)	Number of FC links.
ISCSILINKNUM	Mandatory	string(uint32)	Number of iSCSI links.
LINKNUM	Mandatory	string(uint32)	Number of remote device links.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: link_up 11: link_down 31: disabled 101: connecting
SN	Mandatory	string	Device serial number.
VENDOR	Mandatory	string	Vendor.
WWN	Mandatory	string	Unique device identifier.

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Parameter	Mandatory/ Conditional	Type	Description
MANAGEMENTIPLIST	Conditional	string	Management IP address list where IP addresses are separated by commas (,). Both IPv4 and IPv6 are supported. **Note:**This field is returned when the REQUIREMANAGEMENTIP parameter is delivered for replication device.
SERVICETYPE	Conditional	string(enum)	Identifies the service type. **The value is described as follows:** 0: all 1: LUN copy 2: remote replication **Note:**This field is returned for heterogeneity device.
ENABLEENCRYPT	Conditional	string(bool)	Indicates whether data transmission encryption is enabled. **The value is described as follows:** true: yes false: no **Note:**This field is returned for heterogeneity device.
DEVICEMODEL	Conditional	string	Remote device model. **Note:**This field is returned for heterogeneity device.

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Parameter	Mandatory/ Conditional	Type	Description
COMPRESSSTATUS	Conditional	string(bool)	Status of data compression transmission. **The value is described as follows:** false: not supported true: supported **Note:**This field is returned for heterogeneity device.
CONSULTSTATUS	Conditional	string(enum)	Negotiation status of data transmission. **The value is described as follows:** 0: key negotiation failed 1: key negotiation succeeded 2: encryption transmission is not supported **Note:**This field is returned for heterogeneity device.

Example

- Querying information about remote devices.

```
Request: GET/deviceManager/rest/210235843910E6000009/remote_device/0

Response:
 {
    "data": {
        "ARRAYTYPE": "1",
        "COMPRESSALGORITHM": "0",
        "COMPRESSALGVALID": "true",
        "COMPRESSJUDGE": "true",
        "DESCRIPTION": "",
        "FCLINKNUM": "1",
        "HEALTHSTATUS": "1",
        "ID": "0",
        "ISCSILINKNUM": "0",
        "LINKNUM": "1",
        "NAME": "Huawei.Storage",
        "RUNNINGSTATUS": "10",
        "SN": "210235843710E7000007",
        "TYPE": 224,
        "VENDOR": "HUAWEI",
        "WWN": "21001051720c8a61"
    },
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.12.7 remote_resource

4.12.7.1 Interface for Scanning for a Remote LUN

Function

This interface is used to scan remote LUN.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_lun/scan_remote_lun

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 224: remote device 243: iSCSI link
ASSOCIATEOBJID	Optional	string	Associated object ID.

Result

N/A

Example

- Scanning remote LUN.

```
Request: GET /deviceManager/rest/210235843910E6000009/remote_lun/
scan_remote_lun?ASSOCIATEOBJTYPE=224&ASSOCIATEOBJID=1
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.7.2 Interface for Querying the Number of Remote Resources Available to the Remote vStore

Function

This interface is used to query the number of remote resources available to the remote vStore.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_lun/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, RUNNINGSTATUS, HEALTHSTATUS are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
RESTYPE	Mandatory	enum	Resource type. **The value is described as follows:** 40: file system
ARRAYTYPE	Mandatory	enum	Device type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
RSSTYPE	Optional	enum	Type of the value-added available remote LUN. **The value is described as follows:** 28: REPHC_SECONDARY_FS
DEVICEID	Mandatory	string	Remote device ID.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried remote resources.
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 250: remote LUN

Example

- Querying the number of remote resources available to the remote vStore.

```
Request: GET /deviceManager/rest/1016964156/remote_lun/count?
RSSTYPE=28&DEVICEID=0&vstoreId=1&RESTYPE=40&ARRAYTYPE=1&filter=HEALTHSTATUS::1

Response:
{
    "data": {
        "COUNT": "1",
        "TYPE":250
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.7.3 Interface for Batch Querying Remote Resources Available to the Remote vStore

Function

This interface is used to batch query information about remote vStores.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_lun

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, NAME, RUNNINGSTATUS, HEALTHSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
RSSTYPE	Mandatory	enum	Type of the value-added available remote LUN. **The value is described as follows:** 40: file system
RESTYPE	Mandatory	enum	Resource type. **The value is described as follows:** 28: REPHC_SECONDARY_FS
ARRAYTYPE	Mandatory	enum	Identifies the type of the remote device. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device

Result

Parameter	Mandatory/Conditional	Type	Description
CAPACITY	Mandatory	string	Capacity.
CAPACITYBYTE	Mandatory	string	Remote capacity.

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Parameter	Mandatory/ Conditional	Type	Description
DEVICEID	Mandatory	string	Remote Device ID.
DEVICESN	Mandatory	string	Device serial number.
HEALTHSTATUS	Mandatory	string	Health status. **The value is described as follows:** 1: normal 2: fault 14: invalid
ID	Mandatory	string	Remote resources ID.
LUNID	Mandatory	string	Remote LUN ID.
NAME	Mandatory	string	Name.
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 250:remote LUN

Example

- Batch querying information about remote vStores.

```
Request: GET/deviceManager/rest/210235843910E6000009/remote_lun?
RSSTYPE=28&DEVICEID=0&vstoreId=1&RESTYPE=40&ARRAYTYPE=1&filter=HEALTHSTATUS::
1&range=[0-100]

Response: {
    "data": [
        {
            "CAPACITY": "1048576",
            "CAPACITYBYTE": "1073741824",
            "DEVICEID": "0",
            "DEVICESN": "5345A4C89612455DA54B",
            "HEALTHSTATUS": "1",
            "ID": "0;0;INVALID;INVALID;INVALID",
            "LUNID": "0",
            "NAME": "FileSystem0010000",
            "TYPE": 250
        },
        {
            "CAPACITY": "1048576",
            "CAPACITYBYTE": "1073741824",
            "DEVICEID": "0",
            "DEVICESN": "5345A4C89612455DA54B",
            "HEALTHSTATUS": "1",
            "ID": "0;1;INVALID;INVALID;INVALID",
            "LUNID": "1",
            "NAME": "FileSystem0010001",
            "TYPE": 250
        }
    ],
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.12.7.4 Interface for Implementing Associated Query of Remote LUN Information

Function

This interface is used to associated query of remote LUN information.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_lun/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 224: remote device
ASSOCIATEOBJID	Conditional	string	Associated object ID. **Note:**This field must be delivered when field ASSOCIATEOBJTYPE is delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
ARRAYTYPE	Mandatory	enum	Identifies the type of the remote device. **The value is described as follows:** 2: heterogeneity device 3: unknown device
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter LUNWWN is supported. **Note:**When the LUNWWN field is used to filter the search, its value with colons (:) removed will be delivered. For example, if the LUNWWN value queried by using the interface is "12:34:56:78", "12345678" will be delivered.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 250: Remote LUN
ID	Mandatory	string	Object ID. **The value is described as follows:** Format: "ArrayID;LUNID;WWN;WWPN;HOSTLUN_ID".
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
LUNID	Mandatory	string	Remote LUN ID.
DEVICEID	Mandatory	string	Remote device ID.
DEVICESN	Mandatory	string	Device serial number.
LUNWWN	Mandatory	string	Unique identifier of the remote LUN.
ARRAYTYPE	Mandatory	string(enum)	Identifies the type of the remote device, a heterogeneity device or a replication device. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
CAPACITY	Mandatory	string(uint32)	Capacity. **Unit:**KB
CAPACITYBYTE	Mandatory	string(uint64)	Capacity. **Unit:**bytes

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Parameter	Mandatory/ Conditional	Type	Description
USED	Mandatory	string(bool)	Indicates whether the device is used by replication. The remote LUN of a private array does not use this parameter. Use this parameter to filter the external LUN used by the created eDevLUN. **The value is described as follows:** true: yes false: no
VENDOR	Mandatory	string	Vendor name, which is a field for the third-party LUN.
MODEL	Mandatory	string	LUN device model, which is a field for the third-party LUN.
SECTORSIZE	Mandatory	string(uint32)	Block size (the sector size presented to the host). The current block size is 512 bytes.
HOSTLUNID	Mandatory	string	ID of a host LUN.
ISTHINLUN	Mandatory	string(bool)	Indicates whether it is a thin LUN. **The value is described as follows:** true: yes false: no
DEVICEWWN	Mandatory	string	Unique device identifier.
DEVICENAME	Mandatory	string	Device name.
LOGICPATHNUM	Mandatory	string(uint32)	Number of logical paths.

Example

- Implementing associated query of remote LUN information.

```
Request: GET /deviceManager/rest/210235843910E6000009/remote_lun/associate?
ARRAYTYPE=2&ASSOCIATEOBJTYPE=224&ASSOCIATEOBJID=513

Response:
{
    "data": [
```

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```
        {
            "ARRAYTYPE": "2",
            "CAPACITY": "2097152",
            "CAPACITYBYTE": "2147483648",
            "DEVICEID": "513",
            "DEVICENAME": "HUAWEI_XSG1_513",
            "DEVICESN": "65789AB65C7136CC98B5",
            "DEVICEWWN": "--",
            "HEALTHSTATUS": "2",
            "HOSTLUNID": "--",
            "ID": "INVALID;INVALID;64:84:6f:b1:00:8c:a1:5c:16:77:3e:ad:
00:00:00:1c;INVALID;INVALID",
            "ISTHINLUN": "false",
            "LUNID": "--",
            "LUNWWN": "64:84:6f:b1:00:8c:a1:5c:16:77:3e:ad:00:00:00:1c",
            "MODEL": "XSG1            ",
            "NAME": "--",
            "SECTORSIZE": "512",
            "TYPE": 250,
            "USED": "true",
            "VENDOR": "HUAWEI  "
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.7.5 Interface for Querying the Number of Remote LUN

Function

This interface is used to query the number of remote LUN.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_lun/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters HEALTHSTATUS and CAPACITYBYTE and LUNWWN are supported. **Note:**The LUWWN field is used for heterogeneous devices, when the LUNWWN field is used to filter the search, its value with colons (:) removed will be delivered. For example, if the LUNWWN value queried by using the interface is "12:34:56:78", "12345678" will be delivered.
ARRAYTYPE	Mandatory	enum	Remote device type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device

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Parameter	Mandatory/Optional/Conditional	Type	Description
RSSTYPE	Optional	enum	Type of remote LUN. **The value is described as follows:** 5: LUNCOPY_SOURCELUN_REMOTELUN 13: REP_SECONDARYLUN 24: REPRM_SECONDARY_FS 26: REPHC_SECONDARY_LUN 28: REPHC_SECONDARY_FS 30: REPHV_SECONDARY_FS **Note:**Used for replication remote device.
DEVICEID	Conditional	string	Remote device ID. **Note:**Used for replication remote device.
ASSOCIATEOBJTYPE	Optional	enum	Associated object type. **The value is described as follows:** 224: remote device **Note:**Used for heterogeneous remote device.
ASSOCIATEOBJID	Conditional	string	Associated object ID. **The value is described as follows:** The value of ASSOCIATEOBJID should be greater than or equal to 512. **Note:**This field must be delivered when field ASSOCIATEOBJTYPE delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried remote LUN.

Example

- Querying the number of remote LUN.

```
Request: GET /deviceManager/rest/1016964156/remote_lun/count?
RSSTYPE=13&DEVICEID=0&ARRAYTYPE=1&filter=HEALTHSTATUS::1 and CAPACITYBYTE::
1073741824

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.7.6 Interface for Batch Querying Remote LUN Information

Function

This interface is used to batch query remote LUN.

Applicable Model

Applicable to V3 all series.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/remote_lun

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Conditional	string	Query criteria. **The value is described as follows:** Parameters HEALTHSTATUS and CAPACITYBYTE are supported. **Note:**filter and range,one of the two fields must be delivered.
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.filter and range,one of the two fields must be delivered.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
RSSTYPE	Optional	enum	Type of remote lun. **The value is described as follows:** 5: LUNCOPY_SOURCELUN_REMOTELUN 13: REP_SECONDARYLUN 24: REPRM_SECONDARY_FS 26: REPHC_SECONDARY_LUN 28: REPHC_SECONDARY_FS 30: REPHV_SECONDARY_FS
DEVICEID	Mandatory	string	Remote device ID.
ARRAYTYPE	Mandatory	enum	Remote device type. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 250: Remote LUN

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	Object ID. **The value is described as follows:** Format: "ArrayID;LUNID;WWN;WWPN;HOSTLUN_ID".
NAME	Mandatory	string	Name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
LUNID	Mandatory	string	Remote LUN ID.
DEVICEID	Mandatory	string	Remote device ID.
DEVICESN	Mandatory	string	Device serial number.
LUNWWN	Mandatory	string	Unique identifier of the remote LUN.
ARRAYTYPE	Mandatory	string(enum)	Identifies the type of the remote device, a heterogeneity device or a replication device. **The value is described as follows:** 1: replication device 2: heterogeneity device 3: unknown device
CAPACITY	Mandatory	string(uint32)	Capacity. **Unit:**KB
CAPACITYBYTE	Mandatory	string(uint64)	Capacity. **Unit:**bytes

Example

- Batch querying remote LUN.

```
Request: GET /deviceManager/rest/210235843910E6000009/remote_lun?
RSSTYPE=13&DEVICEID=0&ARRAYTYPE=1&filter=HEALTHSTATUS::1 and CAPACITYBYTE::
1073741824&range=[0-100]

Response:
{
    "data": [
```

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```
        {
            "ARRAYTYPE": "1",
            "CAPACITY": "1048576",
            "CAPACITYBYTE": "1073741824",
            "DEVICEID": "0",
            "DEVICESN": "210235982510G2000016",
            "HEALTHSTATUS": "1",
            "ID": "0;2;INVALID;INVALID;INVALID",
            "LUNID": "2",
            "LUNWWN": "694dbda1003ddda504f1605a00000002",
            "NAME": "LUN0010002",
            "TYPE": 250
        },
        {
            "ARRAYTYPE": "1",
            "CAPACITY": "1048576",
            "CAPACITYBYTE": "1073741824",
            "DEVICEID": "0",
            "DEVICESN": "210235982510G2000016",
            "HEALTHSTATUS": "1",
            "ID": "0;3;INVALID;INVALID;INVALID",
            "LUNID": "3",
            "LUNWWN": "694dbda1003ddda504f160be00000003",
            "NAME": "LUN0010003",
            "TYPE": 250
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.8 fs_snapshot

4.12.8.1 Interface for Querying FileSystem Snapshot Information

Function

This interface is used to query basic information about the snapshots of a file system.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system snapshot ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Managed object type number of the file system snapshot. **The value is described as follows:** 48: file system snapshot
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
CONSUMEDCAPACITY	Mandatory	stirng(uint64)	Space exclusively occupied by the snapshot. **Unit:**bytes
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal 2:fault
PARENTTYPE	Mandatory	enum	Object type number of the source file system. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	Source file system ID.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTNAME	Mandatory	string	Source file system name.
TIMESTAMP	Mandatory	stirng(uint64)	Snapshot point in time. **Unit:**seconds
USERCAPACITY	Mandatory	stirng(uint64)	Snapshot capacity. **Unit:**bytes

Example

- Querying basic information about the snapshots of a file system.

```
Request: GET /deviceManager/rest/210235843910E6000009/fssnapshot/5@dddd111111

Response:
{
    "data": {
        "CONSUMEDCAPACITY": "0",
        "HEALTHSTATUS": "1",
        "ID": "5@dddd111111",
        "NAME": "dddd111111",
        "PARENTID": "5",
        "PARENTNAME": "FileSystem006",
        "PARENTTYPE": 40,
        "TIMESTAMP": "1461189319",
        "TYPE": 48,
        "USERCAPACITY": "1248"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.8.2 Interface for Creating FileSystem Snapshot Information

Function

This interface is used to create a file system snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains only letters, digits, and underscores (_). **Length:**1~127
PARENTID	Mandatory	string	Owning parent object ID.
PARENTTYPE	Mandatory	enum	Owning parent object type. **The value is described as follows:** 40: file system
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Managed object type number of the file system snapshot. **The value is described as follows:** 48: file system snapshot
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
CONSUMEDCAPACITY	Mandatory	stirng(uint64)	Space exclusively occupied by the snapshot. **Unit:**bytes

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal 2:fault
PARENTTYPE	Mandatory	enum	Object type number of the source file system. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	Source file system ID.
PARENTNAME	Mandatory	string	Source file system name.
TIMESTAMP	Mandatory	stirng(uint64)	Snapshot point in time (UTC). **Unit:**seconds
USERCAPACITY	Mandatory	stirng(uint64)	Snapshot capacity. **Unit:**bytes

Example

- Creating a file system snapshot.

```
Request: POST /deviceManager/rest/210235843910E6000009/FSSNAPSHOT
{
    "NAME": "test",
    "PARENTID": "5",
    "PARENTTYPE": 40
 }

Response:
{
    "data": {
        "CONSUMEDCAPACITY": "0",
        "HEALTHSTATUS": "1",
        "ID": "5@test",
        "NAME": "test",
        "PARENTID": "5",
        "PARENTNAME": "FileSystem006",
        "PARENTTYPE": 40,
        "TIMESTAMP": "1461187853",
        "TYPE": 48,
        "USERCAPACITY": "1248"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.8.3 Interface for Rolling Back a Filesystem Snapshot

Function

This interface is used to restore the source file system data to the target snapshot data.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to run a command to roll back a read-only file system snapshot. Data in the corresponding file system will be rolled back to the state preserved by the specified snapshot, all the read-only snapshots generated after the specified read-only snapshot will be deleted, and all data generated after the specified snapshot will be lost. If you access file system data during snapshot rollback, you may access data lost after file system snapshot rollback. This may cause logical errors or even interrupt services.

Suggestion:

1. Before performing this operation, to avoid accessing data lost after snapshot rollback, stop services of the file system.

2. Ensure that the file system snapshot you have selected is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot/rollback_fssnapshot

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system snapshot ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

N/A

Example

- Restoring the source file system data to the target snapshot data.

```
Request: PUT /deviceManager/rest/210235843910E6000009/FSSNAPSHOT/
ROLLBACK_FSSNAPSHOT
{
    "ID": "5@test123"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.8.4 Interface for Deleting FileSystem Snapshot Information

Function

This interface is used to delete a file system snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system snapshot ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a file system snapshot.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/FSSNAPSHOT/
5@dddd111111

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.8.5 Interface for Batch Querying FileSystem Snapshot Information

Function

This interface is used to batch query basic information about file system snapshots.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTID	Mandatory	string	Owning parent object ID.
sortby	Conditional	string	Sorting TIMESTAMP is supported. **The value is described as follows:** TIMESTAMP,d represents decs,TIMESTAMP,a represents asc. **Note:**Sortby and range,one of the two fields must be delivered.
filter	Optional	string	Search criteria. **The value is described as follows:** Parameters NAME and ID are supported.
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:** Sortby and range,one of the two fields must be delivered. A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0:UTC 1:Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Managed object type number of the file system snapshot. **The value is described as follows:** 48: file system snapshot
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
CONSUMEDCAPACITY	Mandatory	stirng(uint64)	Space exclusively occupied by the snapshot. **Unit:**bytes
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1:normal 2:fault
PARENTTYPE	Mandatory	enum	Object type number of the source file system. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	Source file system ID.
PARENTNAME	Mandatory	string	Source file system name.
TIMESTAMP	Mandatory	stirng(uint64)	Snapshot point in time. **Unit:**seconds
USERCAPACITY	Mandatory	stirng(uint64)	Snapshot capacity. **Unit:**bytes

Example

- Batch querying basic information about file system snapshots.

```
Request: GET /deviceManager/rest/210235843910E6000009/FSSNAPSHOT?
PARENTID=5&sortby=TIMESTAMP,d&range=[0-100]

Response:
{
    "data": [
```

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```
        {
            "CONSUMEDCAPACITY": "0",
            "HEALTHSTATUS": "1",
            "ID": "5@dddd111111",
            "NAME": "dddd111111",
            "PARENTID": "5",
            "PARENTNAME": "FileSystem006",
            "PARENTTYPE": 40,
            "TIMESTAMP": "1461189319",
            "TYPE": 48,
            "USERCAPACITY": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.8.6 Interface for Querying the Number of FileSystem Snapshot Information

Function

This interface is used to query the number of file system snapshots.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTID	Mandatory	string	Parent object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Object statistics quantity.
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 48: file system snapshot

Example

- Querying the number of file system snapshots.

```
Request: GET /deviceManager/rest/210235843910E6000009/FSSNAPSHOT/count?
PARENTID=5

Response:
{
    "data": {
        "COUNT": "4",
        "TYPE": "48"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.8.7 Interface for Modifying FileSystem Snapshot Information

Function

This interface is used to modify a file system snapshot.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/fssnapshot/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Name. **The value is described as follows:** Contains letters, digits, and underscores (_). **Length:**1~127
ID	Mandatory	string	File system snapshot ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying a file system snapshot.

```
Request: PUT /deviceManager/rest/210235843910E6000009/FSSNAPSHOT/5@ddddd
{
    "NAME": "test123"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9 mirror_lun

4.12.9.1 Interface for Batch Querying HyperMirror Copy Information

Function

This interface is used to batch query basic information about HyperMirror copies.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorluncopy

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
MIRRORLUNID	Mandatory	string	HyperMirror ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 51: Mirror copy
ID	Mandatory	string	Mirror copy ID.
NAME	Mandatory	string	Mirror copy name.
PARENTID	Mandatory	string	ID of the storage pool.
PARENTNAME	Mandatory	string	Name of the storage pool.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 53: initializing 26: split 23: synchronizing 37: queuing 34: interrupted 35: invalid
MIRRORLUNID	Mandatory	string	Mirror LUN ID.
MIRRORLUNNAME	Mandatory	string	Mirror LUN name.
SYNSPEED	Mandatory	string(enum)	Synchronization speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
SYNPROGRESS	Mandatory	string(uint32)	Synchronization progress. **The value is described as follows:** The value is from -1 to 100.
DATASTATUS	Mandatory	string(enum)	Data status. **The value is described as follows:** 2:data is consistent 5:data is inconsistent
ISREADPRIORITY	Mandatory	string(uint32)	Whether the read/write has the priority.

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Parameter	Mandatory/ Conditional	Type	Description
SYNSTARTTIME	Mandatory	string(uint64)	Synchronization start time. **Unit:**seconds **Note:** This field is returned if the mirrorCopy has been synchronized. If the mirrorCopy has not been synchronized, -1 is returned.
SYNENDTIME	Mandatory	string(uint64)	Synchronization end time. **Unit:**seconds **Note:** This field is returned if the mirrorCopy has been synchronized. If the mirrorCopy has not been synchronized, -1 is returned.
SPLITTIME	Mandatory	string(uint64)	Split time. **Unit:**seconds **Note:** This field is returned if the mirrorCopy has been synchronized. If the mirrorCopy has not been synchronized, -1 is returned.

Example

- Batch querying basic information about HyperMirror copies.

```
Request: GET /deviceManager/rest/210235843910E6000009/mirrorluncopy?
MIRRORLUNID=48

Response:
{
    "data": [
        {
            "DATASTATUS": "2",
            "HEALTHSTATUS": "1",
            "ID": "94",
            "ISREADPRIORITY": "0",
            "MIRRORLUNID": "48",
            "MIRRORLUNNAME": "yjm10000",
            "NAME": "LUN_48_Copy_2",
            "PARENTID": "2",
```

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```
            "PARENTNAME": "ganxiaoxia",
            "RUNNINGSTATUS": "1",
            "SPLITTIME": "-1",
            "SYNENDTIME": "-1",
            "SYNPROGRESS": "-1",
            "SYNSPEED": "2",
            "SYNSTARTTIME": "-1",
            "TYPE": 51
        },
        {
            "DATASTATUS": "5",
            "HEALTHSTATUS": "1",
            "ID": "95",
            "ISREADPRIORITY": "0",
            "MIRRORLUNID": "48",
            "MIRRORLUNNAME": "yjm10000",
            "NAME": "LUN_48_Copy_6",
            "PARENTID": "6",
            "PARENTNAME": "StoragePool007",
            "RUNNINGSTATUS": "23",
            "SPLITTIME": "-1",
            "SYNENDTIME": "-1",
            "SYNPROGRESS": "2",
            "SYNSPEED": "2",
            "SYNSTARTTIME": "1480504610",
            "TYPE": 51
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.9.2 Interface for Synchronizing a Mirror Copy

Function

This interface is used to synchronize a mirror copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorluncopy/synchronize

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mirror Copy ID.
MIRRORLUNID	Mandatory	string	HyperMirror ID.

Result

N/A

Example

- Synchronizing a mirror copy.

```
Request:PUT /deviceManager/rest/210235843910E6000009/mirrorluncopy/synchronize
{
    "ID": "50",
    "MIRRORLUNID": "52"
}
Response:
{
 "data": {},
 "error": {
  "code": 0,
  "description": "0"
 }
}
```

4.12.9.3 Interface for Splitting a Mirror Copy

Function

This interface is used to split a mirror copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

HighRisk

You are about to split the mirror copy from the mirror LUN (##00). This operation will cause that the data on the mirror LUN has no redundancy protection.

Before performing this operation, ensure the selected mirror copy is correct to avoid misoperation.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorluncopy/split

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mirror Copy ID.
MIRRORLUNID	Mandatory	string	HyperMirror ID.

Result

N/A

Example

- Splitting a mirror copy.

```
Request: PUT/deviceManager/rest/210235843910E6000009/mirrorluncopy/split
{
    "ID": "50",
    "MIRRORLUNID": "52"
}
Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.4 Interface for Modifying a Mirror Copy

Function

This interface is used to modify a mirror copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorluncopy/${id}

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mirror copy ID.
MIRRORLUNID	Mandatory	string	HyperMirror ID.
SYNSPEED	Conditional	enum	Synchronization speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**One of the parameters SYNSPEED and ISREADPRIORITY must be delivered.
ISREADPRIORITY	Conditional	bool	Whether the read/write has the priority. **The value is described as follows:** false: no true: yes **Note:**One of the parameters SYNSPEED and ISREADPRIORITY must be delivered.

Result

N/A

Example

- Modifying a mirror copy.

```
Request: PUT/deviceManager/rest/2102350DJV10EC000001/mirrorluncopy/554
{
    "ISREADPRIORITY": true,
    "ID": "554",
```

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```
    "MIRRORLUNID": "551"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.5 Interface for Creating a HyperMirror

Function

This interface is used to create a HyperMirror.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorlun

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Source LUN ID.
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **Note:**This parameter must be the MirrorLUN ID of source LUN.

Result

N/A

Example

- Creating a HyperMirror.

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```
Request: POST /deviceManager/rest/2102350BSE10F3000088/mirrorlun
{
    "ASSOCIATEOBJID": "1053",
    "ID": "127"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.6 Interface for Deleting a HyperMirror

Function

This interface is used to delete a HyperMirror.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorlun/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMirror ID.

Result

N/A

Example

- Deleting a HyperMirror.

```
Request: DELETE /deviceManager/rest/2102350BSE10F3000088/mirrorlun/126

Response: {
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.7 Interface for Querying the Number of HyperMirrors

Function

This interface is used to query the number of HyperMirrors.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorlun/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME , ID,PARENTNAME,CAPACITY,PARENTID,HEALTHSTATUS and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried HyperMirrors.

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Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 50: HyperMirror **Note:**This field has been discarded.

Example

- Querying the number of HyperMirrors.

```
Request:GET /deviceManager/rest/1016964156/mirrorlun/count

Response:
{
 "data": {
     "COUNT": "3",
     "TYPE": 50
 },
 "error": {
    "code": 0,
    "description": "0"
 }
}
```

4.12.9.8 Interface for Querying a HyperMirror Information

Function

This interface is used to query basic information about a HyperMirror.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorlun/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMirror ID.

Result

Parameter	Mandatory/Conditional	Type	Description
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**bytes
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
ID	Mandatory	string	HyperMirror ID.
NAME	Mandatory	string	HyperMirror name.
PARENTID	Mandatory	string	ID of the storage pool.
PARENTNAME	Mandatory	string	Name of the storage pool.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 53: initializing 26: split 23: synchronizing 37: queuing 34: interrupted 35: invalid
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 50: HyperMirror

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Example

- Querying basic information about a HyperMirror.

```
Request: GET /deviceManager/rest/1016964156/mirrorlun/8

Response:
{
    "data": {
        "CAPACITY": "1073741824",
        "HEALTHSTATUS": "1",
        "ID":"8",
        "NAME":"LUN009",
        "PARENTID":"2",
        "PARENTNAME":"StoragePool003",
        "RUNNINGSTATUS":"1",
        "TYPE":50
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.9 Interface for Implementing Associated Query of HyperMirror Information

Function

This interface is used to implement associated query of basic information about a HyperMirror.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorLun/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**bytes
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
ID	Mandatory	string	HyperMirror ID.
NAME	Mandatory	string	HyperMirror name.
PARENTID	Mandatory	string	ID of the storage pool.
PARENTNAME	Mandatory	string	Name of the storage pool.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 53: initializing 26: split 23: synchronizing 37: queuing 34: interrupted 35: invalid
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 50: mirrorlun

Example

- Implementing associated query of basic information about a HyperMirror.

```
Request:GET /deviceManager/rest/2102350BSE10F3000088/mirrorlun/associate?
ASSOCIATEOBJID=0

Response:
{
    "data": [
        {
            "CAPACITY": "1048576",
            "HEALTHSTATUS": "5",
```

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```
            "ID": "126",
            "NAME": "LUN0330086",
            "PARENTID": "2",
            "PARENTNAME": "StoragePool003",
            "RUNNINGSTATUS": "1",
            "TYPE": 50
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.10 Interface for Batch Querying HyperMirrors Information

Function

This interface is used to batch query basic information about HyperMirrors.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorlun

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME , ID,PARENTNAME,CAPACITY,PARENTID,HEALTHSTATUS and RUNNINGSTATUS are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**bytes
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded
ID	Mandatory	string	HyperMirror ID.
NAME	Mandatory	string	HyperMirror Name.
PARENTID	Mandatory	string	ID of the storage pool.
PARENTNAME	Mandatory	string	Name of the storage pool.

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 53: initializing 26: split 23: synchronizing 37: queuing 34: interrupted 35: invalid
TYPE	Mandatory	string(enum)	Type number of the managed object. **The value is described as follows:** 50: mirrorlun

Example

- Batch querying basic information about HyperMirrors.

```
Request: GET /deviceManager/rest/1016964156/mirrorlun?range=[0-100]

Response:
{
    "data": [
        {
            "CAPACITY": "1073741824",
            "HEALTHSTATUS": "1",
            "ID": "10",
            "NAME": "LUN011",
            "PARENTID": "3",
            "PARENTNAME": "StoragePool004",
            "RUNNINGSTATUS": "1",
            "TYPE": 50
        }, {
            "CAPACITY": "1073741824",
            "HEALTHSTATUS": "1",
            "ID": "9",
            "NAME": "LUN010",
            "PARENTID": "4",
            "PARENTNAME": "StoragePool005",
            "RUNNINGSTATUS": "1",
            "TYPE": 50
        }, {
            "CAPACITY": "1073741824",
            "HEALTHSTATUS": "1",
            "ID": "8",
            "NAME": "LUN009",
            "PARENTID": "2",
            "PARENTNAME": "StoragePool003",
            "RUNNINGSTATUS": "1",
            "TYPE": 50
        }
    ],
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.11 Interface for Deleting a Mirror LUN Association

Function

This interface is used to delete a mirror LUN association.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorLun/associate

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
ID	Mandatory	string	HyperMirror ID.

Result

N/A

Example

- Deleting a Mirror LUN Association.

```
Request:DELETE /deviceManager/rest/1016964156/mirrorlun/associate?
ID=10&ASSOCIATEOBJID=11

Response:
{
 "data": {},
 "error": {
  "code": 0,
  "description": "0"
```

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```
  }
}
```

4.12.9.12 Interface for Creating a mirror LUN Association

Function

This interface is used to create a mirror LUN association.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorLun/associate

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMirror ID. **Note:**This parameter must be mirror LUN ID.
ASSOCIATEOBJID	Mandatory	string	Associated object ID. **Note:**This parameter must be mirror copy LUN ID, the mirror copy LUN cannot be in the same disk domain with the mirror LUN, but must be on the same controller with the mirror LUN.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISINITSYN	Mandatory	bool	Whether the mirror LUN association is synchronized during initialization. **The value is described as follows:** false: no true: yes

Result

N/A

Example

- Creating a mirror LUN Association.

```
Request:POST /deviceManager/rest/1016964156/mirrorlun/associate
{
    "ASSOCIATEOBJID": "11",
    "ID": "10",
    "ISINITSYN": true
}

Response :
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.9.13 Interface for Querying a HyperMirror Copy Information

Function

This interface is used to query basic information about a HyperMirror copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/mirrorluncopy/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Mirror Copy ID.
MIRRORLUNID	Mandatory	string	HyperMirror ID.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 51: Mirror copy
ID	Mandatory	string	Mirror copy ID.
NAME	Mandatory	string	Mirror copy name.
PARENTID	Mandatory	string	ID of the storage pool.
PARENTNAME	Mandatory	string	Name of the storage pool.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault 5: degraded

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 53: initializing 26: split 23: synchronizing 37: queuing 34: interrupted 35: invalid
SYNPROGRESS	Mandatory	string(uint32)	Synchronization progress. **The value is described as follows:** The value is from -1 to 100.
SYNSPEED	Mandatory	string(enum)	Synchronization speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
MIRRORLUNNAME	Mandatory	string	Mirror LUN name.
MIRRORLUNID	Mandatory	string	Mirror LUN ID.
SPLITTIME	Mandatory	string(uint64)	Split time. **Unit:**seconds **Note:** This field is returned if the mirrorCopy has been synchronized. If the mirrorCopy has not been synchronized, -1 is returned.

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Parameter	Mandatory/ Conditional	Type	Description
SYNENDTIME	Mandatory	string(uint64)	Synchronization end time. **Unit:**seconds **Note:** This field is returned if the mirrorCopy has been synchronized. If the mirrorCopy has not been synchronized, -1 is returned.
SYNSTARTTIME	Mandatory	string(uint64)	Synchronization start time. **Unit:**seconds **Note:** This field is returned if the mirrorCopy has been synchronized. If the mirrorCopy has not been synchronized, -1 is returned.
ISREADPRIORITY	Mandatory	string(uint32)	Whether the read/write has the priority.
DATASTATUS	Mandatory	string(enum)	Data status. **The value is described as follows:** 2:data is consistent 5:data is inconsistent

Example

- Querying basic information about a HyperMirror copy.

```
Request: GET /deviceManager/rest/210235843910E6000009/mirrorluncopy/94?
MIRRORLUNID=48

Response: {
    "data": {
        "DATASTATUS": "2",
        "HEALTHSTATUS": "1",
        "ID": "94",
        "ISREADPRIORITY": "0",
        "MIRRORLUNID": "48",
        "MIRRORLUNNAME": "yjm10000",
        "NAME": "LUN_48_Copy_2",
        "PARENTID": "2",
        "PARENTNAME": "ganxiaoxia",
        "RUNNINGSTATUS": "1",
        "SPLITTIME": "-1",
        "SYNENDTIME": "-1",
```

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```
        "SYNPROGRESS": "-1",
        "SYNSPEED": "2",
        "SYNSTARTTIME": "-1",
        "TYPE": 51
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10 hyper_metro_pair

4.12.10.1 Interface for Batch Querying HyperMetro Pair Information

Function

This interface is used to batch query HyperMetro Pairs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters LOCALOBJNAME,ID,LOCALOBJID,REMOTEOBJID,HEALTHSTATUS,RUNNINGSTATUS,ISPRIMARY,HCRESOURCETYPE are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15361:HyperMetro Pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 100: to be synchronized 23: synchronizing 0: unknown 1: normal 41: pause 94: error 93: forced start 35: invalid
DOMAINID	Mandatory	string	HyperMetro Domain ID.
DOMAINNAME	Mandatory	string	HyperMetro Domain name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
HCRESOURCETYPE	Mandatory	string(enum)	Primary resource type of the HyperMetro Pair. **The value is described as follows:** 1: LUN 2: file system
LOCALOBJID	Mandatory	string	Local object ID.
REMOTEOBJID	Mandatory	string	Remote object ID.
LOCALOBJNAME	Mandatory	string	Local object name.
REMOTEOBJNAME	Mandatory	string	Remote object name.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.

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Parameter	Mandatory/ Conditional	Type	Description
CONFIGSTATUS	Conditional	string(enum)	Config status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be synchronized **Note:**This parameter is returned for HyperMetro NAS.
ISPRIMARY	Mandatory	string(bool)	Whether it is a preferred site. **The value is described as follows:** true: preferred false: non preferred **Note:**A/P indicates the primary end, and A/A indicates the preferential quorum end.
RESOURCEWWN	Conditional	string	Resource WWN (applicable to SAN only). **Note:**This field is returned for HyperMetro SAN.
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
LOCALDATASTATE	Mandatory	string(enum)	Local resource data status. **The value is described as follows:** 1: consistent 2: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
ISISOLATION	Mandatory	string(bool)	Isolation switch. **The value is described as follows:** true: open false: closed
REMOTEDATASTATE	Mandatory	string(enum)	Remote resource data status. **The value is described as follows:** 1: consistent 2: inconsistent
LOCALHOSTACCESS-STATE	Mandatory	string(enum)	Access state of the local resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write
REMOTEHOSTACCESS STATE	Mandatory	string(enum)	Access state of the remote resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write
SYNCPROGRESS	Mandatory	string(uint32)	Synchronization progress. **Note:** This parameter is returned when the HyperMetro running status is synchronizing. If the HyperMetro Pair has not been synchronized, -1 is returned.
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local

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Parameter	Mandatory/ Conditional	Type	Description
SPEED	Mandatory	string(enum)	Synchronization rate of the HyperMetro Pair. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
STARTTIME	Mandatory	string(uint64)	Start time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.
ENDTIME	Mandatory	string(uint64)	End time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.
ISINCG	Mandatory	string(bool)	Indicates whether a HyperMetro Pair is in a consistency group. **The value is described as follows:** true: belongs to the consistency group. false: not belong to the consistency group.

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Parameter	Mandatory/ Conditional	Type	Description
CGID	Mandatory	string	Consistency group ID. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
CGNAME	Mandatory	string	Consistency group name. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
CAPACITYBYTE	Mandatory	string(uint64)	Capacity available to the host of HyperMetro Pair resource (byte). **Unit:**bytes
VSTOREPAIRID	Conditional	string	vStore pair ID **Note:**This field is returned for HyperMetro NAS.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
SYNCLEFTTIME	Mandatory	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:**"-1" indicates a invalid value.

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Parameter	Mandatory/ Conditional	Type	Description
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Example

- Batch querying HyperMetro Pairs.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperMetroPair?
range=[0-100]


Response: {
    "data": [
        {
            "ACTIVEORPASSIVE": "0",
            "CAPACITYBYTE": "10737418240",
            "CGID": "",
            "CGNAME": "",
            "DOMAINID": "e4c2d1eaf02c0100",
            "DOMAINNAME": "shuanyu",
            "ENDTIME": "1",
            "HCRESOURCETYPE": "1",
            "HEALTHSTATUS": "1",
            "ID": "e4c2d1eaf02c0001",
            "ISINCG": "false",
            "ISISOLATION": "false",
            "ISISOLATIONTHRESHOLDTIME": "1000",
            "ISPRIMARY": "true",
            "LINKSTATUS": "1",
            "LOCALDATASTATE": "1",
            "LOCALHOSTACCESSSTATE": "3",
            "LOCALOBJID": "216",
            "LOCALOBJNAME": "lsm94_LUN2170000",
            "RECOVERYPOLICY": "1",
            "REMOTEDATASTATE": "2",
            "REMOTEHOSTACCESSSTATE": "1",
            "REMOTEOBJID": "514",
            "REMOTEOBJNAME": "LSM_LUN5150000",
            "RESOURCEWWN": "6e4c2d1100eaf02c04fa5287000000d8",
            "RUNNINGSTATUS": "41",
            "SPEED": "2",
            "STARTTIME": "-1",
            "SYNCLEFTTIME": "-1",
            "SYNCDIRECTION": "1",
            "SYNCPROGRESS": "1",
            "TYPE": 15361,
            "WRITESECONDARYTIMEOUT": "30"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.10.2 Interface for Querying the Number of HyperMetro Pair Information

Function

This interface is used to query the number of HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters LOCALOBJNAME,ID,LOCALOBJID,REMOTEOBJID,HEALTHSTATUS,RUNNINGSTATUS,ISPRIMARY,HCRESOURCETYPE are supported
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried HyperMetro Pair information.

Example

- Querying the number of HyperMetro Pair.

```
Request: GET /deviceManager/rest/1016964156/HyperMetroPair/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.3 Interface for Switching the Priorities of the HyperMetro Pair

Function

This interface is used to switch the priorities of the HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to perform a preferred/non-preferred site switchover. This operation will modify the arbitration priority of member LUNs in a HyperMetro pair when the communication between two storage arrays is interrupted.

In static priority arbitration mode, if the communication between two storage arrays is interrupted upon a priority switchover, storage array arbitration fails at the two sites.

Suggestion: In static priority arbitration mode, before performing this operation, suspend the HyperMetro pair.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/SWAP_HCPAIR

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.
HCRESOURCETYPE	Mandatory	enum	Primary resource type of the HyperMetro Pair. **The value is described as follows:** 1: LUN

Result

N/A

Example

- Switching the priorities of the HyperMetro Pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroPair/
SWAP_HCPAIR
{
    "ID": "13",
    "HCRESOURCETYPE": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.4 Interface for Suspending a HyperMetro Pair

Function

This interface is used to suspend a HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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HighRisk

You are about to pause a HyperMetro pair.

Once a HyperMetro pair is paused, cross-site real-time data mirroring stops. Member resource in the HyperMetro pair can only be accessed unidirectionally.

Suggestion: Before performing this operation, ensure that the storage arrays at the two data centers are connected to hosts properly to prevent service exceptions.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/disable_hcpair

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.
ISPRIMARY	Optional	boolean	Is Primary. **The value is described as follows:** true: Preferred false: Non-Preferred **Default:**false: Non-Preferred
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Suspending a HyperMetro Pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroPair/
disable_hcpair
{
```

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```
    "ID": "13",
    "ISPRIMARY":false
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.5 Interface for Forcibly Starting a HyperMetro Pair

Function

This interface is used to forcibly start a HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are going to forcibly start host access of a member LUN in a HyperMetro pair on the local storage array.

Before performing this operation, ensure that host access at the remote site is stopped. Otherwise, data loss may occur.

Suggestion: Before performing this operation, disconnect the storage array at the remote site from hosts.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/startup_node

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.

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Result

N/A

Example

- Forcibly Starting a HyperMetro Pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroPair/
startup_node
{
    "ID": "13"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.6 Interface for Synchronizing a HyperMetro Pair

Function

This interface is used to synchronize a HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are going to start data synchronization.

Once data synchronization is started, the system synchronizes data in the default synchronization direction of HyperMetro. After data synhronization, the data cannot be restored.

Suggestion: Before performing this operation, ensure that the parameters are configured correctly to prevent data loss.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/synchronize_hcpair

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Synchronizing a HyperMetro Pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroPair/
synchronize_hcpair
{
    "ID": "13"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.7 Interface for Associate Querying HyperMetro Pair Information

Function

This interface is used to query HyperMetro Pairs associated with LUNs.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/associate

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type(LUN). **The value is described as follows:** 11:LUN 40:filesystem
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time
ASSOCIATEOBJID	Mandatory	string	Associated object ID(LUN ID).
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15361: HyperMetro Pair
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 100: to be recoverd 23: synchronizing 0: unknown 1: normal 41: pause 94: error 93: forced_start 35: invalid
DOMAINID	Mandatory	string	HyperMetro Domain ID.
DOMAINNAME	Mandatory	string	HyperMetro Domain name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
HCRESOURCETYPE	Mandatory	string(enum)	Primary resource type of the HyperMetro Pair. **The value is described as follows:** 1: LUN 2: file system
LOCALOBJID	Mandatory	string	Local object ID.
REMOTEOBJID	Mandatory	string	Remote object ID.
LOCALOBJNAME	Mandatory	string	Local object name.
REMOTEOBJNAME	Mandatory	string	Remote object name.

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Parameter	Mandatory/ Conditional	Type	Description
ISPRIMARY	Mandatory	string(bool)	Whether it is a preferred site. **The value is described as follows:** true: preferred false: non preferred **Note:**A/P indicates the primary end, and A/A indicates the preferential quorum end.
RESOURCEWWN	Conditional	string	Resource WWN (applicable to SAN only). **Note:**This field is returned for HyperMetro SAN.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
LOCALDATASTATE	Mandatory	string(enum)	Local resource data status. **The value is described as follows:** 1: consistent 2: inconsistent
REMOTEDATASTATE	Mandatory	string(enum)	Remote resource data status. **The value is described as follows:** 1: consistent 2: inconsistent
LOCALHOSTACCESS-STATE	Mandatory	string(enum)	Access state of the local resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEHOSTACCESSSTATE	Mandatory	string(enum)	Access state of the remote resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write
SYNCPROGRESS	Mandatory	string(uint32)	Synchronization progress.
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local
SPEED	Mandatory	string(enum)	Synchronization rate of the HyperMetro Pair. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
STARTTIME	Mandatory	string(uint64)	Start time of the last synchronization. **Note:** This parameter is returned when the HyperMetro running status is synchronizing. If the HyperMetro Pair has not been synchronized, -1 is returned.

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Parameter	Mandatory/ Conditional	Type	Description
ENDTIME	Mandatory	string(uint64)	End time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.
ISINCG	Mandatory	string(bool)	Indicates whether a HyperMetro Pair is in a consistency group. **The value is described as follows:** true: belongs to the consistency group false: not belong to the consistency group
CGID	Mandatory	string	Consistency group ID. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
CGNAME	Mandatory	string	Consistency group name. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
CAPACITYBYTE	Mandatory	string(uint64)	Capacity available to the host of HyperMetro Pair resource (byte). **Unit:**bytes

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Parameter	Mandatory/ Conditional	Type	Description
CONFIGSTATUS	Conditional	string(enum)	Config status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be synchronized **Note:**This parameter is returned for HyperMetro NAS.
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
ISISOLATION	Mandatory	string(bool)	Isolation switch. **The value is described as follows:** true: open false: closed
VSTOREPAIRID	Conditional	string	vStore Pair ID. **Note:**This field is returned for HyperMetro NAS.
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
SYNCLEFTTIME	Mandatory	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:**"-1" indicates a invalid value.
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

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Example

- Querying HyperMetro Pairs associated with LUNs.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperMetroPair/
associate?ASSOCIATEOBJTYPE=11&ASSOCIATEOBJID=216

Response: {
    "data": [
        {
            "ACTIVEORPASSIVE": "0",
            "CAPACITYBYTE": "10737418240",
            "CGID": "",
            "CGNAME": "",
            "DOMAINID": "e4c2d1eaf02c0100",
            "DOMAINNAME": "shuanyu",
            "ENDTIME": "1",
            "HCRESOURCETYPE": "1",
            "HEALTHSTATUS": "1",
            "ID": "e4c2d1eaf02c0001",
            "ISINCG": "false",
            "ISISOLATION": "false",
            "ISISOLATIONTHRESHOLDTIME": "1000",
            "ISPRIMARY": "true",
            "LINKSTATUS": "1",
            "LOCALDATASTATE": "1",
            "LOCALHOSTACCESSSTATE": "3",
            "LOCALOBJID": "216",
            "LOCALOBJNAME": "lsm94_LUN2170000",
            "RECOVERYPOLICY": "1",
            "REMOTEDATASTATE": "2",
            "REMOTEHOSTACCESSSTATE": "1",
            "REMOTEOBJID": "514",
            "REMOTEOBJNAME": "LSM_LUN5150000",
            "RESOURCEWWN": "6e4c2d1100eaf02c04fa5287000000d8",
            "RUNNINGSTATUS": "41",
            "SPEED": "2",
            "STARTTIME": "-1",
            "SYNCLEFTTIME": "-1",
            "SYNCDIRECTION": "1",
            "SYNCPROGRESS": "1",
            "TYPE": 15361,
            "WRITESECONDARYTIMEOUT": "30"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.8 Interface for Modifying a HyperMetro Pair

Function

This interface is used to modify a HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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HighRisk

You are about to change the synchronization speed to the "Highest".

After the operation, the Hyper Metro pair will be synchronized at the highest speed, which may cause host latency increase and disconnection of HyperMetro pairs.

Suggestion: Select a low synchronization speed or use the "Highest" synchronization speed during off-peak hours.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
SPEED	Optional	enum	Synchronization rate of the HyperMetro Pair. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISISOLATION	Optional	bool	Isolation switch. **The value is described as follows:** true: open false: closed
ISISOLATIONTHRE-SHOLDTIME	Optional	uint32	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
WRITESECONDARYTIMEOUT	Optional	uint32	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Result

N/A

Example

- Modifying a HyperMetro Pair.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroPair/1
{
    "ISISOLATION":true,
    "ISISOLATIONTHRESHOLDTIME":44,
    "RECOVERYPOLICY": "2",
    "SPEED":"2"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.9 Interface for Deleting a HyperMetro Pair

Function

This interface is used to delete a HyperMetro Pair.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.
ISLOCALDELETE	Optional	bool	Whether a HyperMetro task can be locally deleted. **The value is described as follows:** true: yes false: no **Default:**false: no **Note:**Only delete the configuration information about the local device if the HyperMetro Pair fails or the remote device is disconnected.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISREFRESHWWN	Optional	bool	Whether the device LUN WWNs can be refreshed. **The value is described as follows:** true: yes false: no **Default:**true: yes **Note:**After you delete a HyperMetro Pair, to ensure unique LUN WWNs and prevent WWN conflicts, you are advised select LUN WWN refresh when local deletion is not supported on service clients.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a HyperMetro Pair.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/HyperMetroPair/1?
ISLOCALDELETE=false&ISREFRESHWWN=true

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.10 Interface for Creating HyperMetro Pair Information

Function

This interface is used to create a HyperMetro Pair.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to create a HyperMetro pair. This operation will cause the data on the local resource to overwrite that on the remote resource. If you perform synchronization at the "Highest" speed, check the performance of remote devices and whether the link bandwidth between local and remote arrays is sufficient. Selecting the "Highest" replication speed may cause overloaded services and interruption of HyperMetro pairs during synchronization. Suggestion: Before performing this operation, ensure that parameters are configured correctly to prevent inadvertent data deletion.
You are about to create a HyperMetro pair. This operation will cause the data on the local resource to overwrite that on the remote resource. If you do not perform initial synchronization, ensure that the local and remote resources have the same data. Otherwise, data inconsistency occurs, resulting in service access exceptions. If you perform synchronization at the "Highest" speed, check the performance of remote devices and whether the link bandwidth between local and remote arrays is sufficient. If you select the "Highest" synchronization speed, the host latency may increase, and HyperMetro pairs will be disconnected during synchronization. You are advised to select the "Highest" synchronization speed only during off-peak hours. Suggestion: Before performing this operation, ensure that the parameters are correct to prevent data overwriting.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DOMAINID	Conditional	string	HyperMetro Domain ID. **Note:**SAN HyperMetro must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
HCRESOURCETYPE	Mandatory	enum	Primary resource type of the HyperMetro Pair. **The value is described as follows:** 1: LUN 2: filesystem
LOCALOBJID	Mandatory	string	Local object ID.
REMOTEOBJID	Mandatory	string	Remote object ID.
ISFIRSTSYNC	Optional	bool	Indicates whether initial synchronization is performed. **The value is described as follows:** false: no initial synchronization true: initial synchronization **Default:**false: no initial synchronization
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual **Default:**1: automatic
SPEED	Optional	enum	Synchronization rate of the HyperMetro Pair. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Default:**2: medium
VSTOREPAIRID	Conditional	string	vStore Pair ID. **Note:**NAS HyperMetro must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
WRITESECONDARYTIMEOUT	Optional	uint32	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Default:**30 **Unit:**seconds

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15361: HyperMetro Pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 100: to_be_synchronized 23: synchronizing 0: unknown 1: normal 41: pause 94: error 93: forced_start 35: invalid **Note:**If initial synchronization is not performed when a HyperMetro pair is created, the running status is "pause" after the creation is complete, it changes to "normal" in a asynchronous task, so there is a transition of running status from "pause" to "normal".
DOMAINID	Mandatory	string	HyperMetro Domain ID.
DOMAINNAME	Mandatory	string	HyperMetro Domain name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
HCRESOURCETYPE	Mandatory	string(enum)	Primary resource type of the HyperMetro Pair. **The value is described as follows:** 1: lun 2: file system
LOCALOBJID	Mandatory	string	Local object ID.
REMOTEOBJID	Mandatory	string	Remote object ID.
LOCALOBJNAME	Mandatory	string	Local object name.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEOBJNAME	Mandatory	string	Remote object name.
ISPRIMARY	Mandatory	string(bool)	Whether it is a preferred site. **The value is described as follows:** true: preferred false: non preferred **Note:**A/P indicates the primary end, and A/A indicates the preferential quorum end.
RESOURCEWWN	Conditional	string	Resource WWN (applicable to SAN only). **Note:**This parameter is returned for HyperMetro SAN.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
LOCALDATASTATE	Mandatory	string(enum)	Local resource data status. **The value is described as follows:** 1: consistent 2: inconsistent
REMOTEDATASTATE	Mandatory	string(enum)	Remote resource data status. **The value is described as follows:** 1: consistent 2: inconsistent
LOCALHOSTACCESS-STATE	Mandatory	string(enum)	Access state of the local resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write

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Parameter	Mandatory/ Conditional	Type	Description
REMOTEHOSTACCESSSTATE	Mandatory	string(enum)	Access state of the remote resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write
SYNCPROGRESS	Mandatory	string(uint32)	Synchronization progress. **Note:** This parameter is returned when the HyperMetro Pair running status is synchronizing. If the HyperMetro Pair has not been synchronized, -1 is returned.
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local
SPEED	Mandatory	string(enum)	Synchronization rate of the HyperMetro Pair. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
STARTTIME	Mandatory	string(uint64)	Start time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.

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Parameter	Mandatory/ Conditional	Type	Description
ENDTIME	Mandatory	string(uint64)	End time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.
ISINCG	Mandatory	string(bool)	Indicates whether a HyperMetro Pair is in a consistency group.
CGID	Mandatory	string	Consistency group ID. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
CGNAME	Mandatory	string	Consistency group name. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
CAPACITYBYTE	Mandatory	string(uint64)	Capacity available to the host of HyperMetro Pair resource. **Unit:**bytes
VSTOREPAIRID	Conditional	string	vStore Pair ID. **Note:**This field is returned for HyperMetro NAS.

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Parameter	Mandatory/ Conditional	Type	Description
CONFIGSTATUS	Conditional	string(enum)	Config status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be synchronized **Note:**This parameter is returned for HyperMetro NAS.
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
ISISOLATION	Mandatory	string(bool)	Isolation switch. **The value is described as follows:** true: open false: closed
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
SYNCLEFTTIME	Mandatory	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:**"-1" indicates a invalid value.

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Parameter	Mandatory/ Conditional	Type	Description
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Example

- Creating a HyperMetro Pair.

```
Request: POST /deviceManager/rest/210235843910E6000009/HyperMetroPair
{
        "DOMAINID": "e4c2d1eaf02c0100",
        "HCRESOURCETYPE": 1,
        "ISFIRSTSYNC": true,
        "RECOVERYPOLICY": "1",
        "SPEED": "2",
        "LOCALOBJID": "216",
        "REMOTEOBJID": "514"
}

Response:
 {
   "data": {
        "ACTIVEORPASSIVE": "0",
        "CAPACITYBYTE": "10737418240",
        "CGID": "",
        "CGNAME": "",
        "DOMAINID": "e4c2d1eaf02c0100",
        "DOMAINNAME": "shuanyu",
        "ENDTIME": "1",
        "HCRESOURCETYPE": "1",
        "HEALTHSTATUS": "1",
        "ID": "e4c2d1eaf02c0001",
        "ISINCG": "false",
        "ISISOLATION": "false",
        "ISISOLATIONTHRESHOLDTIME": "1000",
        "ISPRIMARY": "true",
        "LINKSTATUS": "1",
        "LOCALDATASTATE": "1",
        "LOCALHOSTACCESSSTATE": "3",
        "LOCALOBJID": "216",
        "LOCALOBJNAME": "lsm94_LUN2170000",
        "RECOVERYPOLICY": "1",
        "REMOTEDATASTATE": "2",
        "REMOTEHOSTACCESSSTATE": "1",
        "REMOTEOBJID": "514",
        "REMOTEOBJNAME": "LSM_LUN5150000",
        "RESOURCEWWN": "6e4c2d1100eaf02c04fa5287000000d8",
        "RUNNINGSTATUS": "41",
        "SPEED": "2",
        "STARTTIME": "-1",
        "SYNCLEFTTIME": "-1",
        "SYNCDIRECTION": "1",
        "SYNCPROGRESS": "1",
        "TYPE": 15361,
        "WRITESECONDARYTIMEOUT": "30"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.10.11 Interface for Querying a HyperMetro Pair Information

Function

This interface is used to query a HyperMetro Pair.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroPair/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Pair ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15361: HyperMetro Pair
ID	Mandatory	string	ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 100: to be synchronized 23: synchronizing 0: unknown 1: normal 41: pause 94: error 93: forced start 35: invalid
DOMAINID	Mandatory	string	HyperMetro Domain ID.
DOMAINNAME	Mandatory	string	HyperMetro Domain name.
LINKSTATUS	Mandatory	string(enum)	Link status. **The value is described as follows:** 1: connected 2: disconnected
HCRESOURCETYPE	Mandatory	string(enum)	Primary resource type of the HyperMetro Pair. **The value is described as follows:** 1: LUN 2: file system

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Parameter	Mandatory/ Conditional	Type	Description
LOCALOBJID	Mandatory	string	Local object ID.
REMOTEOBJID	Mandatory	string	Remote object ID.
LOCALOBJNAME	Mandatory	string	Local object name.
REMOTEOBJNAME	Mandatory	string	Remote object name.
ISPRIMARY	Mandatory	string(bool)	Whether it is a preferred site. **The value is described as follows:** true: preferred false: noe preferred **Note:**A/P indicates the primary end, and A/A indicates the preferential quorum end.
RESOURCEWWN	Conditional	string	Resource WWN (applicable to SAN only). **Note:**This parameter is returned for HyperMetro SAN.
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
LOCALDATASTATE	Mandatory	string(enum)	Local resource data status. **The value is described as follows:** 1: consistent 2: inconsistent
REMOTEDATASTATE	Mandatory	string(enum)	Remote resource data status. **The value is described as follows:** 1: consistent 2: inconsistent

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Parameter	Mandatory/ Conditional	Type	Description
LOCALHOSTACCESS-STATE	Mandatory	string(enum)	Access state of the local resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write
REMOTEHOSTACCESS STATE	Mandatory	string(enum)	Access state of the remote resource host. **The value is described as follows:** 1: access forbidden 2: read-only 3: read/write
SYNCPROGRESS	Mandatory	string(uint32)	Synchronization progress. **Note:** This parameter is returned when the HyperMetro running status is synchronizing. If the HyperMetro Pair has not been synchronized, -1 is returned.
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local
SPEED	Mandatory	string(enum)	Synchronization rate of the HyperMetro Pair. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/ Conditional	Type	Description
STARTTIME	Mandatory	string(uint64)	Start time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.
ENDTIME	Mandatory	string(uint64)	End time of the last synchronization. **Note:** This field is returned if the HyperMetro Pair has been synchronized. If the HyperMetro Pair has not been synchronized, -1 is returned.
ISINCG	Mandatory	string(bool)	Indicates whether a HyperMetro Pair is in a consistency group. **The value is described as follows:** true: belongs to the consistency group. false: not belong to the consistency group.
CGID	Mandatory	string	Consistency group ID. **Note:** This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.

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Parameter	Mandatory/ Conditional	Type	Description
CGNAME	Mandatory	string	Consistency group name. **Note:** .This field is returned if the HyperMetro Pair is in a consistency group. If the HyperMetro Pair is not in a consistency group, "" is returned.
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
CAPACITYBYTE	Mandatory	string(uint64)	Capacity available to the host of HyperMetro Pair resource. **Unit:**bytes
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
CONFIGSTATUS	Conditional	string(enum)	Config status. **The value is described as follows:** 0: normal 1: synchronizing 2: to be synchronized **Note:**This parameter is returned for HyperMetro NAS.
VSTOREPAIRID	Conditional	string	vStore Pair id. **Note:**This parameter is returned for HyperMetro NAS.
ISISOLATION	Mandatory	string(bool)	Isolation switch. **The value is described as follows:** true: open false: closed

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Parameter	Mandatory/ Conditional	Type	Description
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
SYNCLEFTTIME	Mandatory	string(uint32)	Time Remaining for Synchronization. **Unit:**seconds **Note:**"-1" indicates a invalid value.
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Example

- Querying a HyperMetro Pair.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperMetroPair/
e4c2d1eaf02c0001

Response:
{
    "data": {
        "ACTIVEORPASSIVE": "0",
        "CAPACITYBYTE": "10737418240",
        "CGID": "",
        "CGNAME": "",
        "DOMAINID": "e4c2d1eaf02c0100",
        "DOMAINNAME": "shuanyu",
        "ENDTIME": "1",
        "HCRESOURCETYPE": "1",
        "HEALTHSTATUS": "1",
        "ID": "e4c2d1eaf02c0001",
        "ISINCG": "false",
        "ISISOLATION": "false",
        "ISISOLATIONTHRESHOLDTIME": "1000",
        "ISPRIMARY": "true",
        "LINKSTATUS": "1",
        "LOCALDATASTATE": "1",
        "LOCALHOSTACCESSSTATE": "3",
        "LOCALOBJID": "216",
        "LOCALOBJNAME": "lsm94_LUN2170000",
```

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```
        "RECOVERYPOLICY": "1",
        "REMOTEDATASTATE": "2",
        "REMOTEHOSTACCESSSTATE": "1",
        "REMOTEOBJID": "514",
        "REMOTEOBJNAME": "LSM_LUN5150000",
        "RESOURCEWWN": "6e4c2d1100eaf02c04fa5287000000d8",
        "RUNNINGSTATUS": "41",
        "SPEED": "2",
        "STARTTIME": "-1",
        "SYNCLEFTTIME": "-1",
        "SYNCDIRECTION": "1",
        "SYNCPROGRESS": "1",
        "TYPE": 15361,
        "WRITESECONDARYTIMEOUT": "30"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.11 quorum_server

4.12.11.1 Interface for Querying the Number of Quorum Servers

Function

This interface is used to query the number of Quorum Servers.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServer/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried Quorum Servers.

Example

- Querying the number of Quorum Servers.

```
Request: GET /deviceManager/rest/1016964156/QuorumServer/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.2 Interface for Batch Querying Quorum Server Information

Function

This interface is used to batch query basic information about Quorum Servers.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServer

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by NAME is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15363: Quorum Server
ID	Mandatory	string	ID.
USERNAME	Mandatory	string	User name.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 27: online 28: offline
DESCRIPTION	Mandatory	string	Description.
SERVERIPA	Mandatory	string	Primary IP address of the Quorum Server.

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Parameter	Mandatory/ Conditional	Type	Description
SERVERPORTA	Mandatory	string	Port for the primary IP address of the Quorum Server.
SERVERIPB	Mandatory	string	Secondary IP address of the Quorum Server.
SERVERPORTB	Mandatory	string	Port for the secondary IP address of the Quorum Server.
DEVICESN	Mandatory	string	Device serial number, which is returned when the device is on a Huawei device.

Example

- Batch querying basic information about Quorum Servers.

```
Request: GET /deviceManager/rest/210235843910E6000009/QuorumServer?
range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "DEVICESN": "ffffffffffffffff",
            "ID": "0",
            "NAME": "112test",
            "RUNNINGSTATUS": "28",
            "SERVERIPA": "3.3.3.6",
            "SERVERIPB": "",
            "SERVERPORTA": "30002",
            "SERVERPORTB": "",
            "TYPE": 15363,
            "USERNAME": ""
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.3 Interface for Creating a Quorum Server Link

Function

This interface is used to add a Quorum Server link.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServerLink

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Optional	enum	Type number of Quorum Server. **The value is described as follows:** 15363: Quorum Server **Note:**This field is not used temporarily.
PARENTID	Mandatory	string	Quorum Server ID.
LOCALCONTROLLER-ID	Optional	string	Identifier of the local controller.
LOCALPORTID	Mandatory	string	Physical port ID of the local controller.
QUORUMSERVERIP	Mandatory	string	IP address of the Quorum Server to be connected.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15365: Quorum Server link

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Example

- Adding a Quorum Server link.

```
Request: POST /deviceManager/rest/210235843910E6000009/QuorumServerLink
{
    "PARENTID": "0",
    "LOCALCONTROLLERID": "0A",
    "LOCALPORTID": "1200024099",
    "QUORUMSERVERIP": "3.3.3.3"
}

Response:
{
    "data": {
        "TYPE": 15365
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.4 Interface for Batch Querying Quorum Server Link Information

Function

This interface is used to batch query basic information about Quorum Server links.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServerLink

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID, PARENTID are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15365: Quorum Server Link
ID	Mandatory	string	ID.
PARENTTYPE	Mandatory	enum	Type of the parent object:Quorum Server type. **The value is described as follows:** 15363: Quorum Server
PARENTID	Mandatory	string	ID of the parent object:Quorum Server ID.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: link_up 11: link_down
LOCALCONTROLLER-ID	Mandatory	string	Identifier of the local controller.

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Parameter	Mandatory/ Conditional	Type	Description
LOCALPORTID	Mandatory	string	Physical port ID of the local controller.
LOCALCONTROLLER-NAME	Mandatory	string	Name of the local controller.
LOCALPORTNAME	Mandatory	string	Physical port name of the local controller.
QUORUMSERVERIP	Mandatory	string	IP address of the Quorum Server to be connected.

Example

- Batch querying basic information about Quorum Server links.

```
Request: GET /deviceManager/rest/210235843910E6000009/QuorumServerLink

Response: {
    "data": [
        {
            "ID": "0",
            "LOCALCONTROLLERID": "0B",
            "LOCALCONTROLLERNAME": "CTE0.B",
            "LOCALPORTID": "500000001",
            "LOCALPORTNAME": "CTE0.B1.P1",
            "PARENTID": "0",
            "PARENTTYPE": 15363,
            "QUORUMSERVERIP": "3.3.3.3",
            "RUNNINGSTATUS": "10",
            "TYPE": 15365
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.5 Interface for Querying a Quorum Server Link Information

Function

This interface is used to query Quorum Server link information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServerLink/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quorum Server Link ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15365: Quorum Server link
ID	Mandatory	string	ID.
PARENTTYPE	Mandatory	enum	Type of the parent object:Quorum Server type. **The value is described as follows:** 15363: Quorum Server
PARENTID	Mandatory	string	ID of the parent object:Quorum Server ID.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 10: link_up 11: link_down
LOCALCONTROLLER-ID	Mandatory	string	Identifier of the local controller.
LOCALPORTID	Mandatory	string	Physical port ID of the local controller.

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Parameter	Mandatory/ Conditional	Type	Description
LOCALCONTROLLER-NAME	Mandatory	string	Name of the local controller.
LOCALPORTNAME	Mandatory	string	Physical port name of the local controller.
QUORUMSERVERIP	Mandatory	string	IP address of the Quorum Server to be connected.

Example

- Querying Quorum Server link information.

```
Request: GET /deviceManager/rest/210235843910E6000009/QuorumServerLink/0

Response:
{
    "data": {
        "ID": "0",
        "LOCALCONTROLLERID": "0B",
        "LOCALCONTROLLERNAME": "CTE0.B",
        "LOCALPORTID": "500000001",
        "LOCALPORTNAME": "CTE0.B1.P1",
        "PARENTID": "0",
        "PARENTTYPE": 15363,
        "QUORUMSERVERIP": "3.3.3.3",
        "RUNNINGSTATUS": "10",
        "TYPE": 15365
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.6 Interface for Deleting a Quorum Server Link

Function

This interface is used to delete Quorum Server link.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServerLink/${id}

Access Method

DELETE

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quorum Server link ID.

Result

N/A

Example

- Deleting Quorum Server link.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/QuorumServerLink/1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.7 Interface for Deleting a Quorum Server

Function

This interface is used to delete a Quorum Server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServer/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quorum Server ID.

Result

N/A

Example

- Deleting a Quorum Server.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/QuorumServer/0

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.8 Interface for Creating a Quorum Server

Function

This interface is used to create a Quorum Server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServer

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~127
SERVERIPA	Mandatory	string	Primary IP address of the Quorum Server.
SERVERPORTA	Optional	string	Port for the primary IP address of the Quorum Server. **The value is described as follows:** 1~65535. **Default:**30002
SERVERIPB	Optional	string	Secondary IP address of the Quorum Server.
SERVERPORTB	Optional	string	Port for the secondary IP address of the Quorum Server. **The value is described as follows:** 1~65535. **Note:**The port is not modified if the value delivered is null.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15363: Quorum Server

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Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
USERNAME	Mandatory	string	User name.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: online 2: offline
DESCRIPTION	Mandatory	string	Description.
SERVERIPA	Mandatory	string	Primary IP address of the Quorum Server.
SERVERPORTA	Mandatory	string	Port for the primary IP address of the Quorum Server.
SERVERIPB	Mandatory	string	Secondary IP address of the Quorum Server.
SERVERPORTB	Mandatory	string	Port for the secondary IP address of the Quorum Server.
DEVICESN	Mandatory	string	Device serial number, which is returned when the device is on a Huawei device.

Example

- Creating a Quorum Server.

```
Request: POST /deviceManager/rest/210235843910E6000009/QuorumServer
{
    "NAME": "112test",
    "SERVERIPA": "3.3.3.6",
    "SERVERPORTA": 30002
}
Response: {
    "data": {
        "DESCRIPTION": "",
        "DEVICESN": "ffffffffffffffff",
        "ID": "0",
        "NAME": "112test",
        "RUNNINGSTATUS": "28",
        "SERVERIPA": "3.3.3.6",
        "SERVERIPB": "",
        "SERVERPORTA": "30002",
        "SERVERPORTB": "",
        "TYPE": 15363,
        "USERNAME": ""
```

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```
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.9 Interface for Modifying a Quorum Server Information

Function

This interface is used to modify a Quorum Server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to modify the configuration of the quorum server.

If you enter an incorrect IP address, port ID or cipher suite name, the quorum server will not work.

Suggestion: Before performing this operation, ensure that the parameters are configured correctly to prevent service exceptions.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServer/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Name. **The value is described as follows:** Which cannot be empty, and contains only 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~127
SERVERIPA	Optional	string	Primary IP address of the Quorum Server.
SERVERPORTA	Optional	string	Port for the primary IP address of the Quorum Server. **The value is described as follows:** 1~65535. **Note:**The port is not modified if the value delivered is null.
SERVERIPB	Optional	string	Secondary IP address of the Quorum Server.
SERVERPORTB	Optional	string	Port for the secondary IP address of the Quorum Server. **The value is described as follows:** 1~65535. **Note:**The port is not modified if the value delivered is null.
ID	Mandatory	string	Quorum Server ID.

Result

N/A

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Example

- Modifying a Quorum Server.

```
Request: PUT /deviceManager/rest/210235843910E6000009/QuorumServer/0
{
    "NAME": "QuorumServer_002",
    "SERVERIPA": "3.3.3.3",
    "SERVERPORTA": 30002
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.10 Interface for Querying a Quorum Server Information

Function

This interface is used to query a Quorum Server information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServer/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quorum Server ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15363: Quorum Server
ID	Mandatory	string	ID.
USERNAME	Mandatory	string	User name.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 27: online 28: offline
DESCRIPTION	Mandatory	string	Description.
SERVERIPA	Mandatory	string	Primary IP address of the Quorum Server.
SERVERPORTA	Mandatory	string	Port for the primary IP address of the Quorum Server.
SERVERIPB	Mandatory	string	Secondary IP address of the Quorum Server.
SERVERPORTB	Mandatory	string	Port for the secondary IP address of the Quorum Server.
DEVICESN	Mandatory	string	Device serial number, which is returned when the device is on a Huawei device.

Example

- Querying a Quorum Server information.

```
Request: GET /deviceManager/rest/210235843910E6000009/QuorumServer/0

Response:
{
    "data": {
        "DESCRIPTION": "",
        "DEVICESN": "ffffffffffffffff",
        "ID": "0",
        "NAME": "112test",
```

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```
        "RUNNINGSTATUS": "28",
        "SERVERIPA": "3.3.3.6",
        "SERVERIPB": "",
        "SERVERPORTA": "30002",
        "SERVERPORTB": "",
        "TYPE": 15363,
        "USERNAME": ""
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.11.11 Interface for Querying the Number of Quorum Server Links

Function

This interface is used to query the number of Quorum Server links.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QuorumServerLink/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters ID,PARENTID,RUNNINGSTATUS,LOCALCONTROLLERID,LOCALPORTID,LOCALCONTROLLERNAME,LOCALPORTNAME and QUORUMSERVERIP are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried Quorum Servers Links.

Example

- Querying the number of Quorum Servers Links.

```
Request: GET /deviceManager/rest/1016964156/QuorumServerLink/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12 hyper_metro_domain

4.12.12.1 Interface for Creating a HyperMetro Domain

Function

This interface is used to create a HyperMetro Domain.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which cannot be empty, and contains only 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description, which contains 0 to 127 characters. **Length:**0~127
DOMAINTYPE	Optional	enum	HyperMetro Domain type. **The value is described as follows:** 1: AA mode 2: AP mode **Default:**1: AA mode **Note:**Currently, only the AA mode is supported.
REMOTEDEVICES	Mandatory	array	List of remote devices. **The value is described as follows:** Only one device is supported currently, including the json object consisting of the name, ID and SN. [{ "devId":XXX, "devESN":YYY, "devName":ZZZ },...].

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15362: HyperMetro Domain
ID	Mandatory	string	HyperMetro Domain ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 33: to be recoverd 35: invalid
DESCRIPTION	Mandatory	string	Description.
DOMAINTYPE	Mandatory	string(enum)	HyperMetro Domain type. **The value is described as follows:** 1: AA mode 2: AP mode **Note:**Currently, only the AA mode is supported.
REMOTEDEVICES	Mandatory	string(array)	List of remote devices. **The value is described as follows:** Only one device is supported currently, including the json object consisting of the name, ID and SN. [{ "devId":XXX, "devESN":YYY, "devName":ZZZ },...].
CPSID	Mandatory	string	Quorum Server ID.
CPSNAME	Mandatory	string	Quorum Server Name.

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Parameter	Mandatory/ Conditional	Type	Description
CPTYPE	Mandatory	string	Quorum type. **The value is described as follows:** 1: quorum server 2: quorum disk 3: none
STANDBYCPSID	Mandatory	string	Standby Quorum Server ID.
STANDBYCPSNAME	Mandatory	string	Standby Quorum Server Name.

Example

- Creating a HyperMetro Domain.

```
Request: POST /deviceManager/rest/210235843910E6000009/HyperMetroDomain
{
    "NAME": "HyperMetroDomain_002",
    "DESCRIPTION": "",
    "DOMAINTYPE": 1,
    "REMOTEDEVICES": [
        {
            "devId": "testid2",
            "devESN": "210235G6LLZ0B8000002",
            "devName": "5300_V3_10.20.31.09"
        }
    ]
}

Response:
{
    "data": {
        "CPSID": "",
        "CPSNAME": "",
        "CPTYPE": "3",
        "DESCRIPTION": "",
        "DOMAINTYPE": "1",
        "ID": "1",
        "NAME": "HyperMetroDomain_002",
        "REMOTEDEVICES": "[{\"devESN\":\"210235G6LLZ0B8000002\",\"devId\":
\"testid2\",\"devName\":\"5300_V3_10.20.31.09\"}]",
        "RUNNINGSTATUS": "1",
        "STANDBYCPSID": "",
        "STANDBYCPSNAME": "",
        "TYPE": 15362
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.12.2 Interface for Removing a Quorum Server from a HyperMetro Domain

Function

This interface is used to remove a Quorum Server from a HyperMetro Domain.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are going to change the quorum server in the HyperMetro domain. This operation removes quorum server ({0}) from the HyperMetro domain and adds quorum server ({1}) to the HyperMetro domain. If you choose a wrong quorum server, this operation may cause the arbitration function of HyperMetro to malfunction. Suggestion: Before performing this operation, ensure that the parameters are configured correctly to prevent service exceptions.
You are going to remove the quorum server from a HyperMetro domain. This operation may change the HyperMetro arbitration mode. Suggestion: Before performing this operation, ensure that the parameters are configured correctly to prevent service exceptions.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain/REMOVE_ASSOCIATE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Domain ID.
ASSOCIATEOBJID	Mandatory	string	ID of the associated object: ID of the Quorum Server.

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Result

N/A

Example

- Removing a Quorum Server from a HyperMetro Domain.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroDomain/
REMOVE_ASSOCIATE
{
    "ID": "2",
    "ASSOCIATEOBJID": "0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12.3 Interface for Modifying HyperMetro Domain

Function

This interface is used to modify a HyperMetro Domain.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Name. **The value is described as follows:** Which cannot be empty, and contains only 1 to 31 letters, digits, underscores (_), hyphens (-), and periods (.). **Length:**1~31
DESCRIPTION	Optional	string	Description, which contains 0 to 127 characters. **Length:**0~127
ID	Mandatory	string	HyperMetro Domain ID.

Result

N/A

Example

- Modifying a HyperMetro Domain.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperMetroDomain/1
{
     "NAME": "test21",
     "DESCRIPTION": "111"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12.4 Interface for Deleting a HyperMetro Domain

Function

This interface is used to delete a HyperMetro Domain.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Hypermetro Domain ID.
ISLOCALDELETE	Optional	bool	whether a HyperMetro task can be locally deleted. **The value is described as follows:** true: yes false: no **Default:**false: no

Result

N/A

Example

- Deleting a HyperMetro Domain.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/HyperMetroDomain/1?
ISLOCALDELETE=false

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12.5 Interface for Adding a Quorum Server into a HyperMetro Domain

Function

This interface is used to add a Quorum Server into a HyperMetro Domain.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are going to add the quorum server to a HyperMetro domain.

This operation may change the HyperMetro arbitration mode.

Suggestion: Before performing this operation, ensure that the parameters are configured correctly to prevent service exceptions.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain/CREATE_ASSOCIATE

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Domain ID.
ASSOCIATEOBJID	Mandatory	string	ID of the associated object: ID of the Quorum Server.

Result

N/A

Example

- Adding a Quorum Server into a HyperMetro Domain.

```
Request: POST /deviceManager/rest/210235843910E6000009/HyperMetroDomain/
CREATE_ASSOCIATE
{
    "ID": "2",
    "ASSOCIATEOBJID": "0"
}

Response:
```

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```
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12.6 Interface for Querying HyperMetro Domain Information

Function

This interface is used to query HyperMetro Domain information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Domain ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15362: HyperMetro Domain
ID	Mandatory	string	HyperMetro Domain ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 33: to be recoverd 35: invalid
DESCRIPTION	Mandatory	string	Description.
DOMAINTYPE	Mandatory	string(enum)	HyperMetro Domain type. **The value is described as follows:** 1: AA mode 2: AP mode **Note:**Currently, only the AA mode is supported.
REMOTEDEVICES	Mandatory	string(array)	List of remote devices. **The value is described as follows:** Only one device is supported currently, including the json object consisting of the name, ID and SN [{ "devId":XXX, "devESN":YYY, "devName":ZZZ },...].
CPSID	Mandatory	string	Quorum Server ID.
CPSNAME	Mandatory	string	Quorum Server Name.
CPTYPE	Mandatory	string	Quorum type. **The value is described as follows:** 1: quorum server 2: quorum disk 3: none
STANDBYCPSID	Mandatory	string	Standby Quorum Server ID.

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Parameter	Mandatory/ Conditional	Type	Description
STANDBYCPSNAME	Mandatory	string	Standby Quorum Server Name.

Example

- Querying HyperMetro Domain information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperMetroDomain/0

Response:
{
    "data": {
        "CPSID": "",
        "CPSNAME": "",
        "CPTYPE": "3",
        "DESCRIPTION": "",
        "DOMAINTYPE": "1",
        "ID": "0",
        "NAME": "HyperMetroDomain_001",
        "REMOTEDEVICES": "[{\"devESN\":\"210235G6LLZ0B8000001\",\"devId\":
\"testid\",\"devName\":\"S5600T_10.20.30.08\"}]",
        "RUNNINGSTATUS": "1",
        "STANDBYCPSID": "",
        "STANDBYCPSNAME": "",
        "TYPE": 15362
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12.7 Interface for Querying the Number of HyperMetro Domains

Function

This interface is used to query the number of HyperMetro Domains.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

N/A

Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried HyperMetro Domains.

Example

- Querying the number of HyperMetro Domains.

```
Request: GET /deviceManager/rest/1016964156/HyperMetroDomain/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.12.8 Interface for Batch Querying HyperMetro Domain Information

Function

This interface is used to batch query HyperMetro Domain information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetroDomain

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15362: HyperMetro Domain
ID	Mandatory	string	HyperMetro Domain ID.
NAME	Mandatory	string	Name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 33: to_be_recoverd 35: invalid
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
DOMAINTYPE	Mandatory	string(enum)	HyperMetro Domain type. **The value is described as follows:** 1: AA mode 2: AP mode **Note:**Currently, only the AA mode is supported.
REMOTEDEVICES	Mandatory	string(array)	List of remote devices. **The value is described as follows:** Only one device is supported currently, including the json object consisting of the name, ID and SN. [{ "devId":XXX, "devESN":YYY, "devName":ZZZ },...].
CPSID	Mandatory	string	Quorum Server ID.
CPSNAME	Mandatory	string	Quorum Server Name.
CPTYPE	Mandatory	string	Quorum type. **The value is described as follows:** 1: quorum server 2: quorum disk 3: none
STANDBYCPSID	Mandatory	string	Standby Quorum Server ID.
STANDBYCPSNAME	Mandatory	string	Standby Quorum Server Name.

Example

- Batch querying HyperMetro Domain information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperMetroDomain?
range=[0-100]

Response:
{
```

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```
    "data": [
        {
            "CPSID": "",
            "CPSNAME": "",
            "CPTYPE": "3",
            "DESCRIPTION": "",
            "DOMAINTYPE": "1",
            "ID": "8038bc14bd750100",
            "NAME": "test",
            "REMOTEDEVICES": "[{\"devId\":\"0\",\"devESN\":
\"2102350BSE10F3000088\",\"devName\":\"33aa\"}]",
            "RUNNINGSTATUS": "1",
            "STANDBYCPSID": "",
            "STANDBYCPSNAME": "",
            "TYPE": 15362
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.12.13 hyper_metro_consistency_group

4.12.13.1 Interface for Creating a Consistency Group of HyperMetro

Function

This interface is used to create a consistency group of hypermetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to select the "Highest" speed to create a HyperMetro consistency group.

After the operation, HyperMetro pairs in the consistency group will be synchronized at the highest speed, which may cause host latency increase and disconnection of HyperMetro pairs.

Suggestion: Select a low synchronization speed or use the "Highest" synchronization speed during off-peak hours.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Object name. **The value is described as follows:** Which can not be empty, and contains only letters, digits, chinese, underscores (_), hyphens (-), and periods (.), can not begin with symbol. **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~127
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Default:**2: medium
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual **Default:**1: automatic
DOMAINID	Mandatory	string	ID of a HyperMetro Domain.
WRITESECONDARYTIMEOUT	Optional	uint32	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Default:**30 **Unit:**seconds

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15364: HyperMetro consistent group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Object name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 100: to be synchronized 23: synchronizing 0: unknow 1: naomal 41: pause 94: error 93: forced_start 35: invalid
DESCRIPTION	Mandatory	string	Description.
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/ Conditional	Type	Description
PRIORITYSTATION-TYPE	Mandatory	string(enum)	Type of priority station. **The value is described as follows:** 0: prioritizes the local end 1: prioritizes the remote end
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. The default value is automatic. **The value is described as follows:** 1: automatic 2: manual
DOMAINID	Mandatory	string	ID of a HyperMetro Domain.
DOMAINNAME	Mandatory	string	Name of a HyperMetro Domain.
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 11: LUN 40: filesystem
ISEMPTY	Mandatory	string(bool)	Indicates whether a consistency group is empty. If the value is true, no pair is added to this consistency group. **The value is described as follows:** true: yes false: no
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local

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Parameter	Mandatory/ Conditional	Type	Description
ISISOLATION	Mandatory	string(bool)	Isolation Switch. **The value is described as follows:** true: open false: closed
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation Threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Example

- Creating a Consistency Group of HyperMetro.

```
Request: POST /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup
{
    "NAME": "test",
    "DESCRIPTION": "",
    "RECOVERYPOLICY": "1",
    "SPEED": "2",
    "DOMAINID": "0"
}

Response:
 {
    "data": {
        "ACTIVEORPASSIVE": "0",
        "DESCRIPTION": "",
        "DOMAINID": "0",
        "DOMAINNAME": "HyperMetroDomain_001",
        "HEALTHSTATUS": "1",
        "ID": "0022A104DEF50004",
        "ISEMPTY": "true",
        "ISISOLATION": "false",
        "ISISOLATIONTHRESHOLDTIME": "1000",
        "NAME": "test",
```

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```
        "PRIORITYSTATIONTYPE": "0",
        "RECOVERYPOLICY": "1",
        "RUNNINGSTATUS": "41",
        "SPEED": "2",
        "SYNCDIRECTION": "1",
        "TYPE": 15364,
        "RESOURCETYPE": "11",
        "WRITESECONDARYTIMEOUT": "30"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.2 Interface for Querying the Number of Consistency Groups of HyperMetro

Function

This interface is used to query the number of Consistency Groups of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME,ID,HEALTHSTATUS,RUNNINGSTATUS,PRIORITYSTATION-TYPE are supported.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Object statistics quantity.

Example

- Querying the number of Consistency Groups of HyperMetro.

```
Request: GET /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/count

Response:
{
    "data": {
        "COUNT": "5"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.3 Interface for Deleting a Consistency Group of HyperMetro

Function

This interface is used to delete a HyperMetro Consistency Group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ISLOCALDELETE	Optional	bool	Indicates whether the HyperMetro Consistency Group can be locally deleted when the link is disconnected. **The value is described as follows:** true: can be locally deleted false: can't be locally deleted **Default:**false: can't be locally deleted **Note:**If this parameter is not delivered, HyperMetro Consistency Group cannot be locally deleted when the link is disconnected.
ID	Mandatory	string	HyperMetro Consistenteny Group ID.

Result

N/A

Example

- Deleting a HyperMetro Consistency Group.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/30d17eb4f7618000?ISLOCALDELETE=false

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.4 Interface for Synchronizing a Consistency Group of HyperMetro

Function

This interface is used to synchronize a Consistency Group of HyperMetro.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to start data synchronization.

Once data synchronization is started, the system will synchronize data based on the synchronization direction of the consistency group and the data at the synchronized end cannot be restored.

Suggestion: Before performing this operation, ensure that the parameters are correct to prevent data loss.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/sync

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.

Result

N/A

Example

- Synchronizing a Consistency Group of HyperMetro.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/sync
{
    "ID": "0022A104DEF50003"
}
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.12.13.5 Interface for Performing a PrimarySecondary_Switchover on a Consistency Group of HyperMetro

Function

This interface is used to perform a primarysecondary_switchover on a Consistency Group of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to execute a preferred site switchover. This operation will modify the arbitration priority when array communication is interrupted.

In static priority mode, if array communication is interrupted due to a preferred sire switchover, the arbitration will fail.

Suggestion: Before performing this operation, suspend the HyperMetro consistency group in static priority mode.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/switch

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.

Result

N/A

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Example

- Performing a primarysecondary_switchover on a Consistency Group of HyperMetro.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/switch
{
    "ID": "0022A104DEF50003"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.6 Interface for Querying a Consistency Group of HyperMetro

Function

This interface is used to query a consistency group of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15364: HyperMetro Consistent Group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Object name.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 100: to be synchronized 23: synchronizing 0: unknown 1: normal 41: pause 94: error 93: forced start 35: invalid
DESCRIPTION	Mandatory	string	Description.
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest

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Parameter	Mandatory/ Conditional	Type	Description
PRIORITYSTATION-TYPE	Mandatory	string(enum)	Type of priority station. **The value is described as follows:** 0: prioritizes the local end 1: prioritizes the remote end
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. The default value is automatic. **The value is described as follows:** 1: automatic 2: manual
DOMAINID	Mandatory	string	ID of a HyperMetro Domain.
DOMAINNAME	Mandatory	string	Name of a HyperMetro Domain.
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 11: LUN 40: filesystem
ISEMPTY	Mandatory	string(bool)	Indicates whether a consistency group is empty. If the value is true, no pair is added to this consistency group. **The value is described as follows:** true: yes false: no
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local

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Parameter	Mandatory/ Conditional	Type	Description
ISISOLATION	Mandatory	string(bool)	Isolation Switch. **The value is described as follows:** true: open false: closed
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation Threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Example

- Querying a Consistency Group of HyperMetro.

```
Request: GET /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/0022A104DEF50003

Response:
 {
    "data": {
        "ACTIVEORPASSIVE": "0",
        "DESCRIPTION": "",
        "DOMAINID": "0",
        "DOMAINNAME": "HyperMetroDomain_001",
        "HEALTHSTATUS": "1",
        "ID": "0022A104DEF50003",
        "ISEMPTY": "true",
        "ISISOLATION": "false",
        "ISISOLATIONTHRESHOLDTIME": "1000",
        "NAME": "dsfdsdaf",
        "PRIORITYSTATIONTYPE": "0",
        "RECOVERYPOLICY": "1",
        "RUNNINGSTATUS": "1",
        "RESOURCETYPE": "11",
        "SPEED": "2",
        "SYNCDIRECTION": "1",
        "TYPE": 15364,
```

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```
        "WRITESECONDARYTIMEOUT": "30"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.7 Interface for Forcibly Starting a Consistency Group of HyperMetro

Function

This interface is used to forcibly start a Consistency Group of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to forcibly enable host access permissions of member LUNs in the HyperMetro consistency group.

Ensure that the remote site does not accept host access request. Otherwise, data loss may occur.

Suggestion: Before performing this operation, disconnect the remote site from hosts.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/start

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.

Result

N/A

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Example

- Forcibly starting a Consistency Group of HyperMetro.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/start
{
    "ID": "0022A104DEF50003"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.8 Interface for Modifying a Consistency Group of HyperMetro

Function

This interface is used to modify a Consistency Group of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to change the synchronization speed to the "Highest".

After the operation, the Hyper Metro pair will be synchronized at the highest speed, which may cause host latency increase and disconnection of HyperMetro pairs.

Suggestion: Select a low synchronization speed or use the "Highest" synchronization speed during off-peak hours.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Object name. **The value is described as follows:** Which can not be empty, and contains only letters, digits, chinese, underscores (_), hyphens (-), and periods (.), can not begin with symbol. **Length:**1~31
DESCRIPTION	Optional	string	Description. **Length:**0~127
SPEED	Optional	enum	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
RECOVERYPOLICY	Optional	enum	Recovery policy. **The value is described as follows:** 1: automatic 2: manual
ID	Mandatory	string	HyperMetro Consistent Group ID.
ISISOLATION	Optional	bool	Isolation switch. **The value is described as follows:** true: open false: closed
ISISOLATIONTHRE-SHOLDTIME	Optional	uint32	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms

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Parameter	Mandatory/Optional/Conditional	Type	Description
WRITESECONDARYTIMEOUT	Optional	uint32	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Result

N/A

Example

- Modifying a Consistency Group of HyperMetro.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/1
{
    "NAME": "test"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.9 Interface for Batch Querying a Consistency Group of HyperMetro

Function

This interface is used to batch query HyperMetro consistency groups.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME,ID,HEALTHSTATUS,RUNNINGSTATUS,PRIORITYSTATION-TYPE are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 15364: HyperMetro consistent group
ID	Mandatory	string	ID.
NAME	Mandatory	string	Object name.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 0: unknown 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 100: to be synchronized 23: synchronizing 0: unknown 1: normal 41: pause 94: error 93: forced start 35: invalid
DESCRIPTION	Mandatory	string	Description.
SPEED	Mandatory	string(enum)	Rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
PRIORITYSTATION-TYPE	Mandatory	string(enum)	Type of priority station. **The value is described as follows:** 0: prioritizes the local end 1: prioritizes the remote end
RECOVERYPOLICY	Mandatory	string(enum)	Recovery policy. The default value is automatic. **The value is described as follows:** 1: automatic 2: manual

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Parameter	Mandatory/ Conditional	Type	Description
DOMAINID	Mandatory	string	ID of a HyperMetro Domain.
DOMAINNAME	Mandatory	string	Name of a HyperMetro Domain.
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 11: LUN 40: filesystem
ISEMPTY	Mandatory	string(bool)	Indicates whether a consistency group is empty. If the value is true, no pair is added to this consistency group. **The value is described as follows:** true: yes false: no
ACTIVEORPASSIVE	Mandatory	string(enum)	Activation Status. **The value is described as follows:** 0: active 1: passive
SYNCDIRECTION	Mandatory	string(enum)	Synchronization direction. **The value is described as follows:** 1: from local to remote 2: from remote to local
ISISOLATIONTHRE-SHOLDTIME	Mandatory	string(uint32)	Isolation threshold. **The value is described as follows:** 10 to 30000. **Unit:**ms
ISISOLATION	Mandatory	string(bool)	Isolation switch. **The value is described as follows:** true: open false: closed

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Parameter	Mandatory/ Conditional	Type	Description
WRITESECONDARYTIMEOUT	Mandatory	string(uint32)	Mirror write I/O timeout period. **The value is described as follows:** The value ranges from 15 to 180. **Unit:**seconds

Example

- Batch querying HyperMetro consistency groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup?range=[0-100]

Response:
{
    "data": [
        {
            "ACTIVEORPASSIVE": "0",
            "DESCRIPTION": "",
            "DOMAINID": "0",
            "DOMAINNAME": "HyperMetroDomain_001",
            "HEALTHSTATUS": "1",
            "ID": "0022A104DEF50003",
            "ISEMPTY": "true",
            "ISISOLATION": "false",
            "ISISOLATIONTHRESHOLDTIME": "1000",
            "NAME": "dsfdsdaf",
            "PRIORITYSTATIONTYPE": "0",
            "RECOVERYPOLICY": "1",
            "RUNNINGSTATUS": "1",
            "SPEED": "2",
            "SYNCDIRECTION": "1",
            "TYPE": 15364,
            "RESOURCETYPE": "11",
            "WRITESECONDARYTIMEOUT": "30"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.10 Interface for Suspending a Consistency Group of HyperMetro

Function

This interface is used to suspend a Consistency Group of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

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HighRisk

You are about to pause the HyperMetro consistency group.

Once the HyperMetro consistency group is paused, real-time mirroring across sites stops and the member LUNs in the HyperMetro consistency groups can only be accessed in one direction.

Suggestion: Before performing this operation, ensure that the two sites are properly connected to hosts to prevent service exceptions.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperMetro_ConsistentGroup/stop

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.
PRIORITYSTATION-TYPE	Optional	enum	Type of priority station. **The value is described as follows:** 0: preferred 1: non-preferred **Default:**1: non-preferred

Result

N/A

Example

- Suspending a Consistency Group of HyperMetro.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
HyperMetro_ConsistentGroup/stop
{
    "ID": "0022A104DEF50003",
    "PRIORITYSTATIONTYPE": "1"
}

Response:
```

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```
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.11 Interface for Removing a HyperMetro Pair from a Consistency Group of HyperMetro

Function

This interface is used to remove a HyperMetro Pair from a Consistency Group of HyperMetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hyperMetro/associate/pair

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.
ASSOCIATEOBJID	Mandatory	string	Associated object ID(HyperMetro Pair ID).

Result

N/A

Example

- Removing a HyperMetro Pair from a Consistency Group of HyperMetro.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/hyperMetro/associate/
pair?ID=0022A104DEF50003&ASSOCIATEOBJID=10
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.13.12 Interface for Adding a HyperMetro Pair to a Consistency Group of Hypermetro

Function

This interface is used to add a HyperMetro Pair to a Consistency Group of Hypermetro.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3.

HighRisk

You are about to add a pair to the HyperMetro consistency group.

After the pair is added to the consistency group, the pair will use the consistency group's control policies. You cannot operate the pair in this consistency group.

Suggestion: Before performing this operation, ensure that the parameters are correct to prevent service exceptions.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/hyperMetro/associate/pair

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperMetro Consistent Group ID.
ASSOCIATEOBJID	Mandatory	string	Associated object ID(HyperMetro Pair ID).

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Result

N/A

Example

- Adding a HyperMetro Pair to a Consistency Group of Hypermetro.

```
Request: POST /deviceManager/rest/210235843910E6000009/hyperMetro/associate/
pair
{
    "ID": "0022A104DEF50003",
    "ASSOCIATEOBJID": "10"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14 hyper_vault

4.12.14.1 Interface for Batching Querying HyperVault Policy Information

Function

This interface is used to batch query basic information about HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTID	Optional	string	HyperVault ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter PARENTID is supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 295: HyperVault policy
ID	Mandatory	string	Policy ID.
NAME	Mandatory	string	Policy name.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object.
POLICYTYPE	Mandatory	string(enum)	Policy type. **The value is described as follows:** 0: local policy 1: remote policy **Note:**"-1" indicates a invalid value.
MAXCOPYNUMBER	Mandatory	string(uint32)	Threshold for keeping a copy. **The value is described as follows:** 3 to 256.
POLICYPERIODTYPE	Mandatory	string(enum)	Type of the policy execution period. **The value is described as follows:** 0: daily 1: weekly 2: monthly
DAYSOFMONTH	Conditional	string(array)	List for the number of days per month. **The value is described as follows:** The value ranges from 1 to 31. For example, deliver [1,2,3,5]. **Note:**This field is returned when the backup period is monthly.

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Parameter	Mandatory/ Conditional	Type	Description
DAYSOFWEEK	Conditional	string(array)	List for the weekday per week. **The value is described as follows:** The value ranges from 0 to 6. For example, deliver [1,2]. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday **Note:**This field is returned when the backup period is weekly.
DAYOFINTERVAL	Conditional	string(uint32)	Based on the interval of days. **The value is described as follows:** 1 to 7. **Note:**This field is returned when the backup period is daily.
STARTTIME	Mandatory	string	Accurate time to execute the policy. **The value is described as follows:** The format of the value is HH:MM. The value can be any specific moment in a range from 00:00 to 23:59.
HOUR	Mandatory	string(uint32)	Based on the interval of hours. **The value is described as follows:** 0 to 23.

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Parameter	Mandatory/ Conditional	Type	Description
MINUTE	Mandatory	string(uint32)	Interval of minutes for policy execution (the minimal interval is five minutes). **The value is described as follows:** 0 to 59. **Note:**The minimum interval is 5 minutes.
POLICYSTATUS	Mandatory	string(enum)	Policy status. **The value is described as follows:** 0: on 1: off

Example

- Batch querying basic information about HyperVault policy.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVaultPolicy?
range=[0-100]

Response:
{
    "data": [
        {
            "DAYSOFWEEK": "[2,3]",
            "HOUR": "1",
            "ID": "1092393414328145018880",
            "MAXCOPYNUMBER": "5",
            "MINUTE": "30",
            "NAME": "111",
            "PARENTID": "9239341432814501888",
            "PARENTTYPE": 293,
            "POLICYPERIODTYPE": "1",
            "POLICYSTATUS": "0",
            "POLICYTYPE": "0",
            "STARTTIME": "--",
            "TYPE": 295
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.2 Interface for Modifying a HyperVault Policy

Function

This interface is used to modify a HyperVault policy.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Policy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
NAME	Optional	string	Policy name. **Length:**1~127
MAXCOPYNUMBER	Optional	uint32	Threshold for keeping a copy. **The value is described as follows:** 3 to 256.
POLICYPERIODTYPE	Optional	enum	Type of the policy execution period. **The value is described as follows:** 0: daily 1: weekly 2: monthly

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Parameter	Mandatory/Optional/Conditional	Type	Description
DAYSOFMONTH	Optional	array	List for the number of days per month. **The value is described as follows:** The value ranges from 1 to 31. For example, deliver [1,2,3,5]. All options are selected by default.
DAYSOFWEEK	Optional	array	List for the weekday per week. **The value is described as follows:** The value ranges from 0 to 6. For example, deliver [1,2]. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday
DAYOFINTERVAL	Optional	uint32	Based on the interval of days. **The value is described as follows:** 1 to 7.
STARTTIME	Optional	string	Accurate time to execute the policy. **The value is described as follows:** The format of the value is HH:MM. The value can be any specific moment in a range from 00:00 to 23:59. The default value is 00:00. **Length:**5

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Parameter	Mandatory/Optional/Conditional	Type	Description
HOUR	Optional	uint32	Based on the interval of hours. **The value is described as follows:** 0 to 23. **Note:**HOUR and MINUTE cannot be 0 at the same time.
MINUTE	Conditional	uint32	Interval of minutes for policy execution (the minimal interval is five minutes). **The value is described as follows:** 0 to 59. **Note:**The minimum interval is 5 minutes. If HOUR is delivered, this parameter must be delivered. HOUR and MINUTE cannot be 0 at the same time.
POLICYSTATUS	Optional	enum	Policy status. **The value is described as follows:** 0: on 1: off
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying a HyperVault policy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultPolicy/2
{
    "DAYSOFMONTH": [2,3,10,11,18,19,26],
    "HOUR": 1,
    "MINUTE": 0
}
```

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```
Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.3 Interface for Querying a HyperVault Job Information

Function

This interface is used to query a HyperVault job information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultJob/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Job ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 294: HyperVault job
ID	Mandatory	string	Job ID.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: running 70: cancelled 87: suspending 88: suspended 95: job_completed 108: Running(clearing data) 109: Running(synchronizing data)
PROGRESS	Mandatory	string(uint32)	Task progress. **The value is described as follows:** 0 to 100.
STARTTIME	Mandatory	string(uint64)	Start time of the task.
ENDTIME	Mandatory	string(uint64)	End time of the task.
COPYID	Mandatory	string	Copy ID.
COPYNAME	Mandatory	string	Copy name.
POLICYID	Mandatory	string	Policy ID.

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Parameter	Mandatory/ Conditional	Type	Description
POLICYTYPE	Mandatory	string(enum)	Policy type. **The value is described as follows:** 0: local policy 1: remote policy **Note:**"-1" indicates a invalid value.
POLICYNAME	Mandatory	string	Policy name.
JOBTYPE	Mandatory	string(enum)	Task type. **The value is described as follows:** 0: local backup task 1: local recovery task 2: remote backup task 3: remote recovery task
STARTUPMODE	Mandatory	string(enum)	Startup mode. **The value is described as follows:** 0: automatic 1: manual
CLEANPRIMARYFS	Mandatory	string(int32)	Clean up the primary file system. **The value is described as follows:** 1: yes 0: no **Note:**"-1" indicates a invalid value.

Example

- Querying a HyperVault job information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVaultJob/
109239341432814501888 2

Response: {
    "data": {
        "CLEANPRIMARYFS": "0",
        "COPYID": "1092393414328145018885305143604019 2",
        "COPYNAME": "HyperVault_Local_d_Manual_20160202110047_01025259",
        "ENDTIME": "1454410847",
        "ID": "1092393414328145018882",
        "JOBTYPE": "0",
        "PARENTID": "9239341432814501888",
        "PARENTTYPE": 293,
```

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```
        "POLICYID": "--",
        "POLICYNAME": "--",
        "POLICYTYPE": "2",
        "PROGRESS": "100",
        "RUNNINGSTATUS": "95",
        "STARTTIME": "1454410847",
        "STARTUPMODE": "1",
        "TYPE": 294
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.4 Interface for Batch Querying HyperVault Information

Function

This interface is used to batch query HyperVault information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters LOCALRESOURCENAME, REMOTERESOURCENAME, HEALTHSTATUS, RUNNINGSTATUS and ID are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 293: HyperVault
ID	Mandatory	string	HyperVault ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: running 26: splited 34: interrupted 33: to_be_recovered 35: invalid 46: idle
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 11: LUN 40: file system
LOCALRESOURCEID	Mandatory	string	ID of the resource to back up.
LOCALRESOURCENAME	Mandatory	string	Name of the resource to back up.
ENABLEREMOTEBACKUP	Mandatory	string(enum)	Indicates whether remote backup is enabled. **The value is described as follows:** 0: yes 1: no
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTERESOURCENAME	Mandatory	string	Remote resource name.
REMOTERESOURCEID	Mandatory	string	Remote resource ID.
ISPRIMARY	Mandatory	string(enum)	Indicates whether it is the primary end. **The value is described as follows:** 0: source end 1: target end

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Parameter	Mandatory/ Conditional	Type	Description
RECOVERPOLICY	Mandatory	string(enum)	Faulty recovery policy. **The value is described as follows:** 1: When the AUTO link reconnects after being disconnected, backup automatically recovers and resumes to back up data from the primary end. 2: Backup must be manually recovered when the MANUAL link reconnects. Data at the secondary end retains the state preserved at the time when links are interrupted, and is not automatically backed up from the primary end.
BACKUPRATE	Mandatory	string(enum)	Backup rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
LOCALRESOURCECA-PACITY	Mandatory	string(uint64)	Capacity of the local file system or LUN resource. **Unit:**bytes
REMOTERESOURCEC APACITY	Mandatory	string(uint64)	Capacity of the remote file system or LUN resource. **Unit:**bytes
REMOTERESTORERAT E	Mandatory	string(enum)	Remote recovery speed. **The value is described as follows:** 3: high 4: highest **Note:**"-1" indicates a invalid value.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESS	Mandatory	string(enum)	Link compression. **The value is described as follows:** 0: does not compress transferred data 1: compresses transferred data **Note:**"255" indicates a invalid value.

Example

- Batch querying HyperVault information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVault?range=[0-100]

Response:
{
    "data": [
        {
            "BACKUPRATE": "-1",
            "ENABLEREMOTEBACKUP": "1",
            "HEALTHSTATUS": "1",
            "ID": "9239341432814501890",
            "ISPRIMARY": "0",
            "LOCALRESOURCECAPACITY": "1073741824",
            "LOCALRESOURCEID": "19",
            "LOCALRESOURCENAME": "FileSystem0160004",
            "RECOVERPOLICY": "-1",
            "REMOTEDEVICEID": "--",
            "REMOTERESOURCECAPACITY": "-1",
            "REMOTERESOURCEID": "--",
            "REMOTERESOURCENAME": "--",
            "RESOURCETYPE": "40",
            "RUNNINGSTATUS": "46",
            "TYPE": 293,
            "REMOTERESTORERATE": "-1",
            "ENABLECOMPRESS":"0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.5 Interface for Suspending a HyperVault Job

Function

This interface is used to suspend a HyperVault job.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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HighRisk

You are about to suspend a HyperVault job ({0}).

This operation makes data in the secondary file system incomplete.

Before performing this operation, ensure that you have selected the correct HyperVault job.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultJob/pause

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Job ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Suspending a HyperVault job.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultJob/pause
{
    "ID": "0"
}

Response:
{
```

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```
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.6 Interface for Continuing HyperVault Job

Function

This interface is used to continue a HyperVault job.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultJob/continue

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Job ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Continuing a HyperVault job.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultJob/continue
{
    "ID": "0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.7 Interface for Deleting a HyperVault Copy

Function

This interface is used to delete a HyperVault copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultCopy/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Copy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a HyperVault copy.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/HyperVaultCopy/2

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.8 Interface for Enabling a HyperVault Policy

Function

This interface is used to enable a HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to activate a HyperVault policy ({0}).

This operation automatically backs up data using this policy periodically.

Before performing this operation, ensure that you have selected the correct HyperVault policy.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy/${id}

Access Method

PUT

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Policy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
POLICYSTATUS	Mandatory	enum	Policy status. **The value is described as follows:** 0: on
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Enabling a HyperVault policy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultPolicy/2
{
    "POLICYSTATUS": 0
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.9 Interface for Batch Querying HyperVault Job Information

Function

This interface is used to batch query HyperVault job information.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultJob

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters PARENTID, JOBTYPE and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 294: HyperVault job
ID	Mandatory	string	Job ID.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: running 70: cancelled 87: suspending 88: suspended 95: job_completed 108: Running(clearing data) 109: Running(synchronizing data)
PROGRESS	Mandatory	string(uint32)	Task progress. **The value is described as follows:** 0 to 100.
STARTTIME	Mandatory	string(uint64)	Start time of the task.

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Parameter	Mandatory/ Conditional	Type	Description
ENDTIME	Mandatory	string(uint64)	End time of the task.
COPYID	Mandatory	string	Copy ID.
COPYNAME	Mandatory	string	Copy name.
POLICYID	Mandatory	string	Policy ID.
POLICYTYPE	Mandatory	string(enum)	Policy type. **The value is described as follows:** 0: local policy 1: remote policy **Note:**"-1" indicates a invalid value.
POLICYNAME	Mandatory	string	Policy name.
JOBTYPE	Mandatory	string(enum)	Task type. **The value is described as follows:** 0: local backup task 1: local recovery task 2: remote backup task 3: remote recovery task
STARTUPMODE	Mandatory	string(enum)	Startup mode. **The value is described as follows:** 0: automatic 1: manual
CLEANPRIMARYFS	Mandatory	string(int32)	Clean up the primary file system. **The value is described as follows:** 1: yes 0: no **Note:**"-1" indicates a invalid value.

Example

- Batch querying HyperVault job information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVaultJob?
range=[0-100]

Response:
```

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```
{
    "data": [
        {
            "CLEANPRIMARYFS": "0",
            "COPYID": "1092393414328145018885305143604019 2",
            "COPYNAME": "HyperVault_Local_d_Manual_20160202110047_01025259",
            "ENDTIME": "1454410847",
            "ID": "1092393414328145018882",
            "JOBTYPE": "0",
            "PARENTID": "9239341432814501888",
            "PARENTTYPE": 293,
            "POLICYID": "--",
            "POLICYNAME": "--",
            "POLICYTYPE": "2",
            "PROGRESS": "100",
            "RUNNINGSTATUS": "95",
            "STARTTIME": "1454410847",
            "STARTUPMODE": "1",
            "TYPE": 294
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.10 Interface for Querying a HyperVault Information

Function

This interface is used to query a HyperVault information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperVault ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 293: HyperVault
ID	Mandatory	string	HyperVault ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: running 26: splited 34: interrupted 33: to_be_recovered 46: idle 35: invalid
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 11: LUN 40: file system
LOCALRESOURCEID	Mandatory	string	ID of the resource to back up.
LOCALRESOURCENAME	Mandatory	string	Name of the resource to back up.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEREMOTEBACKUP	Mandatory	string(enum)	Indicates whether remote backup is enabled. **The value is described as follows:** 0: yes 1: no
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTERESOURCENAME	Mandatory	string	Remote resource name.
REMOTERESOURCEID	Mandatory	string	Remote resource ID.
ISPRIMARY	Mandatory	string(enum)	Indicates whether it is the primary end. **The value is described as follows:** 0: source end 1: target end
RECOVERPOLICY	Mandatory	string(enum)	Faulty recovery policy. **The value is described as follows:** 1: When the AUTO link reconnects after being disconnected, backup automatically recovers and resumes to back up data from the primary end. 2: Backup must be manually recovered when the MANUAL link reconnects. Data at the secondary end retains the state preserved at the time when links are interrupted, and is not automatically backed up from the primary end.

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Parameter	Mandatory/ Conditional	Type	Description
BACKUPRATE	Mandatory	string(enum)	Backup rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
LOCALRESOURCECA-PACITY	Mandatory	string(uint64)	Capacity of the local resource. **Unit:**bytes
REMOTERESOURCEC APACITY	Mandatory	string(uint64)	Capacity of the remote resource. **Unit:**bytes
REMOTERESTORERAT E	Mandatory	string(enum)	Remote recovery speed. **The value is described as follows:** 3: high 4: highest **Note:**"-1" indicates a invalid value.
ENABLECOMPRESS	Mandatory	string(enum)	Link compression. **The value is described as follows:** 0: does not compress transferred data 1: compresses transferred data **Note:**"255" indicates a invalid value.

Example

- Querying a HyperVault information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVault/
9239341432814501890

Response:
{
    "data": {
        "BACKUPRATE": "-1",
        "ENABLEREMOTEBACKUP": "1",
        "HEALTHSTATUS": "1",
        "ID": "9239341432814501890",
        "ISPRIMARY": "0",
        "LOCALRESOURCECAPACITY": "1073741824",
```

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```
        "LOCALRESOURCEID": "19",
        "LOCALRESOURCENAME": "FileSystem0160004",
        "RECOVERPOLICY": "-1",
        "REMOTEDEVICEID": "--",
        "REMOTERESOURCECAPACITY": "-1",
        "REMOTERESOURCEID": "--",
        "REMOTERESOURCENAME": "--",
        "RESOURCETYPE": "40",
        "RUNNINGSTATUS": "46",
        "TYPE": 293,
        "REMOTERESTORERATE": "-1",
        "ENABLECOMPRESS":"0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.11 Interface for Creating a HyperVault Policy

Function

This interface is used to create a HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Policy name. **The value is described as follows:** Cannot be empty and contains only letters, digits, periods (.), underscores (_), and hyphens (-). **Length:**1~127

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Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object.
POLICYTYPE	Mandatory	enum	Policy type. **The value is described as follows:** 0: local policy 1: remote policy
MAXCOPYNUMBER	Optional	uint32	Threshold for keeping a copy. **The value is described as follows:** 3 to 256. **Default:**5
POLICYPERIODTYPE	Mandatory	enum	Type of the policy execution period. **The value is described as follows:** 0: daily 1: weekly 2: monthly
DAYSOFMONTH	Conditional	array	List for the number of days per month. **The value is described as follows:** The value ranges from 1 to 31. For example, deliver [1,2,3,5]. **Note:**This parameter is delivered when policyPeriodType is monthly.

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Parameter	Mandatory/Optional/Conditional	Type	Description
DAYSOFWEEK	Conditional	array	List for the weekday per week. **The value is described as follows:** The value ranges from 0 to 6. For example, deliver [1,2]. All options are selected by default. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday **Note:**This parameter is delivered when policyPeriodType is weekly.
DAYOFINTERVAL	Conditional	uint32	Based on the interval of days. **The value is described as follows:** 1 to 7. **Note:**This parameter is delivered when policyPeriodType is daily. The default value is 1.
STARTTIME	Optional	string	Accurate time to execute the policy. **The value is described as follows:** The format of the value is HH:MM. The value can be any specific moment in a range from 00:00 to 23:59. **Default:**00:00 **Length:**5 **Note:**This field is mutually exclusive with HOUR and MINUTE.

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Parameter	Mandatory/Optional/Conditional	Type	Description
HOUR	Optional	uint32	Based on the interval of hours. **The value is described as follows:** 0 to 23. **Note:**This field is mutually exclusive with STARTTIME. HOUR and MINUTE cannot be 0 at the same time.
MINUTE	Conditional	uint32	Interval of minutes for policy execution (the minimal interval is five minutes). **The value is described as follows:** 0 to 59. **Note:**This parameter is mutually exclusive with STARTTIME and must be delivered together with HOUR. The interval must be a multiple of 5.
POLICYSTATUS	Mandatory	enum	Policy status. **The value is described as follows:** 0: on 1: off
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Creating a HyperVault policy.

```
Request: POST /deviceManager/rest/210235843910E6000009/HyperVaultPolicy
{
    "PARENTTYPE": 293,
    "MAXCOPYNUMBER": 5,
    "POLICYSTATUS": 0,
```

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```
    "PARENTID": "9239341432814501896",
    "NAME": "aaaa",
    "POLICYTYPE": "0",
    "POLICYPERIODTYPE": "1",
    "DAYSOFWEEK": "[1,2,3]",
    "HOUR": 5,
    "MINUTE": 35
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.12 Interface for Querying a HyperVault Policy Information

Function

This interface is used to query basic information about a HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Policy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 295: HyperVault policy
ID	Mandatory	string	Policy ID.
NAME	Mandatory	string	Policy name.
PARENTTYPE	Mandatory	enum	Type of the parent object: HyperVault. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object: HyperVault ID.
POLICYTYPE	Mandatory	string(enum)	Policy type. **The value is described as follows:** 0: local policy 1: remote policy **Note:**"-1" indicates a invalid value.
MAXCOPYNUMBER	Mandatory	string(uint32)	Threshold for keeping a copy. **The value is described as follows:** 3 to 2048.

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Parameter	Mandatory/ Conditional	Type	Description
POLICYPERIODTYPE	Mandatory	string(enum)	Type of the policy execution period. **The value is described as follows:** 0: daily 1: weekly 2: monthly
DAYSOFMONTH	Conditional	string(array)	List for the number of days per month. **The value is described as follows:** The value ranges from 1 to 31. For example, deliver [1,2,3,5]. All options are selected by default. **Note:**This field is returned when the backup period is monthly.
DAYSOFWEEK	Conditional	string(array)	List for the weekday per week. **The value is described as follows:** The value ranges from 0 to 6. For example, deliver [1,2]. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday **Note:**This field is returned when the backup period is weekly.

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Parameter	Mandatory/ Conditional	Type	Description
DAYOFINTERVAL	Conditional	string(uint32)	Based on the interval of days. **The value is described as follows:** 1 to 7. **Note:**This field is returned when the backup period is daily.
STARTTIME	Mandatory	string	Accurate time to execute the policy. **The value is described as follows:** The format of the value is HH:MM. The value can be any specific moment in a range from 00:00 to 23:59. The default value is 00:00.
HOUR	Mandatory	string(uint32)	Based on the interval of hours. **The value is described as follows:** 0 to 23.
MINUTE	Mandatory	string(uint32)	Interval of minutes for policy execution (the minimal interval is five minutes). **The value is described as follows:** 0 to 59. **Note:**The minimum interval is 5 minutes.
POLICYSTATUS	Mandatory	string(enum)	Policy status. **The value is described as follows:** 0: on 1: off

Example

- Querying basic information about a HyperVault policy.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVaultPolicy/
109239341432814501888 0
```

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```
Response:
 {
    "data": [
        {
            "DAYSOFWEEK": "[2,3]",
            "HOUR": "1",
            "ID": "1092393414328145018880",
            "MAXCOPYNUMBER": "5",
            "MINUTE": "30",
            "NAME": "111",
            "PARENTID": "9239341432814501888",
            "PARENTTYPE": 293,
            "POLICYPERIODTYPE": "1",
            "POLICYSTATUS": "0",
            "POLICYTYPE": "0",
            "STARTTIME": "--",
            "TYPE": 295
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.13 Interface for Recovering a HyperVault Copy

Function

This interface is used to recover a HyperVault copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to restore copy {0} to primary file system {1}.

If this operation is performed on the primary storage system, data in the file system will be restored to the data on the copy in the primary storage system. Copies created after this copy will be deleted.

If this operation is performed on the secondary storage system, data in the primary file system will be restored to the data on the copy in the secondary storage system. The data restoration period is determined by the data volume on the copy. If you choose to clean up the primary file system when starting restoration, you need to manually delete user snapshots from the primary file system. This restoration task cannot be canceled. After the restoration is complete, data on the primary file system will be deleted.

Suggestion: Before performing this operation, back up the data on the primary file system and ensure that the selected copy is correct. Besides, ensure that the primary and secondary file systems are not being read or written by hosts.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultCopy/RestoreHyperVaultCopy

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Copy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
CLEANPRIMARYFS	Optional	int32	Clear primary file system. **The value is described as follows:** 1: yes 0: no **Default:**0: no **Note:**If this parameter is delivered with 1,it is valid when delivered on the secondary file system.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Recovering a HyperVault copy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultCopy/
RestoreHyperVaultCopy
```

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```
{
    "ID": "2313242778665653",
    "CLEANPRIMARYFS": 0
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.14 Interface for Querying a HyperVault Copy Information

Function

This interface is used to query a HyperVault copy Information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultCopy/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Copy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 296: HyperVault copy
ID	Mandatory	string	Copy ID.
NAME	Mandatory	string	Copy name.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Policy name. **The value is described as follows:** 1: normal 2: fault 10: busy
POLICYID	Mandatory	string	Health status.
POLICYNAME	Mandatory	string	Policy ID.
POLICYTYPE	Mandatory	string(enum)	Policy type. **The value is described as follows:** 0: local policy 1: remote policy **Note:**"-1" indicates a invalid value.
COPYCAPACITY	Mandatory	string(uint64)	Copy capacity. **Unit:**bytes
CREATETIME	Mandatory	string(uint64)	Creation time of a copy.
CUSTOMNAME	Mandatory	string	Custom Name.
RESTORENAME	Mandatory	string	Resource Name.

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Parameter	Mandatory/ Conditional	Type	Description
RESTOREABLE	Mandatory	string(enum)	Restorable or not. **The value is described as follows:** 0: yes 1: no

Example

- Querying HyperVault copy Information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVaultCopy/
109239341432814501888178670639513 60

Response:
 {
    "data": {
        "COPYCAPACITY": "0",
        "CREATETIME": "1454408762",
        "CUSTOMNAME": "NA",
        "HEALTHSTATUS": "1",
        "ID": "109239341432814501888178670639513 60",
        "NAME": "HyperVault_Local_NA_Manual_20160202102601_00503854",
        "PARENTID": "9239341432814501888",
        "PARENTTYPE": 293,
        "POLICYID": "--",
        "POLICYNAME": "--",
        "POLICYTYPE": "2",
        "RESTOREABLE": "0",
        "RESTORENAME": "FileSystem0010000",
        "TYPE": 296
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.15 Interface for Batch Querying HyperVault Copy Information

Function

This interface is used to batch query HyperVault copy Information.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultCopy

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	HyperVault ID.
filter	Conditional	string	Query criteria. **The value is described as follows:** Parameters NAME, POLICYNAME, POLICYTYPE and RESTOREABLE are supported. **Note:**This field must be delivered if parameter range is not delivered.
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:** This field must be delivered if parameter filter is not delivered. A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
timeConversion	Optional	uint32	Time conversion. **The value is described as follows:** 0: UTC 1: Local time

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 296: HyperVault copy
ID	Mandatory	string	Copy ID.
NAME	Mandatory	string	Copy name.
PARENTTYPE	Mandatory	enum	Type of the parent object: All-In-One backup. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object: All-In-One backup ID.
HEALTHSTATUS	Mandatory	string(enum)	Policy name. **The value is described as follows:** 1: normal 2: fault 10: busy
POLICYID	Mandatory	string	Health status.
POLICYNAME	Mandatory	string	Policy ID.

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Parameter	Mandatory/ Conditional	Type	Description
POLICYTYPE	Mandatory	string(enum)	Policy type. **The value is described as follows:** 0: local policy 1: remote policy **Note:**"-1" indicates a invalid value.
COPYCAPACITY	Mandatory	string(uint64)	Copy capacity, expressed in bytes. **Unit:**bytes
CREATETIME	Mandatory	string(uint64)	Creation time of a copy.
CUSTOMNAME	Mandatory	string	Custom Name.
RESTORENAME	Mandatory	string	Resource Name.
RESTOREABLE	Mandatory	string(enum)	Restorable or not. **The value is described as follows:** 0: yes 1: no

Example

- Batch querying HyperVault copy Information.

```
Request: GET /deviceManager/rest/210235843910E6000009/HyperVaultCopy?
PARENTTYPE=293&PARENTID=0&range=[0-100]

Response:
 {
    "data": [
        {
            "COPYCAPACITY": "0",
            "CREATETIME": "1454408762",
            "CUSTOMNAME": "NA",
            "HEALTHSTATUS": "1",
            "ID": "10923934143281450188817867063951360",
            "NAME": "HyperVault_Local_NA_Manual_20160202102601_00503854",
            "PARENTID": "9239341432814501888",
            "PARENTTYPE": 293,
            "POLICYID": "--",
            "POLICYNAME": "--",
            "POLICYTYPE": "2",
            "RESTOREABLE": "0",
            "RESTORENAME": "FileSystem0010000",
            "TYPE": 296
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.14.16 Interface for Disabling a HyperVault Policy

Function

This interface is used to disable a HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to disable a HyperVault policy ({0}).

This operation disables the automatic periodic backup function of this policy.

Before performing this operation, ensure that you have selected the correct HyperVault policy.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Policy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
POLICYSTATUS	Mandatory	enum	Policy status. **The value is described as follows:** 1: off

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Disabling a HyperVault policy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultPolicy/2
{
    "POLICYSTATUS": 1
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.17 Interface for Deleting a HyperVault

Function

This interface is used to delete a HyperVault.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ISLOCALDELETE	Optional	enum	Indicates whether a remote replication task can be locally deleted when the link is disconnected. When this parameter is not delivered, the default value is no, indicating a remote replication task cannot be locally deleted. **The value is described as follows:** 0: can be locally deleted 1: cannot be locally deleted **Default:**1: cannot be locally deleted
ID	Mandatory	string	HyperVault ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a HyperVault.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/HyperVault/
1175846375907196937?ISLOCALDELETE=0

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.12.14.18 Interface for Deleting a HyperVault Policy

Function

This interface is used to delete a HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Policy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a HyperVault policy.

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```
Request: DELETE /deviceManager/rest/210235843910E6000009/HyperVaultPolicy/2

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.19 Interface for Manually Executing a HyperVault

Function

This interface is used to manually execute a HyperVault.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault/start

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperVault ID. **The value is described as follows:** Contains digits cannot start with 0 if there is more than one digit.
ACTIONTYPE	Mandatory	enum	Type of the manually enabled backup. **The value is described as follows:** 0: local 1: remote

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Parameter	Mandatory/Optional/Conditional	Type	Description
CUSTOMNAME	Optional	string	User-Defined Name. **The value is described as follows:** Contains digits, letter, and underscores (_). **Length:**0~31
POLOCYID	Optional	string	HyperVault policy ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Manually executing a HyperVault.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVault/start
{
    "ID": "465463534523545",
    "ACTIONTYPE": 0
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.20 Interface for Creating a HyperVault

Function

This interface is used to create a HyperVault.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to set the HyperVault restoration speed to the highest.

After this operation, the HyperVault restoration will be performed at the highest speed. As a result, the performance of other services on the storage array will be adversely affected .

Suggestion: Before performing this operation, ensure that the impact on other services is acceptable.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
RESOURCETYPE	Mandatory	enum	Resource type. **The value is described as follows:** 40: file system
REMOTERESTORERATE	Optional	enum	Remote recovery speed. **The value is described as follows:** 3: high 4: highest **Default:**3: high **Note:**This parameter can be delivered for remote backup.
LOCALRESOURCEID	Mandatory	string	ID of the resource to back up.

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Parameter	Mandatory/Optional/Conditional	Type	Description
REMOTEDEVICEID	Optional	string	Remote device ID. **Note:**It indicates enabling remote backup when this parameter is delivered.
REMOTERESOURCEID	Conditional	string	Remote resource ID. **Note:**This parameter must be delivered when remote backup is enabled.
RECOVERPOLICY	Conditional	enum	Faulty recovery policy. **The value is described as follows:** 1: When the AUTO link reconnects after being disconnected, backup automatically recovers and resumes to back up data from the primary end. 2: Backup must be manually recovered when the MANUAL link reconnects. Data at the secondary end retains the state preserved at the time when links are interrupted, and is not automatically backed up from the primary end. **Note:**This parameter must be delivered when remote backup is enabled.
BACKUPRATE	Conditional	enum	Backup rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**This parameter must be delivered when remote backup is enabled.

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Parameter	Mandatory/Optional/Conditional	Type	Description
STARTBACKUPAFTERCREATE	Conditional	enum	Whether to start the backup after remote backup is created. **The value is described as follows:** 0: backup init 1: backup not init **Note:**This parameter must be delivered when remote backup is enabled.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
ENABLECOMPRESS	Optional	enum	Link compression. **The value is described as follows:** 0: does not compress transferred data 1: compresses transferred data **Default:**0: does not compress transferred data

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 293: HyperVault
ID	Mandatory	string	HyperVault ID.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: running 26: splited 34: interrupted 33: to be recoverd 35: invalid 46: idle
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 11: LUN 40: FileSystem
LOCALRESOURCEID	Mandatory	string	ID of the resource to back up.
LOCALRESOURCENAME	Mandatory	string	Name of the resource to back up.
ENABLEREMOTEBACKUP	Mandatory	string(enum)	Indicates whether remote backup is enabled. **The value is described as follows:** 0: yes 1: no
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTERESOURCENAME	Mandatory	string	Remote resource name.
REMOTERESOURCEID	Mandatory	string	Remote resource ID.
ISPRIMARY	Mandatory	string(enum)	Indicates whether it is the primary end. **The value is described as follows:** 0: source end 1: target end

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Parameter	Mandatory/ Conditional	Type	Description
RECOVERPOLICY	Mandatory	string(enum)	Faulty recovery policy. **The value is described as follows:** 1: When the AUTO link reconnects after being disconnected, backup automatically recovers and resumes to back up data from the primary end. 2: Backup must be manually recovered when the MANUAL link reconnects. Data at the secondary end retains the state preserved at the time when links are interrupted, and is not automatically backed up from the primary end. **Note:**"-1" indicates a invalid value.
BACKUPRATE	Mandatory	string(enum)	Backup rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**"-1" indicates a invalid value.
LOCALRESOURCECA-PACITY	Mandatory	string(uint64)	Capacity of the local resource (bytes). **Unit:**bytes
REMOTERESOURCEC APACITY	Mandatory	string(uint64)	Capacity of the remote resource (bytes). **Unit:**bytes **Note:**"-1" indicates a invalid value.

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Parameter	Mandatory/ Conditional	Type	Description
REMOTERESTORERATE	Mandatory	string(enum)	Remote recovery speed. **The value is described as follows:** 3: high 4: highest **Note:**"-1" indicates a invalid value.
ENABLECOMPRESS	Mandatory	string(enum)	Link compression. **The value is described as follows:** 0: does not compress transferred data 1: compresses transferred data **Note:**"255" indicates a invalid value.

Example

- Creating a HyperVault.

```
Request: POST/deviceManager/rest/210235843910E6000009/HyperVault
{
    "LOCALRESOURCEID": "19",
    "RESOURCETYPE": 40
}

Response:
{
    "data": {
        "BACKUPRATE": "-1",
        "ENABLEREMOTEBACKUP": "1",
        "HEALTHSTATUS": "1",
        "ID": "9239341432814501890",
        "ISPRIMARY": "0",
        "LOCALRESOURCECAPACITY": "1073741824",
        "LOCALRESOURCEID": "19",
        "LOCALRESOURCENAME": "FileSystem0160004",
        "RECOVERPOLICY": "-1",
        "REMOTEDEVICEID": "--",
        "REMOTERESOURCECAPACITY": "-1",
        "REMOTERESOURCEID": "--",
        "REMOTERESOURCENAME": "--",
        "RESOURCETYPE": "40",
        "RUNNINGSTATUS": "46",
        "TYPE": 293,
        "REMOTERESTORERATE": "-1",
        "ENABLECOMPRESS":"255"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.14.21 Interface for Modifying a HyperVault

Function

This interface is used to modify a HyperVault.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to set the HyperVault restoration speed to the highest.

After this operation, the HyperVault restoration will be performed at the highest speed. As a result, the performance of other services on the storage array will be adversely affected .

Suggestion: Before performing this operation, ensure that the impact on other services is acceptable.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	HyperVault ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLEREMOTEBACKUP	Conditional	enum	Indicates whether remote backup is enabled. **The value is described as follows:** 0: yes 1: no **Note:**This parameter must be delivered when remote backup is enabled.
REMOTERESTORERATE	Optional	enum	Remote recovery speed. **The value is described as follows:** 3: high 4: highest **Note:**This parameter can be delivered when a remote backup is started.
REMOTEDEVICEID	Conditional	string	Remote device ID. **Note:**This parameter must be delivered when a remote backup is started.
REMOTERESOURCEID	Conditional	string	Remote resource ID. **Note:**This parameter must be delivered when a remote backup is started.

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Parameter	Mandatory/Optional/Conditional	Type	Description
RECOVERPOLICY	Optional	enum	Faulty recovery policy. **The value is described as follows:** 1: When the AUTO link reconnects after being disconnected, backup automatically recovers and resumes to back up data from the primary end. 2: Backup must be manually recovered when the MANUAL link reconnects. Data at the secondary end retains the state preserved at the time when links are interrupted, and is not automatically backed up from the primary end.
BACKUPRATE	Optional	enum	Backup rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
ENABLECOMPRESS	Optional	enum	Link compression. **The value is described as follows:** 0: does not compress transferred data 1: compresses transferred data

Result

N/A

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Example

- Modifying a HyperVault.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVault/0
{
    "RECOVERPOLICY": "1",
    "BACKUPRATE": "2"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.22 Interface for Stopping a HyperVault Job

Function

This interface is used to stop a HyperVault job.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to cancel a HyperVault job ({0}).

This operation restores data in the primary and secondary file systems to the state before the HyperVault job is executed.

Before performing this operation, ensure that you have selected the correct task to delete.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultJob/stop

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Job ID. **The value is described as follows:** Contains digits and cannot start with 0 if there is more than one digit.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Stopping a HyperVault job.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultJob/stop
{
    "ID": "0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.23 Interface for Querying the Number of HyperVault

Function

This interface is used to query the number of HyperVault.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault/count

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters LOCALRESOURCENAME, REMOTERESOURCENAME, HEALTHSTATUS and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried HyperVault.

Example

- Querying the number of HyperVault.

```
Request: GET /deviceManager/rest/1016964156/HyperVault/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.14.24 Interface for Querying the Number of HyperVault Policy

Function

This interface is used to query the number of HyperVault policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultPolicy/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameter PARENTID is supported.
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Optional	string	ID of the parent object.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried HyperVault policy.

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Example

- Querying the number of HyperVault policy.

```
Request: GET /deviceManager/rest/210235982510G2000015/HyperVaultPolicy/count?
PARENTTYPE=293&PARENTID=10726406896759341056&filter=PARENTID:
10726406896759341056

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.25 Interface for Querying the Number of HyperVault Copy

Function

This interface is used to query the number of HyperVault copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HYPERVAULTCOPY/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, POLICYNAME, POLICYTYPE, RESTOREABLE and CREATETIME are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 293: HyperVault
PARENTID	Mandatory	string	ID of the parent object.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried HyperVault copy.

Example

- Querying the number of HyperVault copy.

```
Request: GET /deviceManager/rest/210235982510G2000015/HYPERVAULTCOPY/count?
PARENTTYPE=293&PARENTID=10726406896759341056
Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.26 Interface for Querying the Number of HyperVault Job

Function

This interface is used to query the number of HyperVault job.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultJob/count

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters PARENTID, JOBTYPE and RUNNINGSTATUS are supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried HyperVault job.

Example

- Querying the number of HyperVault job.

```
Request: GET /deviceManager/rest/1016964156/HyperVaultJob/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.12.14.27 Interface for Modifying a HyperVault Copy

Function

This interface is used to modify a HyperVault copy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVaultCopy/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Copy ID.
CUSTOMNAME	Optional	string	User-defined Name. **The value is described as follows:** Cannot be empty and contains only letters, digits and underscores (_). **Length:**1~31

Result

N/A

Example

- Modifying a HyperVault copy.

```
Request: PUT /deviceManager/rest/210235843910E6000009/HyperVaultCopy/
110726406896759341056178670639513 60
{
    "CUSTOMNAME": "test"
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.12.14.28 Interface for Implementing Associated Query of HyperVault Information

Function

This interface is used to implement associated query of HyperVault.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/HyperVault/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Associated object type. **The value is described as follows:** 40: file system
ASSOCIATEOBJID	Mandatory	string	Associated object ID.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 293: HyperVault
ID	Mandatory	string	HyperVault ID.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: normal 2: fault
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 2: running 26: splited 34: interrupted 33: to_be_recovered 46: idle 35: invalid
RESOURCETYPE	Mandatory	string(enum)	Resource type. **The value is described as follows:** 40: file system
LOCALRESOURCEID	Mandatory	string	ID of the resource to back up.
LOCALRESOURCENAME	Mandatory	string	Name of the resource to back up.
ENABLEREMOTEBACKUP	Mandatory	string(enum)	Indicates whether remote backup is enabled. **The value is described as follows:** 0: yes 1: no
REMOTEDEVICEID	Mandatory	string	Remote device ID.
REMOTERESOURCENAME	Mandatory	string	Remote resource name.
REMOTERESOURCEID	Mandatory	string	Remote resource ID.
ISPRIMARY	Mandatory	string(enum)	Indicates whether it is the primary end. **The value is described as follows:** 0: source end 1: target end

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Parameter	Mandatory/ Conditional	Type	Description
RECOVERPOLICY	Mandatory	string(enum)	Faulty recovery policy. **The value is described as follows:** 1: When the AUTO link reconnects after being disconnected, backup automatically recovers and resumes to back up data from the primary end. 2: Backup must be manually recovered when the MANUAL link reconnects. Data at the secondary end retains the state preserved at the time when links are interrupted, and is not automatically backed up from the primary end.
BACKUPRATE	Mandatory	string(enum)	Backup rate. **The value is described as follows:** 1: low 2: medium 3: high 4: highest
LOCALRESOURCECA-PACITY	Mandatory	string(uint64)	Capacity of the local resource. **Unit:**bytes
REMOTERESOURCEC APACITY	Mandatory	string(uint64)	Capacity of the remote resource. **Unit:**bytes
REMOTERESTORERAT E	Mandatory	string(enum)	Remote recovery speed. **The value is described as follows:** 3: high 4: highest **Note:**The other value returned are invalid.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLECOMPRESS	Mandatory	string(enum)	Link compression. **The value is described as follows:** 0: does not compress transferred data 1: compresses transferred data **Note:**"255" indicates a invalid value.

Example

- Implementing associated query of HyperVault.

```
Request: GET /deviceManager/rest/1016964156/HyperVault/associate?
ASSOCIATEOBJTYPE=40&ASSOCIATEOBJID=0

Response:
{
    "data": [
        {
            "BACKUPRATE": "-1",
            "ENABLEREMOTEBACKUP": "1",
            "HEALTHSTATUS": "1",
            "ID": "2",
            "ISPRIMARY": "0",
            "LOCALRESOURCECAPACITY": "4294967296",
            "LOCALRESOURCEID": "0",
            "LOCALRESOURCENAME": "FileSystem0010000",
            "RECOVERPOLICY": "-1",
            "REMOTEDEVICEID": "",
            "REMOTERESOURCECAPACITY": "-1",
            "REMOTERESOURCEID": "",
            "REMOTERESOURCENAME": "",
            "REMOTERESTORERATE": "-1",
            "RESOURCETYPE": "40",
            "RUNNINGSTATUS": "1",
            "TYPE": 293,
            "ENABLECOMPRESS":"0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13 File system storage service

4.13.1 file_system

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4.13.1.1 Interface for Querying File System Information

Function

This interface is used to query basic information about a file system.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 40: file system
ID	Mandatory	string	ID.

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Parameter	Mandatory/ Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains only 1 to 255 digits, letters and underscores .
ENABLEDEDUP	Mandatory	string(bool)	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled
RECYCLESWITCH	Mandatory	string(enum)	Recycle bin switch. **The value is described as follows:** 0: off 1: on
IOCLASSID	Mandatory	string	I/O class ID.
CAPACITYTHRESHOLD	Mandatory	string(uint64)	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. The default value is 90%.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 216: storage pool
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: NORMAL

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Parameter	Mandatory/ Conditional	Type	Description
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 27: ONLINE 28: OFFLINE
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(enum)	File system type. **The value is described as follows:** 0: common file system 1: WORM file system
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
INITIALALLOCCAPACITY	Mandatory	string(uint64)	Initially allocated capacitys. **Unit:**sectors **Note:**The sector size is 512 bytes.
SNAPSHOTRESERVEPER	Mandatory	string(uint32)	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
AUTODELSNAPSHOTENABLE	Mandatory	string(bool)	Indicates whether the earliest snapshots (manual snapshots and periodic snapshots) can be automatically deleted. **The value is described as follows:** true:enable false:disabled
SNAPSHOTUSECAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots. **Unit:**sectors **Note:**The sector size is 512 bytes.
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
SECTORSIZE	Mandatory	string(uint32)	Block size. **The value is described as follows:** The value can only be 4 KB, 8 KB, 16 KB, 32 KB, or 64 KB. **Unit:**bytes
OWNINGCONTROLLER	Mandatory	string	ID of the owning controller.
WORKINGCONTROLLER	Mandatory	string	ID of the working controller.
CHECKSUMENABLE	Mandatory	string(bool)	Data parity switch. **The value is described as follows:** true: on false: off
ATIME	Mandatory	string(bool)	Indicates whether the access time is updated after a file is read. **The value is described as follows:** true: enable false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
READONLY	Mandatory	string(bool)	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes
IOPRIORITY	Mandatory	string(enum)	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high
CACHEPARTITIONID	Mandatory	string	Cache partition ID.
ISCLONEFS	Mandatory	string(bool)	Indicates whether a file system is a clone. **The value is described as follows:** true: yes false: no
ENABLECOMPRESSION	Mandatory	string(bool)	Compression enabled or not. **The value is described as follows:** true: enable false: disabled
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
WORMTYPE	Mandatory	string(enum)	WORM service type. **The value is described as follows:** 1: compliance mode 3: enterprise mode

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Parameter	Mandatory/ Conditional	Type	Description
WORMMINPROTECTPERIOD	Mandatory	string(uint64)	Minimum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. In addition, infinite is supported.
WORMMAXPROTECTPERIOD	Mandatory	string(uint64)	Maximum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. The default value is 70 years. In addition, infinite is supported.
WORMDEFPROTECTPERIOD	Mandatory	string(uint64)	Default protection period. **The value is described as follows:** Range: minimum protection period ≤ default protection period ≤ maximum protection period.
WORMAUTOLOCK	Mandatory	string(bool)	Automatic locking mode of WORM. **The value is described as follows:** true: on false: off
WORMAUTOLOCKTIME	Mandatory	string(uint32)	Automatic lock time. **The value is described as follows:** The default value is 2 hours. The value ranges from 2 hours to 7 days
WORMAUTODEL	Mandatory	string(bool)	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off

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Parameter	Mandatory/ Conditional	Type	Description
WRITECHECK	Mandatory	string(bool)	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: on false: off
TIMINGSNAPSHOTMAXNUM	Mandatory	string(uint32)	Maximum number of periodic snapshots.
ISSHOWSNAPDIR	Mandatory	string(bool)	Snapshot directory visible or not. **The value is described as follows:** true: yes false: no
DATATRANSFERPOLICY	Mandatory	string(enum)	Data block migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTSNAPSHOTNAME	Conditional	string	Name of the parent read-only snapshot. **Note:**This field must be returned if the specified file system is a clone file system.
PARENTFILESYSTEM-NAME	Mandatory	string	Name of the parent file system.
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: no protection 1: based on capacity 2: based on performance 3: based on high performance 4: based on tiers
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache partition ID. **Note:**This field is not supported by V3 all-flash array series.
ENABLEROLLBACKMODE	Conditional	string(bool)	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
AVAILABLECAPCITY	Mandatory	string(uint64)	Available file system capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
AVAILABLEANDALLOCCAPACITYRATIO	Mandatory	string(uint32)	Percentage of available file system capacity to used capacity. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
ENABLETIMINGSNAP-SHOT	Mandatory	string(bool)	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTSCHEDULEID	Mandatory	string	Timing policy ID of file system read-only snapshots.
ROOT	Mandatory	string	Root path.
LOCALACCESSDEFI-NITIONREQUIRED	Mandatory	string(enum)	Local access options are supported. **The value is described as follows:** 2: A file system needs to be defined in the local access 3: A file system needs to be defined at a fixed directory in the local access 4: A file system does not need to be defined in the local access
PATHNAMESEPARATORSTRING	Mandatory	string	Directory separator.
CASESENSITIVE	Mandatory	string(bool)	Indicates whether a file name is case sensitive. **The value is described as follows:** true: yes false: no
CASEPRESERVED	Mandatory	string(bool)	Indicates whether the file name size is reserved. **The value is described as follows:** true: yes false: no
MAXFILENAMELENGTH	Mandatory	string(uint32)	Maximum file name length.

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Parameter	Mandatory/ Conditional	Type	Description
ACTUALFILESYSTEM-TYPE	Mandatory	string(enum)	Actual file system type. **The value is described as follows:** 1: Wushan file system 2: NOFS
DEDUPSAVEDCAPACI-TY	Mandatory	string(uint64)	Capacity saved by deduplication, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
COMPRESSIONSAVED CAPACITY	Mandatory	string(uint64)	Capacity saved by compression, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
TOTALSAVEDCAPACI-TY	Mandatory	string(uint64)	Total capacity saved, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:**This field is not supported by V3 all-flash array series.
SC_CACHEDSIZE	Mandatory	string(uint32)	SmartCache size, expressed in kilobytes. **Unit:**KB **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio (%). **Unit:**% **Note:**This field is not supported by V3 all-flash array series.
MINPROTECTTIMEU-NIT	Mandatory	string(enum)	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
MAXPROTECTTIMEU-NIT	Mandatory	string(enum)	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
DEFPROTECTTIMEU-NIT	Mandatory	string(enum)	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year
AUTOLOCKTIMEUNIT	Mandatory	string(enum)	Automatic lock time unit. **The value is described as follows:** 46: day 47: month 48: year
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication . **Unit:**%
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio. **Unit:**%
WORMCLOCKTIME	Mandatory	string(uint64)	WORM clock time, expressed in seconds. **Unit:**seconds
WORMEXPIREDTIME	Mandatory	string(uint64)	WORM expiration time, expressed in seconds. **Unit:**seconds
MINSIZEFSCAPACITY	Mandatory	string(uint64)	Minimum space that can be reduced for a thin file system. **Unit:**sectors
inodeTotalCount	Mandatory	string(uint32)	Total number of inodes.
inodeUsedCount	Mandatory	string(uint32)	Number of used inodes.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
PARENTSNAPSHOTID	Mandatory	string	ID of the parent read-only snapshot. **Note:**This field must be returned if the specified file system is a clone file system.
ENABLEDEDUPCHECK	Mandatory	string(bool)	Whether to enable the function of checking byte by byte. **The value is described as follows:** true: on false: off **Note:**This field is valid for the CLI only.
REMOTEREPLICATIONIDS	Mandatory	string(array)	Remote replication IDs.

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Parameter	Mandatory/ Conditional	Type	Description
APPLICATIONSCENARIO	Mandatory	string(enum)	Application Scenario. **The value is described as follows:** 1:Database 2:VM 3:User-defined
HYPERMETROPAIRIDS	Mandatory	string(array)	Hyper Metro pair IDs.
HYPERVAULTPAIRIDS	Mandatory	string(array)	Hyper Vault Pair IDs.
SNAPSHOTRESERVE-CAPACITY	Mandatory	string(uint64)	Reserved snapshot capacity.
CHILDRENCLONEFS-NUM	Mandatory	string(uint32)	Number of child clone file systems.
ISDELETEPARENTS-NAPSHOT	Mandatory	string(bool)	Whether to delete the read-only snapshots associated with the parent file system. **The value is described as follows:** true: yes false: no
SPLITENABLE	Mandatory	string(bool)	Split switch. **The value is described as follows:** true: start splitting false: stop splitting
SPLITPROGRESS	Mandatory	string(uint32)	Split progress. **Unit:**%
SPLITSPEED	Mandatory	string(enum)	Split speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**The other values returned are invalid.

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Parameter	Mandatory/ Conditional	Type	Description
SPLITSTATUS	Mandatory	string(enum)	Split status. **The value is described as follows:** 1: not start 2: splitting 3: queuing 4: abnormal **Note:**The other values returned are invalid.
SPACESELFADJUSTINGMODE	Mandatory	string(enum)	Sets the automatic capacity adjustment mode. **The value is described as follows:** 0: off 1: grow 2: grow shrink
AUTOSIZEENABLE	Mandatory	string(enum)	Switch of automatic capacity adjustment. **The value is described as follows:** 0: off 1: on
AUTOSHRINKTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic reduction. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.

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Parameter	Mandatory/ Conditional	Type	Description
AUTOGROWTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic expansion. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.
MINAUTOSIZE	Mandatory	string(uint64)	Lower limit of the automatic reduction. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
MAXAUTOSIZE	Mandatory	string(uint64)	Upper limit of the automatic expansion. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
AUTOSIZEINCREMENT	Mandatory	string(uint64)	Capacity change of a single expansion/ reduction. **The value is described as follows:** 64MB~100GB **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
SPACERECYCLEMODE	Mandatory	string(enum)	Capacity recycle mode. **The value is described as follows:** 0: auto size first 1: delete snapshot first
allocatedPoolQuota	Mandatory	string(uint64)	Capacity quota in the pool that a file system has applied for **Unit:**sectors

Example

- Querying basic information about a file system.

```
Request: GET/deviceManager/rest/210235843910E6000009/filesystem/12Response: {
    "data": {
        "ACTUALFILESYSTEMTYPE": "2",
        "ALLOCCAPACITY": "429880163",
        "ALLOCTYPE": "1",
        "APPLICATIONSCENARIO": "3",
        "ATIME": "false",
        "AUTODELSNAPSHOTENABLE": "false",
        "AUTOGROWTHRESHOLDPERCENT": "85",
        "AUTOLOCKTIMEUNIT": "0",
        "AUTOSHRINKTHRESHOLDPERCENT": "50",
        "AUTOSIZEENABLE": "1",
        "AUTOSIZEINCREMENT": "2097152",
        "AVAILABLEANDALLOCCAPACITYRATIO": "20",
        "AVAILABLECAPCITY": "1717603456",
        "CACHEPARTITIONID": "",
        "CAPABILITY": "2",
        "CAPACITY": "2147483648",
        "CAPACITYTHRESHOLD": "90",
        "CASEPRESERVED": "true",
        "CASESENSITIVE": "true",
        "CHECKSUMENABLE": "true",
        "CHILDRENCLONEFSNUM": "0",
        "COMPRESSION": "0",
        "COMPRESSIONSAVEDCAPACITY": "0",
        "COMPRESSIONSAVEDRATIO": "0",
        "DATATRANSFERPOLICY": "0",
        "DEDUPSAVEDCAPACITY": "0",
        "DEDUPSAVEDRATIO": "0",
        "DEFPROTECTTIMEUNIT": "0",
        "DESCRIPTION": "",
        "ENABLECOMPRESSION": "true",
        "ENABLEDEDUP": "true",
        "ENABLEDEDUPCHECK": "false",
        "ENABLEROLLBACKMODE": "false",
        "ENABLETIMINGSNAPSHOT": "false",
        "HEALTHSTATUS": "1",
        "HYPERMETROPAIRIDS": "[\"223c1e09335a0003\"]",
        "HYPERVAULTPAIRIDS": "[]",
        "ID": "12",
        "INITIALALLOCCAPACITY": "0",
        "INITIALDISTRIBUTEPOLICY": "0",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
```

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```
        "ISCLONEFS": "false",
        "ISDELETEPARENTSNAPSHOT": "false",
        "ISSHOWSNAPDIR": "true",
        "LOCALACCESSDEFINITIONREQUIRED": "4",
        "MAXAUTOSIZE": "2576980377",
        "MAXFILENAMELENGTH": "256",
        "MAXPROTECTTIMEUNIT": "0",
        "MINAUTOSIZE": "2147483648",
        "MINPROTECTTIMEUNIT": "0",
        "MINSIZEFSCAPACITY": "432016793",
        "NAME": "fs4",
        "OWNINGCONTROLLER": "0B",
        "PARENTFILESYSTEMNAME": "--",
        "PARENTID": "0",
        "PARENTNAME": "pool0",
        "PARENTSNAPSHOTID": "",
        "PARENTTYPE": 216,
        "PATHNAMESEPARATORSTRING": "/",
        "READONLY": "false",
        "RECYCLESWITCH": "4",
        "REMOTEREPLICATIONIDS": "[]",
        "ROOT": "/fs4",
        "RUNNINGSTATUS": "27",
        "SC_CACHEDSIZE": "0",
        "SC_HITRAGE": "0",
        "SECTORSIZE": "65536",
        "SMARTCACHEPARTITIONID": "",
        "SMARTCACHESTATE": "0",
        "SNAPSHOTRESERVECAPACITY": "429496729",
        "SNAPSHOTRESERVEPER": "20",
        "SNAPSHOTUSECAPACITY": "0",
        "SPACERECYCLEMODE": "0",
        "SPACESELFADJUSTINGMODE": "0",
        "SPLITENABLE": "false",
        "SPLITPROGRESS": "-1",
        "SPLITSPEED": "5",
        "SPLITSTATUS": "5",
        "SUBTYPE": "0",
        "TIMINGSNAPSHOTMAXNUM": "16",
        "TIMINGSNAPSHOTSCHEDULEID": "",
        "TOTALSAVEDCAPACITY": "0",
        "TOTALSAVEDRATIO": "0",
        "TYPE": 40,
        "WORKINGCONTROLLER": "0B",
        "WORMAUTODEL": "false",
        "WORMAUTOLOCK": "false",
        "WORMAUTOLOCKTIME": "0",
        "WORMCLOCKTIME": "646",
        "WORMDEFPROTECTPERIOD": "0",
        "WORMEXPIREDTIME": "9223372036854775807",
        "WORMMAXPROTECTPERIOD": "0",
        "WORMMINPROTECTPERIOD": "0",
        "WORMTYPE": "0",
        "WRITECHECK": "false",
        "allocatedPoolQuota": "429916160",
        "inodeTotalCount": "214748364",
        "inodeUsedCount": "0",
        "vstoreId": "1",
        "vstoreName": "vsUser1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


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4.13.1.2 Interface for Batch Querying File System Information

Function

This interface is used to batch query basic information about file systems.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, ISCLONEFS,and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
RSSTYPE	Optional	enum	Type of file systems that support value-added features. **The value is described as follows:** 23: primary file system that supports remote replication 24: secondary file system that supports remote replication 27: primary file system that supports NAS HyperMetro 28: secondary file system that supports NAS HyperMetro 29: primary file system that supports HyperVault 30: secondary file system that supports HyperVault

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 40: file system
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Contains 1 to 255 digits, letters and underscores (_).

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEDEDUP	Mandatory	string(bool)	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled
RECYCLESWITCH	Mandatory	string(enum)	Recycle bin switch. **The value is described as follows:** 0: off 1: on
IOCLASSID	Mandatory	string	I/O class ID.
CAPACITYTHRESHOLD	Mandatory	string(uint64)	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. The default value is 90%.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 216: storage pool
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: NORMAL
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 27: ONLINE 28: OFFLINE
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
SUBTYPE	Mandatory	string(enum)	File system type. **The value is described as follows:** 0: common file system 1: WORM file system
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
INITIALALLOCCAPACITY	Mandatory	string(uint64)	Initially allocated capacitys. **Unit:**sectors **Note:**The sector size is 512 bytes.
SNAPSHOTRESERVEPER	Mandatory	string(uint32)	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Unit:**%
AUTODELSNAPSHOTENABLE	Mandatory	string(bool)	Indicates whether the earliest snapshots (manual snapshots and periodic snapshots) can be automatically deleted. **The value is described as follows:** true:enable false:disabled
SNAPSHOTUSECAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots. **Unit:**sectors **Note:**The sector size is 512 bytes.

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Parameter	Mandatory/ Conditional	Type	Description
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
SECTORSIZE	Mandatory	string(uint32)	Block size. **The value is described as follows:** The value can only be 4 KB, 8 KB, 16 KB, 32 KB, or 64 KB. **Unit:**bytes
OWNINGCONTROLLER	Mandatory	string	ID of the owning controller.
WORKINGCONTROLLER	Mandatory	string	ID of the working controller.
CHECKSUMENABLE	Mandatory	string(bool)	Data parity switch. **The value is described as follows:** true: on false: off
ATIME	Mandatory	string(bool)	Indicates whether the access time is updated after a file is read. **The value is described as follows:** true: enable false: disabled
READONLY	Mandatory	string(bool)	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes
IOPRIORITY	Mandatory	string(enum)	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high
CACHEPARTITIONID	Mandatory	string	Cache partition ID.

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Parameter	Mandatory/ Conditional	Type	Description
ISCLONEFS	Mandatory	string(bool)	Indicates whether a file system is a clone. **The value is described as follows:** true: yes false: no
ENABLECOMPRESSION	Mandatory	string(bool)	Compression enabled or not. **The value is described as follows:** true: enable false: disabled
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
WORMTYPE	Mandatory	string(enum)	WORM service type. **The value is described as follows:** 1: compliance mode 3: enterprise mode
WORMMINPROTECTPERIOD	Mandatory	string(uint64)	Minimum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. In addition, infinite is supported. **Unit:**days
WORMMAXPROTECTPERIOD	Mandatory	string(uint64)	Maximum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. The default value is 70 years. In addition, infinite is supported. **Unit:**days

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Parameter	Mandatory/ Conditional	Type	Description
WORMDEFPROTECTPERIOD	Mandatory	string(uint64)	Default protection period. **The value is described as follows:** Range: minimum protection period ≤ default protection period ≤ maximum protection period.
WORMAUTOLOCK	Mandatory	string(bool)	Automatic locking mode of WORM. **The value is described as follows:** true: on false: off
WORMAUTOLOCKTIME	Mandatory	string(uint32)	Automatic lock time. **The value is described as follows:** The default value is 2 hours. The value ranges from 2 hours to 7 days
WORMAUTODEL	Mandatory	string(bool)	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off
WRITECHECK	Mandatory	string(bool)	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: on false: off
TIMINGSNAPSHOTMAXNUM	Mandatory	string(uint32)	Maximum number of periodic snapshots.

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Parameter	Mandatory/ Conditional	Type	Description
ISSHOWSNAPDIR	Mandatory	string(bool)	Snapshot directory visible or not. **The value is described as follows:** true: yes false: no
DATATRANSFERPOLICY	Mandatory	string(enum)	Data block migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.
PARENTSNAPSHOTNAME	Conditional	string	Name of the parent read-only snapshot. **Note:**This field must be returned for clone file systems.
PARENTFILESYSTEMNAME	Mandatory	string	Name of the parent file system.

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Parameter	Mandatory/ Conditional	Type	Description
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: no protection 1: based on capacity 2: based on performance 3: based on high performance 4: based on tiers
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache partition ID. **Note:**This field is not supported by V3 all-flash array series.
ENABLEROLLBACKMODE	Conditional	string(bool)	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
AVAILABLECAPCITY	Mandatory	string(uint64)	Available file system capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
AVAILABLEANDALLOCCAPACITYRATIO	Mandatory	string(uint32)	Percentage of available file system capacity to used capacity. **Unit:**%
ENABLETIMINGSNAP-SHOT	Mandatory	string(bool)	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTSCHEDULEID	Mandatory	string	Timing policy ID of file system read-only snapshots.

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Parameter	Mandatory/ Conditional	Type	Description
ROOT	Mandatory	string	Root path.
LOCALACCESSDEFI-NITIONREQUIRED	Mandatory	string(enum)	Local access options are supported. **The value is described as follows:** 2: A file system needs to be defined in the local access 3: A file system needs to be defined at a fixed directory in the local access 4: A file system does not need to be defined in the local access
PATHNAMESEPARATORSTRING	Mandatory	string	Directory separator.
CASESENSITIVE	Mandatory	string(bool)	Indicates whether a file name is case sensitive. **The value is described as follows:** true: yes false: no
CASEPRESERVED	Mandatory	string(bool)	Indicates whether the file name size is reserved. **The value is described as follows:** true: yes false: no
MAXFILENAMELENGTH	Mandatory	string(uint32)	Maximum file name length.
ACTUALFILESYSTEM-TYPE	Mandatory	string(enum)	Actual file system type. **The value is described as follows:** 1: Wushan file system 2: NOFS

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Parameter	Mandatory/ Conditional	Type	Description
DEDUPSAVEDCAPACITY	Mandatory	string(uint64)	Capacity saved by deduplication, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
COMPRESSIONSAVEDCAPACITY	Mandatory	string(uint64)	Capacity saved by compression, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
TOTALSAVEDCAPACITY	Mandatory	string(uint64)	Total capacity saved, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:**This field is not supported by V3 all-flash array series.
SC_CACHEDSIZE	Mandatory	string(uint32)	SmartCache size, expressed in kilobytes. **Unit:**KB **Note:**This field is not supported by V3 all-flash array series.
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio (%). **Unit:**% **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
MINPROTECTTIMEU-NIT	Mandatory	string(enum)	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
MAXPROTECTTIMEU-NIT	Mandatory	string(enum)	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
DEFPROTECTTIMEU-NIT	Mandatory	string(enum)	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year
AUTOLOCKTIMEUNIT	Mandatory	string(enum)	Automatic lock time unit. **The value is described as follows:** 46: day 47: month 48: year
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication . **Unit:**%
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression. **Unit:**%
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio. **Unit:**%
WORMCLOCKTIME	Mandatory	string(uint64)	WORM clock time, expressed in seconds. **Unit:**seconds

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Parameter	Mandatory/ Conditional	Type	Description
WORMEXPIREDTIME	Mandatory	string(uint64)	WORM expiration time, expressed in seconds. **Unit:**seconds
MINSIZEFSCAPACITY	Mandatory	string(uint64)	Minimum space that can be reduced for a thin file system. **Unit:**sectors
inodeTotalCount	Mandatory	string(uint32)	Total number of inodes.
inodeUsedCount	Mandatory	string(uint32)	Number of used inodes.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
PARENTSNAPSHOTID	Mandatory	string	Name of the parent read-only snapshot.
ENABLEDEDUPCHECK	Conditional	string	Whether to enable the function of checking byte by byte. **The value is described as follows:** The default value is false. **Note:**This field is valid for the CLI only.
REMOTEREPLICATIONIDS	Mandatory	string(array)	Remote replication IDs.
APPLICATIONSCENARIO	Mandatory	string(enum)	Application Scenario. **The value is described as follows:** 1:Database 2:VM 3:User-defined
HYPERVAULTPAIRIDS	Mandatory	string(array)	Hyper Vault Pair IDs.
HYPERMETROPAIRIDS	Mandatory	string(array)	Hyper Metro pair IDs.

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Parameter	Mandatory/ Conditional	Type	Description
SNAPSHOTRESERVE-CAPACITY	Mandatory	string(uint64)	Reserved snapshot capacity.
CHILDRENCLONEFS-NUM	Mandatory	string(uint32)	Number of child clone file systems.
ISDELETEPARENTS-NAPSHOT	Mandatory	string(bool)	Whether to delete the read-only snapshots associated with the parent file system. **The value is described as follows:** true: yes false: no
SPLITENABLE	Mandatory	string(bool)	Split switch. **The value is described as follows:** true: start splitting false: stop splitting
SPLITPROGRESS	Mandatory	string(uint32)	Split progress. **Unit:**%
SPLITSPEED	Mandatory	string(enum)	Split speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**The other values returned are invalid.
SPLITSTATUS	Mandatory	string(enum)	Split status. **The value is described as follows:** 1: not start 2: splitting 3: queuing 4: abnormal **Note:**The other values returned are invalid.

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Parameter	Mandatory/ Conditional	Type	Description
SPACESELFADJUSTINGMODE	Mandatory	string(enum)	Sets the automatic capacity adjustment mode. **The value is described as follows:** 0: off 1: grow 2: grow shrink
AUTOSIZEENABLE	Mandatory	string(enum)	Switch of automatic capacity adjustment. **The value is described as follows:** 0: off 1: on
AUTOSHRINKTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic reduction. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.
AUTOGROWTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic expansion. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.

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Parameter	Mandatory/ Conditional	Type	Description
MINAUTOSIZE	Mandatory	string(uint64)	Lower limit of the automatic reduction. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
MAXAUTOSIZE	Mandatory	string(uint64)	Upper limit of the automatic expansion. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
SPACERECYCLEMODE	Mandatory	string(enum)	Capacity recycle mode. **The value is described as follows:** 0: auto size first 1: delete snapshot first
AUTOSIZEINCREMENT	Mandatory	string(uint64)	Capacity change of a single expansion/ reduction. **The value is described as follows:** 64MB~100GB **Unit:**sectors
allocatedPoolQuota	Mandatory	string(uint64)	Capacity quota in the pool that a file system has applied for **Unit:**sectors

Example

- Batch querying basic information about file systems.

```
Request: GET/deviceManager/rest/210235843910E6000009/filesystem?
filter=HEALTHSTATUS: : 1Response: {
    "data": [
```

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```
        {
            "ACTUALFILESYSTEMTYPE": "2",
            "ALLOCCAPACITY": "21293484",
            "ALLOCTYPE": "1",
            "APPLICATIONSCENARIO": "3",
            "ATIME": "false",
            "AUTODELSNAPSHOTENABLE": "false",
            "AUTOGROWTHRESHOLDPERCENT": "85",
            "AUTOLOCKTIMEUNIT": "0",
            "AUTOSHRINKTHRESHOLDPERCENT": "50",
            "AUTOSIZEENABLE": "1",
            "AUTOSIZEINCREMENT": "2097152",
            "AVAILABLEANDALLOCCAPACITYRATIO": "20",
            "AVAILABLECAPCITY": "83564112",
            "CACHEPARTITIONID": "",
            "CAPABILITY": "2",
            "CAPACITY": "104857600",
            "CAPACITYTHRESHOLD": "90",
            "CASEPRESERVED": "true",
            "CASESENSITIVE": "true",
            "CHECKSUMENABLE": "true",
            "CHILDRENCLONEFSNUM": "0",
            "COMPRESSION": "0",
            "COMPRESSIONSAVEDCAPACITY": "0",
            "COMPRESSIONSAVEDRATIO": "0",
            "DATATRANSFERPOLICY": "0",
            "DEDUPSAVEDCAPACITY": "0",
            "DEDUPSAVEDRATIO": "0",
            "DEFPROTECTTIMEUNIT": "0",
            "DESCRIPTION": "",
            "ENABLECOMPRESSION": "true",
            "ENABLEDEDUP": "true",
            "ENABLEDEDUPCHECK": "false",
            "ENABLEROLLBACKMODE": "false",
            "ENABLETIMINGSNAPSHOT": "false",
            "HEALTHSTATUS": "1",
            "HYPERMETROPAIRIDS": "[\"223c1e09335a0027\"]",
            "HYPERVAULTPAIRIDS": "[]",
            "ID": "40",
            "INITIALALLOCCAPACITY": "0",
            "INITIALDISTRIBUTEPOLICY": "0",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "ISCLONEFS": "false",
            "ISDELETEPARENTSNAPSHOT": "false",
            "ISSHOWSNAPDIR": "true",
            "LOCALACCESSDEFINITIONREQUIRED": "4",
            "MAXAUTOSIZE": "125829120",
            "MAXFILENAMELENGTH": "256",
            "MAXPROTECTTIMEUNIT": "0",
            "MINAUTOSIZE": "104857600",
            "MINPROTECTTIMEUNIT": "0",
            "MINSIZEFSCAPACITY": "22573056",
            "NAME": "fs40",
            "OWNINGCONTROLLER": "0A",
            "PARENTFILESYSTEMNAME": "--",
            "PARENTID": "0",
            "PARENTNAME": "pool0",
            "PARENTSNAPSHOTID": "",
            "PARENTTYPE": 216,
            "PATHNAMESEPARATORSTRING": "/",
            "READONLY": "false",
            "RECYCLESWITCH": "40",
            "REMOTEREPLICATIONIDS": "[]",
            "ROOT": "/fs40",
            "RUNNINGSTATUS": "27",
            "SC_CACHEDSIZE": "0",
            "SC_HITRAGE": "0",
            "SECTORSIZE": "8192",
```


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```
            "SMARTCACHEPARTITIONID": "",
            "SMARTCACHESTATE": "0",
            "SNAPSHOTRESERVECAPACITY": "20971520",
            "SNAPSHOTRESERVEPER": "20",
            "SNAPSHOTUSECAPACITY": "0",
            "SPACERECYCLEMODE": "0",
            "SPACESELFADJUSTINGMODE": "0",
            "SPLITENABLE": "false",
            "SPLITPROGRESS": "-1",
            "SPLITSPEED": "5",
            "SPLITSTATUS": "5",
            "SUBTYPE": "0",
            "TIMINGSNAPSHOTMAXNUM": "16",
            "TIMINGSNAPSHOTSCHEDULEID": "",
            "TOTALSAVEDCAPACITY": "0",
            "TOTALSAVEDRATIO": "0",
            "TYPE": 40,
            "WORKINGCONTROLLER": "0A",
            "WORMAUTODEL": "false",
            "WORMAUTOLOCK": "false",
            "WORMAUTOLOCKTIME": "0",
            "WORMCLOCKTIME": "646",
            "WORMDEFPROTECTPERIOD": "0",
            "WORMEXPIREDTIME": "9223372036854775807",
            "WORMMAXPROTECTPERIOD": "0",
            "WORMMINPROTECTPERIOD": "0",
            "WORMTYPE": "0",
            "WRITECHECK": "false",
            "allocatedPoolQuota": "23068672",
            "inodeTotalCount": "10485760",
            "inodeUsedCount": "0",
            "vstoreId": "1",
            "vstoreName": "vsUser1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.13.1.3 Interface for Querying File Share Type Config Information

Function

This interface is used to query the file sharing configuration.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FILE_SHARE_TYPE_CONFIG/${FILESHARINGPROTOCOL}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
FILESHARINGPROTOCOL	Mandatory	string	Supported share protocol. **The value is described as follows:** 2: CIFS 3: NFS

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	ID.
WRITEPOLICY	Mandatory	string(enum)	Write policy. **The value is described as follows:** 2: synchronous 3: asynchronous
FILESHARINGPROTOCOL	Mandatory	string(enum)	Supported share protocol. **The value is described as follows:** 2: CIFS 3: NFS
ROOTSQUASH	Mandatory	string(uint32)	Access by user root from any client. **The value is described as follows:** 0: supported 1: not supported
INITIALENABLEDSTATE	Mandatory	string(bool)	File share initial status. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
DEFAULTUSERIDSUP-PORTED	Mandatory	string(bool)	Access using user IDs by default. **The value is described as follows:** true: supported false: not supported
DEFAULTEXCUTE	Mandatory	string(bool)	Executable permission. **The value is described as follows:** true: supported false: not supported
DEFAULTREADWRITE	Mandatory	string(bool)	Read and write permission. **The value is described as follows:** 0: read only 1: read and write (full control) 4: read or write (deletion and renaming not allowed)
PROTOCOLVERSIONS	Mandatory	string(array)	Protocol version. **The value is described as follows:** For CIFS, ["SMBV1","SMBV2"] is returned. For NFS, ["NFSV3","NFSV4"] is returned.
ACCESSPOINTS	Mandatory	string(enum)	Login port configuration. **The value is described as follows:** 1: supported 2: default service 3: all ports 4: named ports 5: DMTF reserved 6: defined by vendors

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Parameter	Mandatory/ Conditional	Type	Description
PARENTTYPE	Mandatory	string(enum)	Parent object type. **The value is described as follows:** The returned value is 0.
PARENTID	Mandatory	string	Parent object ID.
PARENTNAME	Mandatory	string	Parent object name.

Example

- Querying the file sharing configuration.

```
Request: GET /deviceManager/rest/210235843910E6000009/FILE_SHARE_TYPE_CONFIG/2

Response:
{
    "data": {
        "ACCESSPOINTS": "1",
        "DEFAULTEXCUTE": "false",
        "DEFAULTREADWRITE": "0",
        "DEFAULTUSERIDSUPPORTED": "false",
        "FILESHARINGPROTOCOL": "2",
        "ID": "2",
        "INITIALENABLEDSTATE": "true",
        "PARENTID": "",
        "PARENTNAME": "",
        "PARENTTYPE": 0,
        "PROTOCOLVERSIONS": "[SMBV1,SMBV2]",
        "ROOTSQUASH": "0",
        "WRITEPOLICY": "3"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.4 Interface for Querying the Number of File Systems

Function

This interface is used to query the number of file systems.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem/count

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
RSSTYPE	Optional	enum	Type of file systems that support value-added features. **The value is described as follows:** 23: primary file system that supports remote replication 24: secondary file system that supports remote replication 27: primary file system that supports NAS HyperMetro 28: secondary file system that supports NAS HyperMetro 29: primary file system that supports HyperVault 30: secondary file system that supports HyperVault

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(int)	Number of queried file systems.

Example

- Querying the number of file systems.

```
Request: GET /deviceManager/rest/210235843910E6000009/filesystem/count

Response:
{
    "data": {
        "COUNT": "10"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.5 Interface for Querying File System Config Ability Information

Function

This interface is used to query the file system configuration ability.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FILESYSTEM_CONFIG_ABILITY/${ACTUALFILESYSTEMTYPE}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ACTUALFILESYSTEM-TYPE	Mandatory	string	File system type supported by services. **The value is described as follows:** 1: Wushan file system 2: NOFS

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type.
ID	Mandatory	string	ID.
SUPPORTEDACTUAL-FILESYSTEMTYPES	Mandatory	string(array)	List of supported file system types.
SUPPORTEDSYNCHRONOUSMETHODS	Mandatory	string(array)	List of supported synchronous replication modes.
SUPPORTEDASYNCH-RONOUSMETHODS	Mandatory	string(array)	List of supported asynchronous replication modes.
INITIALAVAILABILI-TY	Mandatory	string(enum)	Whether to support file system creation by default. **The value is described as follows:** 2: supported 3: not supported

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Parameter	Mandatory/ Conditional	Type	Description
LOCALACCESSIBILITYSUPPORT	Mandatory	string(enum)	Whether local access is mandatory. **The value is described as follows:** 2: The file system can be accessed locally by default 3: The file system can be accessed locally but a file server that can access the file system must be specified during file system creation 4: The file system cannot be accessed locally
BLOCKSTORAGECREATIONSUPPORT	Mandatory	string(enum)	Whether logical disks and storage pools can be used in file systems. **The value is described as follows:** 2: Storage pools must be specified during file system creation 3: Logical disks must be specified during file system creation 4: Storage pools or logical disks must be specified during file system creation
DIRECTORYSERVERPARAMETERSUPPORTED	Mandatory	string(enum)	Whether the directory service is supported. **The value is described as follows:** 2: not supported 3: supported 4: supported by a file server by default 5: supported by a file system host by default

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Example

- Querying the file system configuration ability.

```
Request: GET /deviceManager/rest/210235843910E6000009/
FILESYSTEM_CONFIG_ABILITY/2

Response:
{
    "data": {
        "BLOCKSTORAGECREATIONSUPPORT": "2",
        "DIRECTORYSERVERPARAMETERSUPPORTED": "2",
        "ID": "1",
        "INITIALAVAILABILITY": "3",
        "LOCALACCESSIBILITYSUPPORT": "4",
        "SUPPORTEDACTUALFILESYSTEMTYPES": 0,
        "SUPPORTEDASYNCHRONOUSMETHODS": "",
        "SUPPORTEDSYNCHRONOUSMETHODS": "",
        "TYPE": 16486
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.6 Interface for Deleting a File System

Function

This interface is used to delete a file system.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a file system.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/filesystem/113

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.7 Interface for Modifying File System Information

Function

This interface is used to modify a file system.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to run a command to set the auto delete snapshot switch used by the system to delete the snapshot in this filesystem when the filesystem has insufficient capacity. If the switch is set to yes, there may be risks. Before running this command, ensure that you have selected the correct filesystem.
You are about to change the priority or the cache prefetch policy of file system ({0}). This operation may affect the file system performance. Suggestion: Before performing this operation, ensure that the preceding risk is acceptable and the correct file system is selected.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system ID.
NAME	Optional	string	Name. **The value is described as follows:** Contains only digits,letters and underscores. **Length:**1~255
DESCRIPTION	Optional	string	Description. **Length:**0~255
CAPACITY	Optional	uint64	Configured capacity. **Unit:**sectors
SNAPSHOTRESERVEPER	Optional	uint32	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Unit:**%
AUTODELSNAPSHOTENABLE	Optional	bool	Indicates whether the created snapshots (manual snapshots and periodic snapshots) and original snapshot are allowed to be automatically deleted. **The value is described as follows:** true:enable false:disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
CAPACITYTHRESHOLD	Optional	uint64	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. The default value is 90%.
SECTORSIZE	Optional	uint32	Sector size. **The value is described as follows:** Support 4K, 8K,16K, 32K, 64K. **Unit:**bytes
OWNINGCONTROLLER	Optional	string	ID of the owning controller.
CHECKSUMENABLE	Optional	bool	Switch of the data check. **The value is described as follows:** true: on false: off
ATIME	Optional	bool	Indicates whether the access time is updated after a control file is read. **The value is described as follows:** true: enable false: disabled
READONLY	Optional	bool	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes
IOPRIORITY	Optional	enum	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLECOMPRESSION	Optional	bool	Indicates whether compression is enabled. **The value is described as follows:** true: enable false: disabled
COMPRESSION	Optional	enum	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
ENABLEDEDUP	Optional	bool	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled
WORMMINPROTECTPERIOD	Optional	uint64	Minimum protection period, expressed in days. **The value is described as follows:** In addition, infinite is supported and the value is "4294967295".
WORMMAXPROTECTPERIOD	Optional	uint64	Maximum protection period.The value ranges from 0 to 70 years. The default value is 70 years. In addition, infinite is supported. **The value is described as follows:** In addition, infinite is supported and the value is "4294967295".
WORMDEFPROTECTPERIOD	Optional	uint64	Default protection period. **The value is described as follows:** Range: minimum protection period ≤ default protection period ≤ maximum protection period.

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Parameter	Mandatory/Optional/Conditional	Type	Description
WORMAUTOLOCK	Optional	bool	Automatic lock mode of WORM. **The value is described as follows:** true: on false: off
WORMAUTOLOCKTIME	Optional	uint32	Need to enter automatic lock time. **The value is described as follows:** Range: 2 hours to 7 days.
WORMAUTODEL	Optional	bool	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off
WRITECHECK	Optional	bool	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: on false: off
TIMINGSNAPSHOTMAXNUM	Optional	uint32	Maximum number of periodic snapshots. **The value is described as follows:** 1~2048
ISSHOWSNAPDIR	Optional	bool	Snapshot directory is visible. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/Optional/Conditional	Type	Description
DATATRANSFERPOLICY	Optional	enum	Data block migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
ENABLEROLLBACKMODE	Optional	bool	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
SNAPSHOTRESERVECAPACITY	Optional	uint64	Snapshot reserved capacity.
ENABLETIMINGSNAPSHOT	Optional	bool	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled
SMARTCACHESTATE	Optional	enum	SmartCache status. **The value is described as follows:** 0: off 1: on 2: POOL status inherited **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/Optional/Conditional	Type	Description
MINPROTECTTIMEU-NIT	Conditional	enum	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is delivered only when the specified file system is a WORM file system.
MAXPROTECTTIMEU-NIT	Conditional	enum	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is delivered only when the specified file system is a WORM file system.
DEFPROTECTTIMEU-NIT	Conditional	enum	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is delivered only when the specified file system is a WORM filesystem.

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Parameter	Mandatory/Optional/Conditional	Type	Description
AUTOLOCKTIMEUNIT	Conditional	enum	Automatic lock time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is delivered only when the specified file system is a WORM file system.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
SPACESELFADJUSTINGMODE	Optional	enum	Sets the automatic capacity adjustment mode. **The value is described as follows:** 0: off 1: grow 2: grow shrink
AUTOSIZEENABLE	Optional	enum	Switch of automatic capacity adjustment. **The value is described as follows:** 0: off 1: on
AUTOSHRINKTHRESHOLDPERCENT	Optional	uint32	Percentage threshold that triggers the automatic reduction. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.

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Parameter	Mandatory/Optional/Conditional	Type	Description
AUTOGROWTHRESHOLDPERCENT	Optional	uint32	Percentage threshold that triggers the automatic expansion. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.
MINAUTOSIZE	Optional	uint64	Lower limit of the automatic reduction. **The value is described as follows:** 1GB~16PB **Default:**Total capacity of the file system **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
MAXAUTOSIZE	Optional	uint64	Upper limit of the automatic expansion. **The value is described as follows:** 1GB~16PB **Default:**1.2 times of the total capacity of the file system **Unit:**secotrs **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.

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Parameter	Mandatory/Optional/Conditional	Type	Description
AUTOSIZEINCREMENT	Optional	uint64	Capacity change of a single expansion/reduction. **The value is described as follows:** 64MB~100GB **Unit:**sectors
SPACERECYCLEMODE	Optional	enum	Capacity recycle mode. **The value is described as follows:** 0: Preferentially Expand Capacity 1: Preferentially Delete Old Snapshot
ALLOCTYPE	Optional	enum	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System
SPLITSPEED	Optional	enum	Split speed. **The value is described as follows:** 1:low 2:medium 3:high 4:highest

Result

N/A

Example

- Modifying a file system.

```
Request: PUT /deviceManager/rest/210235843910E6000009/filesystem/3
{
    "SECTORSIZE": "16384",
    "IOPRIORITY": "3",
    "DATATRANSFERPOLICY": "2"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
```

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```
        "description": "0"
    }
}
```

4.13.1.8 Interface for Modifying Periodic Snapshot Status Information

Function

This interface is used to modify a periodic snapshot status.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem/modify_time_snapshot_status

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system ID.
ENABLETIMINGSNAP-SHOT	Optional	bool	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: on false: off
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Modifying a periodic snapshot status.

```
Request: PUT /deviceManager/rest/210235843910E6000009/filesystem/
modify_time_snapshot_status
{
   "ENABLETIMINGSNAPSHOT": true,
    "ID": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.9 Interface for Creating a File System

Function

This interface is used to create a file system.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

WARNING : You are about to create a file system. When the capacity of file system is no greater than 3 GB, the valued-added services and host services related to the file system may time out, and switching the working controller of the file system may also time out.

Suggestion: The capacity of the file system is greater than 3 GB.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains only digits, letters and underscores. **Length:**1-255
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 216: storage pool **Default:**216: storage pool
PARENTID	Mandatory	string	ID of the parent object.
DESCRIPTION	Optional	string	Description. **Length:**0~255
SUBTYPE	Optional	uint32	File system type. **The value is described as follows:** 0: common file system 1: WORM file system **Default:**0: common file system
ALLOCTYPE	Optional	enum	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System **Default:**1: Thin File System
CAPACITY	Conditional	uint64	Configured capacity, expressed in sectors. **Default:**The default value of the thin file system is 16P. **Unit:**sectors **Note:**The file system size must be specified when a thick file system is created.

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Parameter	Mandatory/Optional/Conditional	Type	Description
INITIALALLOCCAPACITY	Conditional	uint64	Initially allocated capacity, expressed in sectors. **Unit:**sectors **Note:**This parameter must be delivered when a row LUN is configured.
SNAPSHOTRESERVEPER	Optional	uint32	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Default:**20 **Unit:**%
AUTODELSNAPSHOTENABLE	Optional	bool	Indicates whether the created snapshots (manual snapshots and periodic snapshots) and original snapshot are allowed to be automatically deleted. **The value is described as follows:** true: yes false: no **Default:**false: no
CAPACITYTHRESHOLD	Optional	uint64	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. **Default:**90 **Unit:**%
APPLICATIONSCENARIO	Optional	enum	Template. **The value is described as follows:** 1:Database 2:VM 3:User-defined **Default:**3:User Defined

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Parameter	Mandatory/Optional/Conditional	Type	Description
SECTORSIZE	Conditional	uint32	Sector size. **The value is described as follows:** Supports 4 KB, 8 KB, 16 KB, 32 KB, and 64 KB. **Default:**65536 **Unit:**bytes **Note:**This field must be delivered when the value of "APPLICATIONSCENARIO" is "3". When "APPLICATIONSCENARIO" is "1" and storage pools to which file systems belong use all-SSDs, this field's default value is "16384"; otherwise, "8192". When the "APPLICATIONSCENARIO" is "2", this field's default value is "8192".
OWNINGCONTROLLER	Optional	string	ID of the owning controller.
CHECKSUMENABLE	Optional	bool	Switch of the data check. **The value is described as follows:** true: on false: off **Default:**true: on
ATIME	Optional	bool	Indicates whether the access time is updated after a file is read. **The value is described as follows:** true: on false: off **Default:**false: off

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Parameter	Mandatory/Optional/Conditional	Type	Description
READONLY	Optional	bool	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes **Default:**false: yes
IOPRIORITY	Optional	enum	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high **Default:**1: low
ISCLONEFS	Optional	bool	Indicates whether a file system is a clone. **The value is described as follows:** true: yes false: no **Default:**false: no
ENABLECOMPRESSION	Optional	bool	Indicates whether compression is enabled. **The value is described as follows:** true: enable false: disabled **Default:**false: disabled
COMPRESSION	Optional	enum	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression **Default:**0: rapid compression

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Parameter	Mandatory/Optional/Conditional	Type	Description
WORMTYPE	Conditional	enum	WORM service type. **The value is described as follows:** 1: compliance mode 3: enterprise mode **Note:**This parameter must be delivered when a WORM file system is created.
WORMMINPROTECTPERIOD	Optional	uint64	Minimum protection period, expressed in days. **The value is described as follows:** The value ranges from 0 to 70 years. In addition, infinite is supported and the value is "4294967295". **Default:**0
WORMMAXPROTECTPERIOD	Optional	uint64	Maximum protection period, expressed in days. **The value is described as follows:** The value ranges from 1 to 70 years. In addition, infinite is supported and the value is "4294967295". **Default:**70 years
WORMDEFPROTECTPERIOD	Optional	uint64	Default protection period. **The value is described as follows:** Range:minimum protection period ≤ default protection period ≤ maximum protection period. **Default:**70 years

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Parameter	Mandatory/Optional/Conditional	Type	Description
WORMAUTOLOCK	Optional	bool	Automatic lock mode of WORM. **The value is described as follows:** true: on false: off **Default:**true: on
WORMAUTOLOCKTIME	Optional	uint32	Automatic lock time. **The value is described as follows:** Range: 2 hours to 7 days. **Default:**2 hours
WORMAUTODEL	Optional	bool	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off **Default:**false: off
WRITECHECK	Optional	bool	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: enable false: disabled **Default:**false: disabled
TIMINGSNAPSHOTMAXNUM	Optional	uint32	Maximum number of periodic snapshots. **The value is described as follows:** 1~2048 **Default:**16

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Parameter	Mandatory/Optional/Conditional	Type	Description
ISSHOWSNAPDIR	Optional	bool	Indicates whether snapshot directory is visible. **The value is described as follows:** true: yes false: no **Default:**true: yes
INITIALDISTRIBUTE-POLICY	Optional	enum	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Default:**0: automatic **Note:** The prefetch policy is specified based on site requirements. This field is not supported by V3 all-flash array series.
ENABLEROLLBACKMODE	Optional	bool	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
ENABLETIMINGSNAP-SHOT	Optional	bool	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled **Default:**false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
SMARTCACHESTATE	Optional	enum	SmartCache status. **The value is described as follows:** 0: off 1: on 2: Pool status inherited **Default:**0: off **Note:**This field is not supported by V3 all-flash array series.
MINPROTECTTIMEU-NIT	Conditional	enum	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Default:**48: year **Note:**This field must be delivered when a worm file system is specified and the delivered value of the WORMMINPROTECTPERIOD field is a digit.
MAXPROTECTTIMEU-NIT	Conditional	enum	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Default:**48: year **Note:**This field must be delivered when a worm file system is specified and the delivered value of the WORMMAXPROTECTPERIOD field is a digit.

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Parameter	Mandatory/Optional/Conditional	Type	Description
DEFPROTECTTIMEU-NIT	Conditional	enum	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Default:**48: year **Note:**This field must be delivered when a worm file system is specified and the delivered value of the WORMDEFPROTECTPERIOD field is a digit.
AUTOLOCKTIMEUNIT	Conditional	enum	Automatic lock time unit. **The value is described as follows:** 45: hour 46: day **Default:**45: hour **Note:**This field must be delivered when a worm file system is specified and the WORMAUTOLOCKTIME filed is delivered.
ENABLEDEDUP	Optional	bool	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled **Default:**false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SPACESELFADJUSTINGMODE	Optional	enum	Sets the automatic capacity adjustment mode. **The value is described as follows:** 0: off 1: grow 2: grow shrink **Default:**0: off
AUTOSIZEENABLE	Optional	enum	Switch of automatic capacity adjustment. **The value is described as follows:** 0: off 1: on **Default:**1: on
AUTOSHRINKTHRESHOLDPERCENT	Optional	uint32	Percentage threshold that triggers the automatic reduction. **The value is described as follows:** 1~99 **Default:**50 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.

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Parameter	Mandatory/Optional/Conditional	Type	Description
AUTOGROWTHRESHOLDPERCENT	Optional	uint32	Percentage threshold that triggers the automatic expansion. **The value is described as follows:** 1~99 **Default:**85 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.
MINAUTOSIZE	Optional	uint64	Lower limit of the automatic reduction. **The value is described as follows:** 1GB~16PB **Default:**File system total capacity **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
MAXAUTOSIZE	Optional	uint64	Upper limit of the automatic expansion. **The value is described as follows:** 1GB~16PB **Default:**1.2 times of the total capacity of the file system **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.

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Parameter	Mandatory/Optional/Conditional	Type	Description
AUTOSIZEINCREMENT	Optional	uint64	Capacity change of a single expansion/reduction. **The value is described as follows:** 64MB~100GB **Default:**1GB **Unit:**sectors
SPACERECYCLEMODE	Optional	enum	Capacity recycle mode. **The value is described as follows:** 0: Preferentially Expand Capacity 1: Preferentially Delete Old Snapshot **Default:**0: Preferentially Expand Capacity

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 40: file system
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains only 1 to 255 digits, letters and underscores .
ENABLEDEDUP	Mandatory	string(bool)	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
RECYCLESWITCH	Mandatory	string(enum)	Recycle bin switch. **The value is described as follows:** 0: off 1: on **Note:**Currently, this field is not supported.
IOCLASSID	Mandatory	string	I/O class ID.
ENABLEDEDUPCHECK	Mandatory	string(bool)	Whether to enable the function of checking byte by byte. **The value is described as follows:** true: yes false: no **Note:**This field is valid for the CLI only.
CAPACITYTHRESHOLD	Mandatory	string(uint64)	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. The default value is 90%.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 216: storage pool
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status.
DESCRIPTION	Mandatory	string	Description.

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Parameter	Mandatory/ Conditional	Type	Description
SUBTYPE	Mandatory	string(enum)	File system type. **The value is described as follows:** 0: common file system 1: WORM file system
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors
INITIALALLOCCAPACITY	Mandatory	string(uint64)	Initially allocated capacitys. **Unit:**sectors
SNAPSHOTRESERVEPER	Mandatory	string(uint32)	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Unit:**%
AUTODELSNAPSHOTENABLE	Mandatory	string(bool)	Indicates whether the earliest snapshots (manual snapshots and periodic snapshots) can be automatically deleted. **The value is described as follows:** true: yes false: no
SNAPSHOTUSECAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots. **Unit:**sectors
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
SECTORSIZE	Mandatory	string(uint32)	Block size. **The value is described as follows:** The value can only be 4 KB, 8 KB, 16 KB, 32 KB, or 64 KB. **Unit:**bytes
OWNINGCONTROLLER	Mandatory	string	ID of the owning controller.
WORKINGCONTROLLER	Mandatory	string	ID of the working controller.
CHECKSUMENABLE	Mandatory	string(bool)	Data parity switch. **The value is described as follows:** true: enable false: disabled
ATIME	Mandatory	string(bool)	Indicates whether the access time is updated after a file is read. **The value is described as follows:** true: on false: off
READONLY	Mandatory	string(bool)	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes
IOPRIORITY	Mandatory	string(enum)	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high
CACHEPARTITIONID	Mandatory	string	Cache partition ID.

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Parameter	Mandatory/ Conditional	Type	Description
ISCLONEFS	Mandatory	string(bool)	Indicates whether a file system is a clone. **The value is described as follows:** true: yes false: no
ENABLECOMPRESSION	Mandatory	string(bool)	Compression enabled or not. **The value is described as follows:** true: enable false: disabled
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
WORMTYPE	Mandatory	string(enum)	WORM service type. **The value is described as follows:** 1: compliance mode 3: enterprise mode
WORMMINPROTECTPERIOD	Conditional	string(uint64)	Minimum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. In addition, infinite is supported. **Unit:**days
WORMMAXPROTECTPERIOD	Mandatory	string(uint64)	Maximum protection period. **The value is described as follows:** The value ranges from 1 to 70 years. The default value is 70 years. In addition, infinite is supported. **Unit:**days

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Parameter	Mandatory/ Conditional	Type	Description
WORMDEFPROTECTPERIOD	Mandatory	string(uint64)	Default protection period. **The value is described as follows:** Range: minimum protection period ≤ default protection period ≤ maximum protection period.
WORMAUTOLOCK	Mandatory	string(bool)	Automatic locking mode of WORM. **The value is described as follows:** true: on false: off
WORMAUTOLOCKTIME	Mandatory	string(uint32)	Automatic lock time. **The value is described as follows:** The default value is 2 hours. The value ranges from 2 hours to 7 days.
WORMAUTODEL	Mandatory	string(bool)	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off
WRITECHECK	Mandatory	string(bool)	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTMAXNUM	Mandatory	string(uint32)	Maximum number of periodic snapshots.

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Parameter	Mandatory/ Conditional	Type	Description
ISSHOWSNAPDIR	Mandatory	string(bool)	Snapshot directory visible or not. **The value is described as follows:** true: yes false: no
DATATRANSFERPOLICY	Mandatory	string(enum)	Data block migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.
PARENTSNAPSHOTID	Mandatory	string	Id of the parent read-only snapshot.
PARENTSNAPSHOTNAME	Conditional	string	Name of the parent read-only snapshot. **Note:**This field must be returned if the specified file system is a clone file system.
PARENTFILESYSTEMNAME	Mandatory	string	Name of the parent file system.

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Parameter	Mandatory/ Conditional	Type	Description
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache partition ID. **Note:**This field is not supported by V3 all-flash array series.
ENABLEROLLBACKMODE	Conditional	string(bool)	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
AVAILABLECAPCITY	Mandatory	string(uint64)	Available file system capacity. **Unit:**sectors
AVAILABLEANDALLOCCAPACITYRATIO	Mandatory	string(uint32)	Percentage of available file system capacity to used capacity. **Unit:**%
ENABLETIMINGSNAP-SHOT	Mandatory	string(bool)	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTSCHEDULEID	Mandatory	string	Timing policy ID of file system read-only snapshots.
ROOT	Mandatory	string	Root path.

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Parameter	Mandatory/ Conditional	Type	Description
LOCALACCESSDEFINITIONREQUIRED	Mandatory	string(enum)	Local access options are supported. **The value is described as follows:** 2: A file system needs to be defined in the local access 3: A file system needs to be defined at a fixed directory in the local access 4: A file system does not need to be defined in the local access
PATHNAMESEPARATORSTRING	Mandatory	string	Directory separator.
CASESENSITIVE	Mandatory	string(bool)	Indicates whether a file name is case sensitive. **The value is described as follows:** true: yes false: no
CASEPRESERVED	Mandatory	string(bool)	Indicates whether the file name size is reserved. **The value is described as follows:** true: yes false: no
MAXFILENAMELENGTH	Mandatory	string(uint32)	Maximum file name length.
ACTUALFILESYSTEMTYPE	Mandatory	string(enum)	Actual file system type. **The value is described as follows:** 1: Wushan file system 2: NOFS
DEDUPSAVEDCAPACITY	Mandatory	string(uint64)	Capacity saved by deduplication, expressed in sectors. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
COMPRESSIONSAVEDCAPACITY	Mandatory	string(uint64)	Capacity saved by compression, expressed in sectors. **Unit:**sectors
TOTALSAVEDCAPACITY	Mandatory	string(uint64)	Total capacity saved, expressed in sectors. **Unit:**sectors
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:**This field is not supported by V3 all-flash array series.
SC_CACHEDSIZE	Mandatory	string(uint32)	SmartCache size, expressed in kilobytes. **Unit:**KB **Note:**This field is not supported by V3 all-flash array series.
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio (%). **Unit:**% **Note:**This field is not supported by V3 all-flash array series.
MINPROTECTTIMEUNIT	Mandatory	string(enum)	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year

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Parameter	Mandatory/ Conditional	Type	Description
MAXPROTECTTIMEU-NIT	Mandatory	string(enum)	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
DEFPROTECTTIMEU-NIT	Mandatory	string(enum)	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year
AUTOLOCKTIMEUNIT	Mandatory	string(enum)	Automatic lock time unit. **The value is described as follows:** 46: day 47: month 48: year
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication . **Unit:**%
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression. **Unit:**%
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio. **Unit:**%
WORMCLOCKTIME	Mandatory	string(uint64)	WORM clock time, expressed in seconds. **Unit:**seconds
WORMEXPIREDTIME	Mandatory	string(uint64)	WORM expiration time, expressed in seconds. **Unit:**seconds
MINSIZEFSCAPACITY	Mandatory	string(uint64)	Minimum space that can be reduced for a thin file system. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
inodeTotalCount	Mandatory	string(uint32)	Total number of inodes.
inodeUsedCount	Mandatory	string(uint32)	Number of used inodes.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
REMOTEREPLICATIO-NIDS	Mandatory	string(array)	Remote replication IDs.
APPLICATIONSCENARIO	Mandatory	string(enum)	Application Scenario. **The value is described as follows:** 1: Database 2: VM 3: User-defined
HYPERMETROPAIRIDS	Mandatory	string(array)	Hyper Metro pair IDs.
HYPERVAULTPAIRIDS	Mandatory	string(array)	Hyper Vault Pair IDs.
SNAPSHOTRESERVE-CAPACITY	Mandatory	string(uint64)	Reserved snapshot capacity.
CHILDRENCLONEFS-NUM	Mandatory	string(uint32)	Number of child clone file systems.
ISDELETEPARENTS-NAPSHOT	Mandatory	string(bool)	Whether to delete the read-only snapshots associated with the parent file system. **The value is described as follows:** true: yes false: no
SPLITENABLE	Mandatory	string(bool)	Split switch. **The value is described as follows:** true: start splitting false: stop splitting

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Parameter	Mandatory/ Conditional	Type	Description
SPLITPROGRESS	Mandatory	string(uint32)	Split progress. **Unit:**% **Note:**-1 indicates that no split is performed.
SPLITSPEED	Mandatory	string(enum)	Split speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**The other values returned are invalid.
SPLITSTATUS	Mandatory	string(enum)	Split status. **The value is described as follows:** 1: not start 2: splitting 3: queuing 4: abnormal **Note:**The other values returned are invalid.
SPACESELFADJUSTINGMODE	Mandatory	string(enum)	Sets the automatic capacity adjustment mode. **The value is described as follows:** 0: off 1: grow 2: grow shrink
AUTOSIZEENABLE	Mandatory	string(enum)	Switch of automatic capacity adjustment. **The value is described as follows:** 0: off 1: on

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Parameter	Mandatory/ Conditional	Type	Description
AUTOSHRINKTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic reduction. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion bigger than percentage threshold that triggers the automatic reduction.
AUTOGROWTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic expansion. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion bigger than percentage threshold that triggers the automatic reduction.
MINAUTOSIZE	Mandatory	string(uint64)	Lower limit of the automatic reduction. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.

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Parameter	Mandatory/ Conditional	Type	Description
MAXAUTOSIZE	Mandatory	string(uint64)	Upper limit of the automatic expansion. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
AUTOSIZEINCREMENT	Mandatory	string(uint64)	Capacity change of a single expansion/ reduction. **The value is described as follows:** 64MB~100GB **Unit:**sectors
SPACERECYCLEMODE	Mandatory	string(enum)	Capacity recycle mode. **The value is described as follows:** 0: Preferentially Expand Capacity 1: Preferentially Delete Old Snapshot

Example

- Creating a file system.

```
Request: POST/deviceManager/rest/210235843910E6000009/filesystem

{
    "NAME": "FileSystem111",
    "DESCRIPTION": "",
    "ALLOCTYPE": 1,
    "SECTORSIZE": 8192,
    "APPLICATIONSCENARIO": 3,
    "PARENTID": "1",
    "INITIALALLOCCAPACITY": 20480,
    "PARENTTYPE": 216,
    "SNAPSHOTRESERVEPER": 20,
    "INITIALDISTRIBUTEPOLICY": 0,
    "ENABLEDEDUP": false,
    "ISSHOWSNAPDIR": true
}

Response:
{
    "data": {
        "ACTUALFILESYSTEMTYPE": "2",
        "ALLOCCAPACITY": "0",
```

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```
        "ALLOCTYPE": "1",
        "APPLICATIONSCENARIO": "3",
        "ATIME": "false",
        "AUTODELSNAPSHOTENABLE": "false",
        "AUTOGROWTHRESHOLDPERCENT": "85",
        "AUTOLOCKTIMEUNIT": "0",
        "AUTOSHRINKTHRESHOLDPERCENT": "50",
        "AUTOSIZEENABLE": "1",
        "AUTOSIZEINCREMENT": "1048576",
        "AVAILABLEANDALLOCCAPACITYRATIO": "0",
        "AVAILABLECAPCITY": "0",
        "CACHEPARTITIONID": "",
        "CAPACITY": "35184372088832",
        "CAPACITYTHRESHOLD": "90",
        "CASEPRESERVED": "true",
        "CASESENSITIVE": "true",
        "CHECKSUMENABLE": "true",
        "CHILDRENCLONEFSNUM": "0",
        "COMPRESSION": "0",
        "COMPRESSIONSAVEDCAPACITY": "0",
        "COMPRESSIONSAVEDRATIO": "0",
        "DATATRANSFERPOLICY": "0",
        "DEDUPSAVEDCAPACITY": "0",
        "DEDUPSAVEDRATIO": "0",
        "DEFPROTECTTIMEUNIT": "0",
        "DESCRIPTION": "",
        "ENABLECOMPRESSION": "false",
        "ENABLEDEDUP": "false",
        "ENABLEDEDUPCHECK": "false",
        "ENABLEROLLBACKMODE": "false",
        "ENABLETIMINGSNAPSHOT": "false",
        "HEALTHSTATUS": "1",
        "HYPERMETROPAIRIDS": "[]",
        "HYPERVAULTPAIRIDS": "[]",
        "ID": "110",
        "INITIALALLOCCAPACITY": "20480",
        "INITIALDISTRIBUTEPOLICY": "0",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "ISCLONEFS": "false",
        "ISDELETEPARENTSNAPSHOT": "false",
        "ISSHOWSNAPDIR": "true",
        "LOCALACCESSDEFINITIONREQUIRED": "4",
        "MAXAUTOSIZE": "35184372088832",
        "MAXFILENAMELENGTH": "256",
        "MAXPROTECTTIMEUNIT": "0",
        "MINAUTOSIZE": "35184372088832",
        "MINPROTECTTIMEUNIT": "0",
        "MINSIZEFSCAPACITY": "0",
        "NAME": "FileSystem111",
        "OWNINGCONTROLLER": "0B",
        "PARENTFILESYSTEMNAME": "--",
        "PARENTID": "0",
        "PARENTNAME": "pool0",
        "PARENTSNAPSHOTID": "",
        "PARENTTYPE": 216,
        "PATHNAMESEPARATORSTRING": "/",
        "READONLY": "false",
        "RECYCLESWITCH": "110",
        "REMOTEREPLICATIONIDS": "[]",
        "ROOT": "/FileSystem111",
        "RUNNINGSTATUS": "53",
        "SC_CACHEDSIZE": "0",
        "SC_HITRAGE": "0",
        "SECTORSIZE": "8192",
        "SMARTCACHEPARTITIONID": "",
        "SMARTCACHESTATE": "0",
        "SNAPSHOTRESERVECAPACITY": "7036874417766",
        "SNAPSHOTRESERVEPER": "20",
```


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```
        "SNAPSHOTUSECAPACITY": "0",
        "SPACERECYCLEMODE": "0",
        "SPACESELFADJUSTINGMODE": "0",
        "SPLITENABLE": "false",
        "SPLITPROGRESS": "0",
        "SPLITSPEED": "5",
        "SPLITSTATUS": "0",
        "SUBTYPE": "0",
        "TIMINGSNAPSHOTMAXNUM": "16",
        "TIMINGSNAPSHOTSCHEDULEID": "",
        "TOTALSAVEDCAPACITY": "0",
        "TOTALSAVEDRATIO": "0",
        "TYPE": 40,
        "WORKINGCONTROLLER": "0B",
        "WORMAUTODEL": "false",
        "WORMAUTOLOCK": "false",
        "WORMAUTOLOCKTIME": "0",
        "WORMCLOCKTIME": "0",
        "WORMDEFPROTECTPERIOD": "0",
        "WORMEXPIREDTIME": "0",
        "WORMMAXPROTECTPERIOD": "0",
        "WORMMINPROTECTPERIOD": "0",
        "WORMTYPE": "0",
        "WRITECHECK": "false",
        "inodeTotalCount": "0",
        "inodeUsedCount": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.13.1.10 Interface for Implementing Associated Query of File System Information

Function

This interface is used to implement associated query of basic information about file systems.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJTYPE	Mandatory	enum	Object type. **The value is described as follows:** 230: IOCLASS 268: cache partition 273: SmartCache partition
ASSOCIATEOBJID	Mandatory	string	Associated object ID.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, HEALTHSTATUS, and RUNNINGSTATUS are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 40: file system
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains only 1 to 255 digits, letters and underscores .
ENABLEDEDUP	Mandatory	string(bool)	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled
RECYCLESWITCH	Mandatory	string(enum)	Recycle bin switch. **The value is described as follows:** 0: off 1: on
IOCLASSID	Mandatory	string	I/O class ID.
CAPACITYTHRESHOLD	Mandatory	string(uint64)	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. The default value is 90%.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 216: storage pool
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.

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Parameter	Mandatory/ Conditional	Type	Description
HEALTHSTATUS	Mandatory	string(enum)	Health status.
RUNNINGSTATUS	Mandatory	string(enum)	Operating status.
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(enum)	File system type. **The value is described as follows:** 0: common file system 1: WORM file system
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
INITIALALLOCCAPACITY	Mandatory	string(uint64)	Initially allocated capacitys. **Unit:**sectors **Note:**The sector size is 512 bytes.
SNAPSHOTRESERVEPER	Mandatory	string(uint32)	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Unit:**%
AUTODELSNAPSHOTENABLE	Mandatory	string(bool)	Indicates whether the earliest snapshots (manual snapshots and periodic snapshots) can be automatically deleted. **The value is described as follows:** true:enable false:disabled

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Parameter	Mandatory/ Conditional	Type	Description
SNAPSHOTUSECAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots. **Unit:**sectors **Note:**The sector size is 512 bytes.
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
SECTORSIZE	Mandatory	string(uint32)	Block size. **The value is described as follows:** The value can only be 4 KB, 8 KB, 16 KB, 32 KB, or 64 KB. **Unit:**bytes
OWNINGCONTROLLER	Mandatory	string	ID of the owning controller.
WORKINGCONTROLLER	Mandatory	string	ID of the working controller.
CHECKSUMENABLE	Mandatory	string(bool)	Data parity switch. **The value is described as follows:** true: on false: off
ATIME	Mandatory	string(bool)	Indicates whether the access time is updated after a file is read. **The value is described as follows:** true: enable false: disabled
READONLY	Mandatory	string(bool)	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes

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Parameter	Mandatory/ Conditional	Type	Description
IOPRIORITY	Mandatory	string(enum)	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high
CACHEPARTITIONID	Mandatory	string	Cache partition ID.
ISCLONEFS	Mandatory	string(bool)	Indicates whether a file system is a clone. **The value is described as follows:** true: yes false: no
ENABLECOMPRESSION	Mandatory	string(bool)	Compression enabled or not. **The value is described as follows:** true: enable false: disabled
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
WORMTYPE	Mandatory	string(enum)	WORM service type. **The value is described as follows:** 1: compliance mode 3: enterprise mode
WORMMINPROTECTPERIOD	Conditional	string(uint64)	Minimum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. In addition, infinite is supported.

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Parameter	Mandatory/ Conditional	Type	Description
WORMMAXPROTECTPERIOD	Conditional	string(uint64)	Maximum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. The default value is 70 years. In addition, infinite is supported.
WORMDEFPROTECTPERIOD	Conditional	string(uint64)	Default protection period. **The value is described as follows:** Range: minimum protection period ≤ default protection period ≤ maximum protection period.
WORMAUTOLOCK	Conditional	string(bool)	Automatic locking mode of WORM. **The value is described as follows:** true: on false: off
WORMAUTOLOCKTIME	Conditional	string(uint32)	Automatic lock time. **The value is described as follows:** The default value is 2 hours. The value ranges from 2 hours to 7 days.
WORMAUTODEL	Conditional	string(bool)	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off

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Parameter	Mandatory/ Conditional	Type	Description
WRITECHECK	Mandatory	string(bool)	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: on false: off
TIMINGSNAPSHOTMAXNUM	Mandatory	string(uint32)	Maximum number of periodic snapshots.
ISSHOWSNAPDIR	Mandatory	string(bool)	Snapshot directory visible or not. **The value is described as follows:** true: yes false: no
DATATRANSFERPOLICY	Mandatory	string(enum)	Data block migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier **Note:**This field is not supported by V3 all-flash array series.
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity **Note:**This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
PARENTSNAPSHOTNAME	Conditional	string	Name of the parent read-only snapshot. **Note:**This field must be returned for clone file systems.
PARENTFILESYSTEM-NAME	Mandatory	string	Name of the parent file system.
CAPABILITY	Mandatory	string(enum)	VASA: storage capability level. **The value is described as follows:** 0: no protection 1: based on capacity 2: based on performance 3: based on high performance 4: based on tiers
SMARTCACHEPARTI-TIONID	Mandatory	string	SmartCache partition ID. **Note:**This field is not supported by V3 all-flash array series.
ENABLEROLLBACKMODE	Conditional	string(bool)	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
AVAILABLECAPCITY	Mandatory	string(uint64)	Available file system capacity. **Unit:**sectors **Note:**The sector size is 512 bytes.
AVAILABLEANDALLOCCAPACITYRATIO	Mandatory	string(uint32)	Percentage of available file system capacity to used capacity. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
ENABLETIMINGSNAP-SHOT	Mandatory	string(bool)	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTSCHEDULEID	Mandatory	string	Timing policy ID of file system read-only snapshots.
ROOT	Mandatory	string	Root path.
LOCALACCESSDEFI-NITIONREQUIRED	Mandatory	string(enum)	Local access options are supported. **The value is described as follows:** 2: A file system needs to be defined in the local access 3: A file system needs to be defined at a fixed directory in the local access 4: A file system does not need to be defined in the local access
PATHNAMESEPARATORSTRING	Mandatory	string	Directory separator.
CASESENSITIVE	Mandatory	string(bool)	Indicates whether a file name is case sensitive. **The value is described as follows:** true: yes false: no
CASEPRESERVED	Mandatory	string(bool)	Indicates whether the file name size is reserved. **The value is described as follows:** true: yes false: no
MAXFILENAMELENGTH	Mandatory	string(uint32)	Maximum file name length.

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Parameter	Mandatory/ Conditional	Type	Description
ACTUALFILESYSTEM-TYPE	Mandatory	string(enum)	Actual file system type. **The value is described as follows:** 1: Wushan file system 2: NOFS
DEDUPSAVEDCAPACI-TY	Mandatory	string(uint64)	Capacity saved by deduplication, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
COMPRESSIONSAVED CAPACITY	Mandatory	string(uint64)	Capacity saved by compression, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
TOTALSAVEDCAPACI-TY	Mandatory	string(uint64)	Total capacity saved, expressed in sectors. **Unit:**sectors **Note:**The sector size is 512 bytes.
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited **Note:**This field is not supported by V3 all-flash array series.
SC_CACHEDSIZE	Conditional	string(uint32)	SmartCache size, expressed in kilobytes. **Unit:**KB **Note:**This field is returned only when the specified file system is added to SmartCache.This field is not supported by V3 all-flash array series.

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Parameter	Mandatory/ Conditional	Type	Description
SC_HITRAGE	Conditional	string(uint32)	SmartCache hit ratio (%). **Unit:**% **Note:**This field is returned only when the specified file system is added to SmartCache.This field is not supported by V3 all-flash array series.
MINPROTECTTIMEU-NIT	Conditional	string(enum)	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is returned only when the specified file system is a WORM file system.
MAXPROTECTTIMEU-NIT	Conditional	string(enum)	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is returned only when the specified file system is a WORM file system.
DEFPROTECTTIMEU-NIT	Conditional	string(enum)	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is returned only when the specified file system is a WORM file system.

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Parameter	Mandatory/ Conditional	Type	Description
AUTOLOCKTIMEUNIT	Conditional	string(enum)	Automatic lock time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**This field is returned only when the specified file system is a WORM file system.
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication . **Unit:**%
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression. **Unit:**%
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio. **Unit:**%
WORMCLOCKTIME	Mandatory	string(uint64)	WORM clock time, expressed in seconds. **Unit:**seconds
WORMEXPIREDTIME	Conditional	string(uint64)	WORM expiration time, expressed in seconds. **Unit:**seconds **Note:**This field is returned only when the specified file system is a WORM file system.

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Parameter	Mandatory/ Conditional	Type	Description

ASSOCIATEMETADA-TA	Conditional	string	Additional data generated by the creation of an association relationship.
			The value is described as follows:
			1. When the associated object is a host, port, or mapping view, the following is returned:
			{"HostLUNID":XX}
			Note: The previous data is a complete string. XX indicates the host LUN ID.
			2. When the associated object is a host, the service port list can serve as the delivered parameters:
			{
			"ports": {
			"fc": ["PORT_ID1","PORT_ID2","PORT_ID3"],
			"iscsi": ["PORT_ID1","PORT_ID2","PORT_ID3"]
			}
			}
			The previous data can be used to query LUNs that can be accessed by a host through the ports.
			Note: This field is not delivered when the specified file system is a NAS file system.

MINSIZEFSCAPACITY	Mandatory	string(uint64)	Minimum space that can be reduced for a thin file system. **Unit:**sectors
inodeTotalCount	Mandatory	string(uint32)	Total number of inodes.
inodeUsedCount	Mandatory	string(uint32)	Number of used inodes.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
PARENTFILESYSTE-MID	Conditional	string	ID of the parent file system. **Note:**This field must be returned if the specified file system is a clone file system.
PARENTSNAPSHOTID	Conditional	string	ID of the parent read-only snapshot. **Note:**This field must be returned if the specified file system is a clone file system.
ENABLEDEDUPCHECK	Mandatory	string(bool)	Whether to enable the function of checking byte by byte. **The value is described as follows:** true: yes false: no **Note:**This field is valid for the CLI only.
REMOTEREPLICATIO-NIDS	Mandatory	string(array)	Remote replication IDs.
APPLICATIONSCENARIO	Mandatory	string(enum)	Application Scenario. **The value is described as follows:** 1:Database 2:VM 3:User-defined

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Parameter	Mandatory/ Conditional	Type	Description
HYPERVAULTPAIRIDS	Conditional	string(array)	Hyper Vault Pair IDs. **Note:**This field must be delivered when the specified file system is configured with HyperVault.
HYPERMETROPAIRIDS	Conditional	string(array)	Hyper Metro pair IDs. **Note:**This field must be delivered when the specified file system is configured with HyperMetro.
CHILDRENCLONEFS-NUM	Mandatory	string(uint32)	Number of child clone file systems.

Example

- Implementing associated query of basic information about file systems.

```
Request: GET/deviceManager/rest/210235843910E6000009/filesystem/associate?
ASSOCIATEOBJID=1&ASSOCIATEOBJTYPE=273&filter=HEALTHSTATUS: : 1&range=[0-100]

Response: {
    "data": [
        {
            "ACTUALFILESYSTEMTYPE": "2",
            "ALLOCCAPACITY": "796262",
            "ALLOCTYPE": "1",
            "ATIME": "false",
            "AUTODELSNAPSHOTENABLE": "false",
            "AUTOLOCKTIMEUNIT": "0",
            "AVAILABLEANDALLOCCAPACITYRATIO": "22",
            "AVAILABLECAPCITY": "1300864",
            "CACHEPARTITIONID": "",
            "CAPABILITY": "1",
            "CAPACITY": "2097152",
            "CAPACITYTHRESHOLD": "90",
            "CASEPRESERVED": "true",
            "CASESENSITIVE": "true",
            "CHECKSUMENABLE": "true",
            "CHILDRENCLONEFSNUM": "0",
            "COMPRESSION": "0",
            "COMPRESSIONSAVEDCAPACITY": "0",
            "COMPRESSIONSAVEDRATIO": "0",
            "DATATRANSFERPOLICY": "0",
            "DEDUPSAVEDCAPACITY": "0",
            "DEDUPSAVEDRATIO": "0",
            "DEFPROTECTTIMEUNIT": "0",
            "DESCRIPTION": "",
            "ENABLECOMPRESSION": "false",
            "ENABLEDEDUP": "false",
            "ENABLEDEDUPCHECK": "false",
            "ENABLEROLLBACKMODE": "false",
            "ENABLETIMINGSNAPSHOT": "false",
            "HEALTHSTATUS": "1",
            "ID": "4",
```

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```
            "INITIALALLOCCAPACITY": "20480",
            "INITIALDISTRIBUTEPOLICY": "0",
            "IOCLASSID": "",
            "IOPRIORITY": "1",
            "ISCLONEFS": "false",
            "ISSHOWSNAPDIR": "true",
            "LOCALACCESSDEFINITIONREQUIRED": "4",
            "MAXFILENAMELENGTH": "256",
            "MAXPROTECTTIMEUNIT": "0",
            "MINPROTECTTIMEUNIT": "0",
            "MINSIZEFSCAPACITY": "2097152",
            "NAME": "FileSystem0050000",
            "OWNINGCONTROLLER": "0A",
            "PARENTFILESYSTEMID": "",
            "PARENTFILESYSTEMNAME": "",
            "PARENTID": "2",
            "PARENTNAME": "StoragePool003",
            "PARENTSNAPSHOTID": "",
            "PARENTSNAPSHOTNAME": "",
            "PARENTTYPE": 216,
            "PATHNAMESEPARATORSTRING": "/",
            "READONLY": "false",
            "RECYCLESWITCH": "4",
            "REMOTEREPLICATIONIDS": "[]",
            "ROOT": "/FileSystem0050000",
            "RUNNINGSTATUS": "27",
            "SC_CACHEDSIZE": "0",
            "SC_HITRAGE": "0",
            "SECTORSIZE": "65536",
            "SMARTCACHEPARTITIONID": "",
            "SMARTCACHESTATE": "0",
            "SNAPSHOTRESERVEPER": "20",
            "SNAPSHOTUSECAPACITY": "0",
            "SUBTYPE": "0",
            "TIMINGSNAPSHOTMAXNUM": "16",
            "TIMINGSNAPSHOTSCHEDULEID": "",
            "TOTALSAVEDCAPACITY": "0",
            "TOTALSAVEDRATIO": "0",
            "TYPE": 40,
            "WORKINGCONTROLLER": "0A",
            "WORMAUTODEL": "false",
            "WORMAUTOLOCK": "false",
            "WORMAUTOLOCKTIME": "0",
            "WORMCLOCKTIME": "18446612149339932304",
            "WORMDEFPROTECTPERIOD": "0",
            "WORMEXPIREDTIME": "9223372036854775807",
            "WORMMAXPROTECTPERIOD": "0",
            "WORMMINPROTECTPERIOD": "0",
            "WORMTYPE": "0",
            "WRITECHECK": "false",
            "inodeTotalCount": "256",
            "inodeUsedCount": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.13.1.11 Interface for Querying File System Type Config Information

Function

This interface is used to querying the configuration of different types of file systems.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FILESYSTEM_TYPE_CONFIG/${ACTUALFILESYSTEMTYPE}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ACTUALFILESYSTEM-TYPE	Mandatory	enum	File system type supported by services. **The value is described as follows:** 1: WushanFS 2: NOFS

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	ID.
ACTUALFILESYSTEM-TYPE	Mandatory	string(enum)	File system type supported by services. **The value is described as follows:** 1: WushanFS 2: NOFS

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Parameter	Mandatory/ Conditional	Type	Description
OBJECTTYPES	Mandatory	string(array)	Object type supported by the file system. **The value is described as follows:** 2: node 3: file 4: directory 5: link 6: device 7: file and directory 8: block
NUMBEROFOBJECTS-MIN	Mandatory	string(array)	Minimum number of objects supported by the file system.
NUMBEROFOBJECTS-MAX	Mandatory	string(array)	Maximum number of objects supported by the file system.
NUMBEROFOBJECTS	Mandatory	string(array)	Optimal number of objects supported by the file system.
OBJECTSIZE	Mandatory	string(array)	Optimal capacity of objects supported by the file system. **Unit:**bytes
OBJECTSIZEMIN	Mandatory	string(array)	Minimum capacity of objects supported by the file system. **Unit:**bytes
OBJECTSIZEMAX	Mandatory	string(array)	Maximum capacity of objects supported by the file system. **Unit:**bytes
CASESENSITIVE	Mandatory	string(bool)	Case sensitivity of file names. **The value is described as follows:** true: case-sensitive false: case insensitive

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Parameter	Mandatory/ Conditional	Type	Description
CASEPRESERVED	Mandatory	string(bool)	Whether the file name case is reserved **The value is described as follows:** true: reserved false: no reserved
DATAEXTENTSSHARING	Conditional	string(enum)	Share type of data between objects. **The value is described as follows:** 1: not shared 2: optional 3: mandatory sharing **Note:**The returned value varies with file system types.
COPYTARGET	Conditional	string(enum)	Role of the file system in copy. **The value is described as follows:** 1: primary only 2: mirror only 3: synchronization target only 4: backup target only 5: write once only **Note:**The returned value varies with file system types.
FILENAMESTREAMFORMATS	Conditional	string(array)	File name coding format supported by the file system. **Note:**The returned value varies with file system types.
FILENAMEFORMATS	Conditional	string(array)	File name format supported by the file system. **Note:**The returned value varies with file system types.

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Parameter	Mandatory/ Conditional	Type	Description
FILENAMELENGTHMAX	Conditional	string(array)	Maximum file name length supported by the file system. **Note:**The returned value varies with file system types.
SUPPORTEDLOCKINGSEMANTICS	Conditional	string(array)	Lock semantic supported by the file system. **Note:**The returned value varies with file system types.
SUPPORTEDAUTHOR-IZATIONPROTOCOLS	Conditional	string(array)	Authorization protocol supported by the file system. **Note:**The returned value varies with file system types.
SUPPORTEDAUTHEN-TICATIONPROTOCOLS	Conditional	string(array)	Authentication protocol supported by the file system. **Note:**The returned value varies with file system types.
PERSISTENCETYPES	Conditional	string(array)	Whether the file system supports persistence. **Note:**The returned value varies with file system types.
ISSYSDEFINE	Conditional	string(bool)	Whether it is the built-in default settings. If yes, it cannot be modified. **Note:**The returned value varies with file system types.
TYPE	Mandatory	string(enum)	File system type.
PARENTTYPE	Mandatory	string(enum)	Parent object type.
PARENTID	Mandatory	string	Parent object ID.
PARENTNAME	Mandatory	string	Parent object name.

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Example

- Querying the configuration of different types of file systems.

```
Request: GET /deviceManager/rest/210235843910E6000009/FILESYSTEM_TYPE_CONFIG/2

Response:
{
    "data": {
        "ACTUALFILESYSTEMTYPE": "2",
        "CASEPRESERVED": "true",
        "CASESENSITIVE": "true",
        "ID": "0",
        "NUMBEROFOBJECTS": "0",
        "NUMBEROFOBJECTSMAX": "2000000000",
        "NUMBEROFOBJECTSMIN": "0",
        "OBJECTSIZE": "0",
        "OBJECTSIZEMAX": "281474976710656",
        "OBJECTSIZEMIN": "0",
        "OBJECTTYPES": "7",
        "PARENTID": "",
        "PARENTNAME": "",
        "PARENTTYPE": 0,
        "TYPE": 16489
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.12 Interface for Querying File Share Config Information

Function

This interface is used to query the configuration of the file sharing service.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FILE_SHARE_CONFIG/

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

N/A

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
FILESHARINGPROTO-COL	Mandatory	string(array)	Supported protocol. **The value is described as follows:** 2: NFS 3: CIFS
INITIALENABLEDSTATE	Mandatory	string(bool)	File share initial status. **The value is described as follows:** true: enabled false: disabled
PARENTTYPE	Mandatory	string(enum)	Parent object type. **The value is described as follows:** The returned value is 0.
PARENTID	Mandatory	string	Parent object ID.
PARENTNAME	Mandatory	string	Parent object name.

Example

- Querying the configuration of the file sharing service.

```
Request: GET /deviceManager/rest/210235843910E6000009/FILE_SHARE_CONFIG/

Response:
 {
    "data": {
        "FILESHARINGPROTOCOL": "["2","3"]",
        "ID": "0",
        "INITIALENABLEDSTATE": "true",
        "PARENTID": "",
        "PARENTNAME": "",
        "PARENTTYPE": 0
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.1.13 Interface for Creating a Clone File System

Function

This interface is used to create a clone file system .

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Contains only digits, letters and underscores. **Length:**1~255
DESCRIPTION	Optional	string	Description. **Length:**0~255
ALLOCTYPE	Optional	enum	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System **Default:**1: Thin File System
PARENTFILESYSTE-MID	Mandatory	string	Parent file system ID.
PARENTSNAPSHOTID	Optional	string	Parent snapshot ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 40: file system
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name. **The value is described as follows:** Which contains only 1 to 255 digits, letters and underscores .
ENABLEDEDUP	Mandatory	string(bool)	Enables or disables deduplication. **The value is described as follows:** true: enable false: disabled
RECYCLESWITCH	Mandatory	string(enum)	Recycle bin switch. **The value is described as follows:** 0: off 1: on **Note:**Currently, this field is not supported.
IOCLASSID	Mandatory	string	I/O class ID.
ENABLEDEDUPCHECK	Mandatory	string(bool)	Whether to enable the function of checking byte by byte. **The value is described as follows:** true: yes false: no **Note:**This field is valid for the CLI only.

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Parameter	Mandatory/ Conditional	Type	Description
CAPACITYTHRESHOLD	Mandatory	string(uint64)	Total capacity alarm threshold. **The value is described as follows:** The value ranges from 50% to 95%. The default value is 90%.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 216: storage pool
PARENTID	Mandatory	string	ID of the parent object.
PARENTNAME	Mandatory	string	Name of the parent object.
HEALTHSTATUS	Mandatory	string(enum)	Health status. **The value is described as follows:** 1: Normal 2: Faulty 15: Write protection
RUNNINGSTATUS	Mandatory	string(enum)	Operating status. **The value is described as follows:** 27: Online 28: Offline 53: Initializing 96: Partition migrating
DESCRIPTION	Mandatory	string	Description.
SUBTYPE	Mandatory	string(enum)	File system type. **The value is described as follows:** 0: common file system 1: WORM file system
ALLOCTYPE	Mandatory	string(enum)	Space allocation type. **The value is described as follows:** 0: Thick File System 1: Thin File System

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Parameter	Mandatory/ Conditional	Type	Description
CAPACITY	Mandatory	string(uint64)	Configured capacity. **Unit:**sectors
INITIALALLOCCAPACITY	Mandatory	string(uint64)	Initially allocated capacitys. **Unit:**sectors
SNAPSHOTRESERVEP-ER	Mandatory	string(uint32)	Percentage of reserved snapshot space. **The value is described as follows:** The value ranges from 0% to 50%. **Unit:**%
AUTODELSNAPSHOTENABLE	Mandatory	string(bool)	Indicates whether the earliest snapshots (manual snapshots and periodic snapshots) can be automatically deleted. **The value is described as follows:** true: yes false: no
SNAPSHOTUSECAPACITY	Mandatory	string(uint64)	Capacity consumed by snapshots. **Unit:**sectors
ALLOCCAPACITY	Mandatory	string(uint64)	Used capacity. **Unit:**sectors
SECTORSIZE	Mandatory	string(uint32)	Block size. **The value is described as follows:** The value can only be 4 KB, 8 KB, 16 KB, 32 KB, or 64 KB. **Unit:**bytes
OWNINGCONTROLLER	Mandatory	string	ID of the owning controller.
WORKINGCONTROLLER	Mandatory	string	ID of the working controller.

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Parameter	Mandatory/ Conditional	Type	Description
CHECKSUMENABLE	Mandatory	string(bool)	Data parity switch. **The value is described as follows:** true: enable false: disabled
ATIME	Mandatory	string(bool)	Indicates whether the access time is updated after a file is read. **The value is described as follows:** true: on false: off
READONLY	Mandatory	string(bool)	Indicates whether the data set can be modified. **The value is described as follows:** true: no false: yes
IOPRIORITY	Mandatory	string(enum)	File system I/O priority. **The value is described as follows:** 1: low 2: middle 3: high
CACHEPARTITIONID	Mandatory	string	Cache partition ID.
ISCLONEFS	Mandatory	string(bool)	Indicates whether a file system is a clone. **The value is described as follows:** true: yes false: no
ENABLECOMPRESSION	Mandatory	string(bool)	Compression enabled or not. **The value is described as follows:** true: enable false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
COMPRESSION	Mandatory	string(enum)	Compression algorithm. **The value is described as follows:** 0: rapid compression 1: deep compression
WORMTYPE	Mandatory	string(enum)	WORM service type. **The value is described as follows:** Currently only the compliance mode is supported. 1: compliance mode 2: audit log 3: enterprise mode
WORMMINPROTECTPERIOD	Mandatory	string(uint64)	Minimum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. In addition, infinite is supported. **Unit:**days
WORMMAXPROTECTPERIOD	Mandatory	string(uint64)	Maximum protection period. **The value is described as follows:** The value ranges from 0 to 70 years. The default value is 70 years. In addition, infinite is supported. **Unit:**days
WORMDEFPROTECTPERIOD	Mandatory	string(uint64)	Default protection period. **The value is described as follows:** Range: minimum protection period ≤ default protection period ≤ maximum protection period.

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Parameter	Mandatory/ Conditional	Type	Description
WORMAUTOLOCK	Mandatory	string(bool)	Automatic locking mode of WORM. **The value is described as follows:** true: on false: off
WORMAUTOLOCKTIME	Mandatory	string(uint32)	Automatic lock time. **The value is described as follows:** The default value is 2 hours. The value ranges from 2 hours to 7 days.
WORMAUTODEL	Mandatory	string(bool)	Automatic deletion mode of WORM. **The value is described as follows:** true: on false: off
WRITECHECK	Mandatory	string(bool)	Write check.The value remains off in enterprise WORM mode and cannot be changed by users. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTMAXNUM	Mandatory	string(uint32)	Maximum number of periodic snapshots.
ISSHOWSNAPDIR	Mandatory	string(bool)	Snapshot directory visible or not. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/ Conditional	Type	Description
DATATRANSFERPOLICY	Mandatory	string(enum)	Data block migration policy. **The value is described as follows:** 0: no migration 1: automatic migration 2: migration to a higher performance tier 3: migration to a lower performance tier
INITIALDISTRIBUTEPOLICY	Mandatory	string(enum)	Initial allocation policy. **The value is described as follows:** 0: automatic 1: highest performance 2: performance 3: capacity
PARENTSNAPSHOTID	Mandatory	string	Id of the parent read-only snapshot.
PARENTFILESYSTEMID	Conditional	string	Id of the parent file system. **Note:**This field must be returned if the specified file system is a clone file system.
PARENTFILESYSTEMNAME	Mandatory	string	Name of the parent file system.
SMARTCACHEPARTITIONID	Mandatory	string	SmartCache partition ID.
ENABLEROLLBACKMODE	Conditional	string(bool)	Rollback mode of read-only snapshots. **The value is described as follows:** true: on false: off **Note:**This field has been discarded.
AVAILABLECAPCITY	Mandatory	string(uint64)	Available file system capacity. **Unit:**sectors

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Parameter	Mandatory/ Conditional	Type	Description
AVAILABLEANDALLOCCAPACITYRATIO	Mandatory	string(uint32)	Percentage of available file system capacity to used capacity. **Unit:**%
ENABLETIMINGSNAP-SHOT	Mandatory	string(bool)	Indicates whether periodic snapshot is enabled. **The value is described as follows:** true: enable false: disabled
TIMINGSNAPSHOTSCHEDULEID	Mandatory	string	Timing policy ID of file system read-only snapshots.
ROOT	Mandatory	string	Root path.
LOCALACCESSDEFI-NITIONREQUIRED	Mandatory	string(enum)	Local access options are supported. **The value is described as follows:** 2: A file system needs to be defined in the local access 3: A file system needs to be defined at a fixed directory in the local access 4: A file system does not need to be defined in the local access
PATHNAMESEPARATORSTRING	Mandatory	string	Directory separator.
CASESENSITIVE	Mandatory	string(bool)	Indicates whether a file name is case sensitive. **The value is described as follows:** true: yes false: no

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Parameter	Mandatory/ Conditional	Type	Description
CASEPRESERVED	Mandatory	string(bool)	Indicates whether the file name size is reserved. **The value is described as follows:** true: yes false: no
MAXFILENAMELENGTH	Mandatory	string(uint32)	Maximum file name length.
ACTUALFILESYSTEM-TYPE	Mandatory	string(enum)	Actual file system type. **The value is described as follows:** 1: Wushan file system 2: NOFS
DEDUPSAVEDCAPACI-TY	Mandatory	string(uint64)	Capacity saved by deduplication, expressed in sectors. **Unit:**sectors
COMPRESSIONSAVED CAPACITY	Mandatory	string(uint64)	Capacity saved by compression, expressed in sectors. **Unit:**sectors
TOTALSAVEDCAPACI-TY	Mandatory	string(uint64)	Total capacity saved, expressed in sectors. **Unit:**sectors
SMARTCACHESTATE	Mandatory	string(enum)	SmartCache status. **The value is described as follows:** 0: disabled 1: enabled 2: pool status inherited
SC_CACHEDSIZE	Mandatory	string(uint32)	SmartCache size, expressed in kilobytes. **Unit:**KB
SC_HITRAGE	Mandatory	string(uint32)	SmartCache hit ratio (%). **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
MINPROTECTTIMEU-NIT	Mandatory	string(enum)	Minimum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
MAXPROTECTTIMEU-NIT	Mandatory	string(enum)	Maximum protection time unit. **The value is described as follows:** 46: day 47: month 48: year
DEFPROTECTTIMEU-NIT	Mandatory	string(enum)	Default protection time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**"0" indicates a invalid value.
AUTOLOCKTIMEUNIT	Mandatory	string(enum)	Automatic lock time unit. **The value is described as follows:** 46: day 47: month 48: year **Note:**"0" indicates a invalid value.
DEDUPSAVEDRATIO	Mandatory	string(uint32)	Space saving ratio of deduplication . **Unit:**%
COMPRESSIONSAVE-DRATIO	Mandatory	string(uint32)	Space saving ratio of compression. **Unit:**%
TOTALSAVEDRATIO	Mandatory	string(uint32)	Total space saving ratio. **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
WORMCLOCKTIME	Mandatory	string(uint64)	WORM clock time, expressed in seconds. **Unit:**seconds
WORMEXPIREDTIME	Mandatory	string(uint64)	WORM expiration time, expressed in seconds. **Unit:**seconds
MINSIZEFSCAPACITY	Mandatory	string(uint64)	Minimum space that can be reduced for a thin file system. **Unit:**sectors
inodeTotalCount	Mandatory	string(uint32)	Total number of inodes.
inodeUsedCount	Mandatory	string(uint32)	Number of used inodes.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
REMOTEREPLICATIO-NIDS	Mandatory	string(array)	Remote replication IDs.
APPLICATIONSCENARIO	Mandatory	string(enum)	Application Scenario. **The value is described as follows:** 1:Database 2:VM 3:User-defined
HYPERMETROPAIRIDS	Mandatory	string(array)	Hyper Metro pair IDs.
HYPERVAULTPAIRIDS	Mandatory	string(array)	Hyper Vault Pair IDs.
CHILDRENCLONEFS-NUM	Mandatory	string(uint32)	Number of child clone file systems.

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Parameter	Mandatory/ Conditional	Type	Description
ISDELETEPARENTS-NAPSHOT	Mandatory	string(bool)	Indicates whether delete associated snapshots of the parent file system. **The value is described as follows:** true: delete false: not delete
SPLITENABLE	Mandatory	string(bool)	Split switch. **The value is described as follows:** true: start splitting false: stop splitting
SPLITPROGRESS	Mandatory	string(uint32)	Split progress.
SPLITSPEED	Mandatory	enum	Split speed. **The value is described as follows:** 1: low 2: medium 3: high 4: highest **Note:**The other values returned are invalid.
SPLITSTATUS	Mandatory	enum	Split status. **The value is described as follows:** 1: not started 2: splitting 3: queuing 4: abnormal end **Note:**The other values returned are invalid.
SPACESELFADJUSTIN GMODE	Mandatory	string(enum)	Sets the automatic capacity adjustment mode. **The value is described as follows:** 0: off 1: grow 2: grow shrink

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Parameter	Mandatory/ Conditional	Type	Description
AUTOSIZEENABLE	Mandatory	string(enum)	Switch of automatic capacity adjustment. **The value is described as follows:** 0: off 1: on
AUTOSHRINKTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic reduction. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.
AUTOGROWTHRESHOLDPERCENT	Mandatory	string(uint32)	Percentage threshold that triggers the automatic expansion. **The value is described as follows:** 1~99 **Unit:**% **Note:**Percentage threshold that triggers the automatic expansion must bigger than percentage threshold that triggers the automatic reduction.
MINAUTOSIZE	Mandatory	string(uint64)	Lower limit of the automatic reduction. **The value is described as follows:** 1GB~16PB **Unit:**sectors **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.

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Parameter	Mandatory/ Conditional	Type	Description
MAXAUTOSIZE	Mandatory	string(uint64)	Upper limit of the automatic expansion. **The value is described as follows:** 1GB~16PB **Note:**Upper limit of the automatic reduction must bigger than or equal to lower limit.
SPACERECYCLEMODE	Mandatory	string(enum)	Capacity recycle mode. **The value is described as follows:** 0: auto size first 1: delete snapshot first
AUTOSIZEINCREMENT	Mandatory	string(uint64)	Capacity change of a single expansion/ reduction. **The value is described as follows:** 64MB~100GB **Unit:**sectors
SNAPSHOTRESERVE-CAPACITY	Mandatory	string(uint64)	Reserved snapshot capacity.

Example

- Creating a clone file system.

```
Request: POST/deviceManager/rest/210235843910E6000009/filesystem
{
    "NAME": "shl0000_Clone_1708070241082",
    "DESCRIPTION": "",
    "ALLOCTYPE": "1",
    "PARENTFILESYSTEMID": "5"
}

Response: {
    {
        "data": {
            "ACTUALFILESYSTEMTYPE": "2",
            "ALLOCCAPACITY": "0",
            "ALLOCTYPE": "0",
            "APPLICATIONSCENARIO": "3",
            "ATIME": "false",
            "AUTODELSNAPSHOTENABLE": "false",
            "AUTOGROWTHRESHOLDPERCENT": "85",
            "AUTOLOCKTIMEUNIT": "0",
            "AUTOSHRINKTHRESHOLDPERCENT": "50",
            "AUTOSIZEENABLE": "1",
            "AUTOSIZEINCREMENT": "2097152",
            "AVAILABLEANDALLOCCAPACITYRATIO": "0",
```

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```
        "AVAILABLECAPCITY": "0",
        "CACHEPARTITIONID": "",
        "CAPACITY": "2097152",
        "CAPACITYTHRESHOLD": "90",
        "CASEPRESERVED": "true",
        "CASESENSITIVE": "true",
        "CHECKSUMENABLE": "true",
        "CHILDRENCLONEFSNUM": "0",
        "COMPRESSION": "0",
        "COMPRESSIONSAVEDCAPACITY": "0",
        "COMPRESSIONSAVEDRATIO": "0",
        "DATATRANSFERPOLICY": "0",
        "DEDUPSAVEDCAPACITY": "0",
        "DEDUPSAVEDRATIO": "0",
        "DEFPROTECTTIMEUNIT": "0",
        "DESCRIPTION": "",
        "ENABLECOMPRESSION": "false",
        "ENABLEDEDUP": "false",
        "ENABLEDEDUPCHECK": "false",
        "ENABLEROLLBACKMODE": "false",
        "ENABLETIMINGSNAPSHOT": "false",
        "HEALTHSTATUS": "1",
        "HYPERMETROPAIRIDS": "[]",
        "HYPERVAULTPAIRIDS": "[]",
        "ID": "33",
        "INITIALALLOCCAPACITY": "20480",
        "INITIALDISTRIBUTEPOLICY": "0",
        "IOCLASSID": "",
        "IOPRIORITY": "1",
        "ISCLONEFS": "true",
        "ISDELETEPARENTSNAPSHOT": "false",
        "ISSHOWSNAPDIR": "true",
        "LOCALACCESSDEFINITIONREQUIRED": "4",
        "MAXAUTOSIZE": "2516582",
        "MAXFILENAMELENGTH": "256",
        "MAXPROTECTTIMEUNIT": "0",
        "MINAUTOSIZE": "2097152",
        "MINPROTECTTIMEUNIT": "0",
        "MINSIZEFSCAPACITY": "0",
        "NAME": "shl0000_Clone_1708070241082",
        "OWNINGCONTROLLER": "0B",
        "PARENTFILESYSTEMNAME": "shl0000",
        "PARENTID": "0",
        "PARENTNAME": "StoragePool001",
        "PARENTSNAPSHOTID": "",
        "PARENTTYPE": 216,
        "PATHNAMESEPARATORSTRING": "/",
        "READONLY": "false",
        "RECYCLESWITCH": "33",
        "REMOTEREPLICATIONIDS": "[]",
        "ROOT": "/shl0000_Clone_1708070241082",
        "RUNNINGSTATUS": "53",
        "SC_CACHEDSIZE": "0",
        "SC_HITRAGE": "0",
        "SECTORSIZE": "16384",
        "SMARTCACHEPARTITIONID": "",
        "SMARTCACHESTATE": "0",
        "SNAPSHOTRESERVECAPACITY": "419430",
        "SNAPSHOTRESERVEPER": "20",
        "SNAPSHOTUSECAPACITY": "0",
        "SPACERECYCLEMODE": "0",
        "SPACESELFADJUSTINGMODE": "0",
        "SPLITENABLE": "false",
        "SPLITPROGRESS": "0",
        "SPLITSPEED": "2",
        "SPLITSTATUS": "0",
        "SUBTYPE": "0",
        "TIMINGSNAPSHOTMAXNUM": "16",
        "TIMINGSNAPSHOTSCHEDULEID": "",
```


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```
            "TOTALSAVEDCAPACITY": "0",
            "TOTALSAVEDRATIO": "0",
            "TYPE": 40,
            "WORKINGCONTROLLER": "0B",
            "WORMAUTODEL": "false",
            "WORMAUTOLOCK": "false",
            "WORMAUTOLOCKTIME": "0",
            "WORMCLOCKTIME": "0",
            "WORMDEFPROTECTPERIOD": "0",
            "WORMEXPIREDTIME": "0",
            "WORMMAXPROTECTPERIOD": "0",
            "WORMMINPROTECTPERIOD": "0",
            "WORMTYPE": "0",
            "WRITECHECK": "false",
            "inodeTotalCount": "0",
            "inodeUsedCount": "0",
            "vstoreId": "1",
            "vstoreName": "vStore001"
        },
        "error": {
            "code": 0,
            "description": "0"
        }
    }
}
```


4.13.1.14 Interface for Starting or Stopping Splitting a File System Clone

Function

This interface is used to start or stop splitting a file system clone.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to split the clone pair. This operation may occupy extra memory.

Suggestion: Before performing this operation, ensure that the ID of the selected LUN clone is correct.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/filesystem_split_switch

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	File system clone ID.
SPLITENABLE	Mandatory	bool	Split switch. **The value is described as follows:** true:start splitting false:stop splitting
SPLITSPEED	Optional	enum	Split speed. **The value is described as follows:** 1:low 2:medium 3:high 4:highest **Default:**2: medium
ISDELETEPARENTS-NAPSHOT	Optional	bool	Whether associated snapshots of the parent file system are deleted. **The value is described as follows:** true:delete false:not delete **Default:**false: not delete

Result

N/A

Example

- Starting or stopping splitting a file system clone.

```
Request: PUT /deviceManager/rest/210235982610E7873965/filesystem_split_switch
{
    "ID": "10",
    "SPLITENABLE": true,
    "SPLITSPEED": "2",
    "ISDELETEPARENTSNAPSHOT": false
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.2 quota_tree

4.13.2.1 Interface for Creating a Quota Tree

Function

This interface is used to create a quota tree.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QUOTATREE

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Quota tree name. **The value is described as follows:** The value contains 1 to 127 characters, only including letters, digits, spaces, and special characters (!\"#&%$'()*+-.;<=>?@[]^_`{|}~). **Length:**1~127
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** File system ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 40: file system
QUOTASWITCH	Optional	bool	Quota switch. **The value is described as follows:** false: off true: on **Default:**false: off
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	TYPE. **The value is described as follows:** 16445: QUOTATREE
ID	Mandatory	string	ID.
NAME	Mandatory	string	NAME.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	ID of the parent object.
QUOTASWITCH	Mandatory	string(bool)	Quota switch. **The value is described as follows:** false: off true: on

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Parameter	Mandatory/ Conditional	Type	Description
QUOTASWITCHSTATUS	Mandatory	string(enum)	Running Status. **The value is described as follows:** 0: off 1: on 2: initializing
NEEDINIT	Mandatory	string(bool)	Whether to initialize. **The value is described as follows:** true: yes false: no
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating a quota tree.

```
Request: POST /deviceManager/rest/210235843910E6000009/QUOTATREE
{
    "NAME": "Y",
    "PARENTTYPE": "40",
    "PARENTID": "17",
    "QUOTASWITCH": "false"
}

Response:
{
    "data": {
        "ID": "4@1",
        "NAME": "Y",
        "NEEDINIT": "false",
        "PARENTID": "17",
        "PARENTTYPE": 40,
        "QUOTASWITCH": "false",
        "QUOTASWITCHSTATUS": "1",
        "TYPE": 16445
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.2.2 Interface for Deleting a Quota Tree

Function

This interface is used to delete a quota tree.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QUOTATREE/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quota tree ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a quota tree.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/QUOTATREE/9@1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.2.3 Interface for Batch Querying Quota Tree Information

Function

This interface is used to batch query basic information about quota trees.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/quotatree

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Optional	enum	Type of the parent object. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	ID of the parent object.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type. **The value is described as follows:** 16445: QUOTATREE
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	ID of the parent object.
QUOTASWITCH	Mandatory	string(bool)	Quota switch. **The value is described as follows:** false: off true: on
QUOTASWITCHSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 0: off 1: on 2: initializing
NEEDINIT	Mandatory	string(bool)	Initialize or not. **The value is described as follows:** true: yes false: no
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Example

- Batch querying basic information about quota trees.

```
Request: GET /deviceManager/rest/65789AB65C7136CC98B5/quotatree?
PARENTTYPE=40&PARENTID=4&range=[0-100]

Response:
{
    "data": [
        {
            "ID": "4@0",
            "NAME": "Root Quota Tree",
            "NEEDINIT": "false",
            "PARENTID": "4",
            "PARENTTYPE": 40,
            "QUOTASWITCH": "true",
            "QUOTASWITCHSTATUS": "1",
            "TYPE": 16445
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.2.4 Interface for Querying Quota Tree Information

Function

This interface is used to query basic information about a quota tree.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/quotatree/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quota tree ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	TYPE. **The value is described as follows:** 16445: QUOTATREE
ID	Mandatory	string	ID.
NAME	Mandatory	string	NAME.
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** ID of the file system.
QUOTASWITCH	Mandatory	string(bool)	Quota switch. **The value is described as follows:** false: off true: on
QUOTASWITCHSTATUS	Mandatory	string(enum)	Running Status. **The value is described as follows:** 0: off 1: on 2: initializing

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Parameter	Mandatory/ Conditional	Type	Description
NEEDINIT	Mandatory	string(bool)	Whether to initialize. **The value is described as follows:** true: yes false: no
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about a quota tree.

```
Request: GET /deviceManager/rest/210235843910E6000009/quotatree/4@0

Response:
{
    "data": {
        "ID": "4@0",
        "NAME": "Root Quota Tree",
        "NEEDINIT": "false",
        "PARENTID": "4",
        "PARENTTYPE": 40,
        "QUOTASWITCH": "true",
        "QUOTASWITCHSTATUS": "1",
        "TYPE": 16445
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.2.5 Interface for Modifying Quota Tree Information

Function

This interface is used to modify a quota tree.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/QUOTATREE/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quota tree ID.
NAME	Conditional	string	Quota tree name. **The value is described as follows:** The value contains 1 to 127 characters, only including letters, digits, spaces, and special characters (!\"#&%$'()*+-.;<=>?@[]^_`{|}~). **Length:**1~127 **Note:**NAME or QUOTASWITCH is delivered.
QUOTASWITCH	Conditional	bool	Quota switch. **The value is described as follows:** false: off true: on **Note:**NAME or QUOTASWITCH is delivered.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Modifying a quota tree.

```
Request: PUT /deviceManager/rest/210235843910E6000009/QUOTATREE/9@1
{
    "NAME": "Y",
    "QUOTASWITCH": "false"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.2.6 Interface for Querying the Number of Quota Trees

Function

This interface is used to query the number of quota trees.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/quotatree/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Optional	enum	Parent object type. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	Parent object ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried file quota trees.

Example

- Querying the number of quota trees.

```
Request: GET /deviceManager/rest/210235843910E6000009/quotatree/count?
PARENTTYPE=40&PARENTID=2

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.3 quota

4.13.3.1 Interface for Querying Directory Quota Information

Function

This interface is used to query information about a directory quota.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FS_QUOTA/${id}

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quota ID. **The value is described as follows:** The format is parentID@quotaType.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16458: Quota
ID	Mandatory	string	ID. **The value is described as follows:** The format is parentID@quotaType.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 16445: Qtree 40: filesystem

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Parameter	Mandatory/ Conditional	Type	Description
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** For the default directory quota of a file system, parentID is fsid. For a quota tree directory quota, parentID is in the format of fsid@qid.
QUOTATYPE	Mandatory	string(enum)	Quota type. **The value is described as follows:** 1: Quota Tree 2: Quota User Tree 3: Quota UserGroup Tree
RESUSENAME	Mandatory	string	Quota tree name. **The value is described as follows:** 1. This field can be left empty when you create a directory quota and must be configured when you create a user quota or group quota. 2. If the default directory quota is returned, the field is left empty. 3. If the directory quota of the specified quota tree is returned, the field value is the quota tree name.

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Parameter	Mandatory/ Conditional	Type	Description
SPACESOFTQUOTA	Mandatory	string(uint64)	Space soft quota. **The value is described as follows:** Supports a maximum of 16 PB. An alarm is reported when the soft quota is exceeded. (This parameter is optional for soft quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no soft quota is configured.). **Unit:**bytes
SPACEHARDQUOTA	Mandatory	string(uint64)	Space hard quota. **The value is described as follows:** Supports a maximum of 16 PB (This parameter is optional for hard quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no hard quota is configured.). **Unit:**bytes
FILESOFTQUOTA	Mandatory	string(uint64)	Soft quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion. An alarm is reported when the soft quota is exceeded. (This parameter is optional for soft quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no soft quota is configured.).

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Parameter	Mandatory/ Conditional	Type	Description
FILEHARDQUOTA	Mandatory	string(uint64)	Hard quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion (This parameter is optional for hard quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no hard quota is configured.).
SPACEUSED	Mandatory	string(uint64)	Used space. **The value is described as follows:** If INVALID_VALUE64 is displayed in the query response, the value is invalid. **Unit:**bytes
FILEUSED	Mandatory	string(uint64)	Number of used files. **The value is described as follows:** If INVALID_VALUE64 is displayed in the query response, the value is invalid.
SPACEUSEDRATE	Mandatory	string(uint32)	Space utilization . **Unit:**%
FILEUSEDRATE	Mandatory	string(uint32)	File utilization . **Unit:**%
USRGRPOWNERNAME	Mandatory	string	Name of a user or user group.
USRGRPTYPE	Mandatory	string(uint32)	Type of a user or a user group. **The value is described as follows:** 1: Local user or local user group 2: Domain user or domain user group

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying information about a directory quota.

```
Request: GET /deviceManager/rest/210235843910E6000009/FS_QUOTA/34@4@1

Response:
 {
    "data": {
        "FILEHARDQUOTA": "2000",
        "FILESOFTQUOTA": "1000",
        "FILEUSED": "0",
        "FILEUSEDRATE": "0",
        "ID": "34@4@1",
        "PARENTID": "34@4",
        "PARENTTYPE": 16445,
        "QUOTATYPE": "1",
        "RESUSENAME": "test10003",
        "SPACEHARDQUOTA": "2147483648",
        "SPACESOFTQUOTA": "1073741824",
        "SPACEUSED": "0",
        "SPACEUSEDRATE": "0",
        "TYPE": 16458,
        "USRGRPOWNERNAME": "",
        "USRGRPTYPE": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.3.2 Interface for Querying the Number of Directory Quotas

Function

This interface is used to query the number of directory quotas.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FS_QUOTA/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 40: file system
PARENTID	Mandatory	string	ID of the parent object.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried directory quotas.

Example

- Querying the number of directory quotas.

```
Request: GET /deviceManager/rest/210235843910E6000009/FS_QUOTA/count?
PARENTTYPE=40&PARENTID=9

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.3.3 Interface for Deleting a Directory Quota

Function

This interface is used to delete a directory quota.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FS_QUOTA/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quota ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a directory quota.

```
Request: DELETE  /deviceManager/rest/210235843910E6000009/FS_QUOTA/34@4@1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.3.4 Interface for Modifying Directory Quota Information

Function

This interface is used to modify a directory quota.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FS_QUOTA/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Quota ID.
SPACESOFTQUOTA	Conditional	uint64	Space soft quota, An alarm is reported when the soft quota is exceeded. **The value is described as follows:** Support a maximum of 16 PB. **Unit:**bytes **Note:**The space hard quota must be greater than the space soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SPACEHARDQUOTA	Conditional	uint64	Space hard quota. **The value is described as follows:** Supports a maximum of 16 PB. **Unit:**bytes **Note:**The space hard quota must be greater than the space soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.
FILESOFTQUOTA	Conditional	uint64	Soft quota of file quantity. An alarm is reported when the soft quota is exceeded. **The value is described as follows:** Supports a maximum of 2 billion. **Note:**The file quantity hard quota must be greater than the file quantity soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
FILEHARDQUOTA	Conditional	uint64	Hard quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion. **Note:**The file quantity hard quota must be greater than the file quantity soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying a directory quota.

```
Request: PUT /deviceManager/rest/210235843910E6000009/FS_QUOTA/10@0@1
{
    "FILEHARDQUOT": 4000
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.3.5 Interface for Batch Querying Directory Quota Information

Function

This interface is used to batch query basic information about directory quotas.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FS_QUOTA

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 16445: Qtree 40: file system
PARENTID	Mandatory	string	ID of the parent object.
range	Mandatory	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16458: Quota
ID	Mandatory	string	ID. **The value is described as follows:** The format is parentID@quotaType.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** filesystem or Qtree.
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** For the default directory quota of a file system, parentID is fsid. For a quota tree directory quota, parentID is in the format of fsid@qid.
QUOTATYPE	Mandatory	string(enum)	Quota type. **The value is described as follows:** 1: Quota Tree 2: Quota User Tree 3: Quota UserGroup Tree

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Parameter	Mandatory/ Conditional	Type	Description
RESUSENAME	Mandatory	string	Quota tree name. **The value is described as follows:** 1. This field can be left empty when you create a directory quota and must be configured when you create a user quota or group quota. 2. If the default directory quota is returned, the field is left empty. 3. If the directory quota of the specified quota tree is returned, the field value is the quota tree name.
SPACESOFTQUOTA	Mandatory	string(uint64)	Space soft quota. **The value is described as follows:** Supports a maximum of 16 PB. An alarm is reported when the soft quota is exceeded. (This parameter is optional for soft quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no soft quota is configured.). **Unit:**bytes
SPACEHARDQUOTA	Mandatory	string(uint64)	Space hard quota. **The value is described as follows:** Supports a maximum of 16 PB (This parameter is optional for hard quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no hard quota is configured.). **Unit:**bytes

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Parameter	Mandatory/ Conditional	Type	Description
FILESOFTQUOTA	Mandatory	string(uint64)	Soft quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion. An alarm is reported when the soft quota is exceeded. (This parameter is optional for soft quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no soft quota is configured.).
FILEHARDQUOTA	Mandatory	string(uint64)	Hard quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion (This parameter is optional for hard quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no hard quota is configured.).
SPACEUSED	Mandatory	string(uint64)	Used space. **The value is described as follows:** If INVALID_VALUE64 is displayed in the query response, the value is invalid. **Unit:**bytes
FILEUSED	Mandatory	string(uint64)	Number of used files. **The value is described as follows:** If INVALID_VALUE64 is displayed in the query response, the value is invalid.
SPACEUSEDRATE	Mandatory	string(uint32)	Space utilization . **Unit:**%

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Parameter	Mandatory/ Conditional	Type	Description
FILEUSEDRATE	Mandatory	string(uint32)	File utilization . **Unit:**%
USRGRPOWNERNAME	Mandatory	string	Name of a user or user group.
USRGRPTYPE	Mandatory	string(uint32)	Type of a user or a user group. **The value is described as follows:** 1: Local user or local user group 2: Domain user or domain user group
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying basic information about directory quotas.

```
Request: GET /deviceManager/rest/210235843910E6000009/FS_QUOTA?
PARENTTYPE=40&PARENTID=10&range=[0-100]

Response:
{
    "data": [
       {
          "FILEHARDQUOTA": "2000",
          "FILESOFTQUOTA": "1000",
          "FILEUSED": "0",
          "FILEUSEDRATE": "0",
          "ID": "10@0@1",
          "PARENTID": "10",
          "PARENTTYPE": 40,
          "QUOTATYPE": "1",
          "RESUSENAME": "test10003",
          "SPACEHARDQUOTA": "2147483648",
          "SPACESOFTQUOTA": "1073741824",
          "SPACEUSED": "0",
          "SPACEUSEDRATE": "0",
          "TYPE": 16458,
          "USRGRPOWNERNAME": "",
          "USRGRPTYPE": "0"
      }
],
    "error": {
```

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```
        "code": 0,
        "description": "0"
    }
}
```

4.13.3.6 Interface for Creating a Directory Quota

Function

This interface is used to create a directory quota.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FS_QUOTA

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
PARENTTYPE	Mandatory	enum	Type number of the parent object. **The value is described as follows:** 16445: Qtree 40: filesystem
PARENTID	Mandatory	string	ID of the parent object, which maps to the directory path.
QUOTATYPE	Mandatory	enum	Quota type. **The value is described as follows:** 1: Quota Tree 2: Quota User Tree 3: Quota UserGroup Tree

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Parameter	Mandatory/Optional/Conditional	Type	Description
SPACESOFTQUOTA	Conditional	uint64	Space soft quota, An alarm is reported when the soft quota is exceeded. **The value is described as follows:** Support a maximum of 16 PB. **Unit:**bytes **Note:**The space hard quota must be greater than the space soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.
SPACEHARDQUOTA	Conditional	uint64	Space hard quota. **The value is described as follows:** Supports a maximum of 16 PB. **Unit:**bytes **Note:**The space hard quota must be greater than the space soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.

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Parameter	Mandatory/Optional/Conditional	Type	Description
FILESOFTQUOTA	Conditional	uint64	Soft quota of file quantity. An alarm is reported when the soft quota is exceeded. **The value is described as follows:** Supports a maximum of 2 billion. **Note:**The file quantity hard quota must be greater than the file quantity soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.
FILEHARDQUOTA	Conditional	uint64	Hard quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion. **Note:**The file quantity hard quota must be greater than the file quantity soft quota. At least one of SPACESOFTQUOTA, SPACEHARDQUOTA, FILESOFTQUOTA, and FILEHARDQUOTA must be delivered.
USRGRPOWNERNAME	Conditional	string	User/User Group Name. **Note:**This parameter must be delivered,If QUOTATYPE is Quota User Tree Or Quota UserGroup Tree.

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Parameter	Mandatory/Optional/Conditional	Type	Description
USRGRPTYPE	Conditional	uint32	User/User Group Type. **Note:**This parameter must be delivered,If QUOTATYPE is Quota User Tree Or Quota UserGroup Tree.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16458: Quota
ID	Mandatory	string	ID. **The value is described as follows:** The format is parentID@quotaType.
PARENTTYPE	Mandatory	enum	Type of the parent object. **The value is described as follows:** 16445: Qtree 40: filesystem
PARENTID	Mandatory	string	ID of the parent object. **The value is described as follows:** For the default directory quota of a file system, parentID is fsid. For a quota tree directory quota, parentID is in the format of fsid@qid.

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Parameter	Mandatory/ Conditional	Type	Description
QUOTATYPE	Mandatory	string(enum)	Quota type. **The value is described as follows:** 1: Quota Tree 2: Quota User Tree 3: Quota UserGroup Tree
RESUSENAME	Mandatory	string	Quota tree name. **The value is described as follows:** 1. This field can be left empty when you create a directory quota and must be configured when you create a user quota or group quota. 2. If the default directory quota is returned, the field is left empty. 3. If the directory quota of the specified quota tree is returned, the field value is the quota tree name.
SPACESOFTQUOTA	Mandatory	string(uint64)	Space soft quota. **The value is described as follows:** Supports a maximum of 16 PB. An alarm is reported when the soft quota is exceeded. (This parameter is optional for soft quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no soft quota is configured.) **Unit:**bytes

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Parameter	Mandatory/ Conditional	Type	Description
SPACEHARDQUOTA	Mandatory	string(uint64)	Space hard quota. **The value is described as follows:** Supports a maximum of 16 PB (This parameter is optional for hard quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no hard quota is configured.) **Unit:**bytes
FILESOFTQUOTA	Mandatory	string(uint64)	Soft quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion. An alarm is reported when the soft quota is exceeded. (This parameter is optional for soft quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no soft quota is configured.)
FILEHARDQUOTA	Mandatory	string(uint64)	Hard quota of file quantity. **The value is described as follows:** Supports a maximum of 2 billion (This parameter is optional for hard quota creation and modification. If INVALID_VALUE64 is displayed in the query response, no hard quota is configured.)

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Parameter	Mandatory/ Conditional	Type	Description
SPACEUSED	Mandatory	string(uint64)	Used space. **The value is described as follows:** If INVALID_VALUE64 is displayed in the query response, the value is invalid. **Unit:**bytes
FILEUSED	Mandatory	string(uint64)	Number of used files. **The value is described as follows:** If INVALID_VALUE64 is displayed in the query response, the value is invalid.
SPACEUSEDRATE	Mandatory	string(uint32)	Space utilization . **Unit:**%
FILEUSEDRATE	Mandatory	string(uint32)	File utilization . **Unit:**%
USRGRPOWNERNAME	Mandatory	string	Name of a user or user group.
USRGRPTYPE	Mandatory	string(uint32)	Type of a user or a user group. **The value is described as follows:** 1. Local user or local user group 2. Domain user or domain user group
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Example

- Creating a directory quota.

```
Request: POST /deviceManager/rest/210235843910E6000009/FS_QUOTA
{
    "QUOTATYPE": 1,
    "FILEHARDQUOTA": 2000,
    "FILESOFTQUOTA": 1000,
    "PARENTID": "34",
    "PARENTTYPE": 40
}

Response:
{
    "data": {
        "FILEHARDQUOTA": "2000",
        "FILESOFTQUOTA": "1000",
        "FILEUSED": "-1",
        "FILEUSEDRATE": "-1",
        "ID": "34@0@1",
        "PARENTID": "34",
        "PARENTTYPE": 40,
        "QUOTATYPE": "1",
        "RESUSENAME": "",
        "SPACEHARDQUOTA": "-1",
        "SPACESOFTQUOTA": "-1",
        "SPACEUSED": "-1",
        "SPACEUSEDRATE": "-1",
        "TYPE": 16458,
        "USRGRPOWNERNAME": "",
        "USRGRPTYPE": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4 share

4.13.4.1 Interface for Adding a CIFS Share User (Group)

Function

This interface is used to add a CIFS share user (user group).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFS_SHARE_AUTH_CLIENT

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name of a user or user group. **Length:**1~256 **Note:**The user group name must start with @.
PARENTID	Mandatory	string	ID of the parent object.
DOMAINTYPE	Optional	enum	Domain type. **The value is described as follows:** 0: AD domain user 2: local user **Default:**2
PERMISSION	Mandatory	enum	Permission. **The value is described as follows:** 0: read 1: full control 2: forbidden 5: read/write (cannot be deleted or renamed)
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name of a user or user group.
PARENTID	Mandatory	string	ID of the parent object.

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Parameter	Mandatory/ Conditional	Type	Description
DOMAINTYPE	Mandatory	string(uint32)	Domain type. **The value is described as follows:** 0: AD domain user 2: local user
PERMISSION	Mandatory	string(uint32)	Permission. **The value is described as follows:** 0: read 1: full control 2: forbidden 5: read/write
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Adding a CIFS share user (user group).

```
Request: POST /deviceManager/rest/210235843910E6000009/CIFS_SHARE_AUTH_CLIENT
{
    "NAME": "jordan",
    "PARENTID": "1",
    "DOMAINTYPE": "2",
    "PERMISSION": "0"
}

Response:
 {
    "data": {
        "DOMAINTYPE": "2",
        "ID": "4294967297",
        "NAME": "jordan",
        "PARENTID": "1",
        "PERMISSION": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.4.2 Interface for Batch Querying CIFS Share User (Group) Information

Function

This interface is used to batch query information about CIFS share user (user group).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFS_SHARE_AUTH_CLIENT

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by PARANTID and NAME is supported.
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**If filter is delivered, range is mandatory.A maximum of 10000 results can be returned.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name of a user or user group.
PARENTID	Mandatory	string	CIFS share ID.
DOMAINTYPE	Mandatory	string(uint32)	Domain type. **The value is described as follows:** 0: AD domain user 2: local user
PERMISSION	Mandatory	string(enum)	Permission. **The value is described as follows:** 0: read 1: full control 2: forbidden 5: read/write
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying information about CIFS share user (user group).

```
Request: GET /deviceManager/rest/210235843910E6000009/CIFS_SHARE_AUTH_CLIENT?
filter=PARENTID::1&range=[0-100]
```

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```
Response:
{
    "data": [
        {
            "DOMAINTYPE": "2",
            "ID": "4294967297",
            "NAME": "tangfuwang",
            "PARENTID": "1",
            "PERMISSION": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.3 Interface for Batch Querying NFS Share Client Information

Function

This interface is used to batch query information about NFS share clients.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFS_SHARE_AUTH_CLIENT

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by PARENTID and NAME is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:** If filter is delivered, range is mandatory. A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	NFS Share Client ID.
NAME	Mandatory	string	Client IP address, host name, or network group name.
PARENTID	Mandatory	string	ID of the parent object.
ACCESSVAL	Mandatory	string(uint32)	Permission. **The value is described as follows:** 0: read-only 1: read/write
SYNC	Mandatory	string(uint32)	Write Mode. **The value is described as follows:** 0: synchronization 1: asynchronous

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Parameter	Mandatory/ Conditional	Type	Description
ALLSQUASH	Mandatory	string(uint32)	Permission Constraint. **The value is described as follows:** 0: all_squash 1: no_all_squash
ROOTSQUASH	Mandatory	string(uint32)	root Permission Constraint. **The value is described as follows:** 0: root_squash 1: no_root_squash
SECURE	Mandatory	string(uint32)	Source Port Verification. **The value is described as follows:** 0: secure 1: insecure
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying information about NFS share clients.

```
Request: GET /deviceManager/rest/210235843910E6000009/NFS_SHARE_AUTH_CLIENT

Response:
 {
    "data": [
        {
            "ACCESSVAL": "0",
            "ALLSQUASH": "1",
            "ID": "3",
            "NAME": "*",
            "PARENTID": "1",
            "ROOTSQUASH": "0",
            "SYNC": "0",
            "SECURE": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.4.4 Interface for Deleting a CIFS Share

Function

This interface is used to delete a CIFS share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFSHARE/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CIFS Share ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a CIFS share.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/CIFSHARE/1

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.4.5 Interface for Querying the Number of CIFS Shares

Function

This interface is used to query the number of CIFS shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFSHARE/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by NAME,DESCRIPTION and subType is supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried CIFS shares

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Example

- Querying the number of CIFS shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/CIFSHARE/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.6 Interface for Batch Querying CIFS Share Information

Function

This interface is used to batch query basic information about CIFS shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFSHARE

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by NAME,DESCRIPTION and subType is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 100 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	CIFS Share ID.
NAME	Mandatory	string	Name.
subType	Mandatory	string(uint32)	**The value is described as follows:** 0: normal 1: homedir 2: all
DESCRIPTION	Mandatory	string	Description.
SHAREPATH	Mandatory	string	Share path.
ABEENABLE	Mandatory	string(bool)	After this function is enabled, users can only access folders for which the users have access permission.
FSID	Mandatory	string	File system ID.

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEOPLOCK	Mandatory	string(bool)	Indicates whether Oplock is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLENOTIFY	Mandatory	string(bool)	Indicates whether the notify function is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLECA	Mandatory	string(bool)	Indicates whether failover is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLEIPCONTROL	Mandatory	string(bool)	Whether to enable the IP address access control feature. **The value is described as follows:** true: enabled false: disabled
OFFLINEFILEMODE	Mandatory	string(enum)	Offline Cache Model. **The value is described as follows:** 0: none 1: manual 2: documents 3: programs

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Parameter	Mandatory/ Conditional	Type	Description
AUDITITEMS	Mandatory	array	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr 13: get xattr 14: set xattr
APPLYDEFAULTACL	Mandatory	string(bool)	Whether to enable the default ACL. **The value is described as follows:** true:enabled false:disabled
ENABLEFILEEXTEN-SIONFILTER	Mandatory	string(bool)	Whether to enable the File name extension filtering feature. **The value is described as follows:** true: enabled false: disabled
ENABLESHOWPREVI OUSVERSIONS	Mandatory	string(bool)	Whether the function of showing previous versions is enabled. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
ENABLESHOWSNAPSHOT	Mandatory	string(bool)	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying basic information about CIFS shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/CIFSHARE?filter=NAME:
t&range=[ 0-100]

Response:
{
    "data": [
        {
            "ABEENABLE": "false",
            "AUDITITEMS": "[2,3,5,7,8,10]",
            "DESCRIPTION": "",
            "ENABLECA": "false",
            "ENABLEFILEEXTENSIONFILTER": "false",
            "ENABLENOTIFY": "true",
            "ENABLEOPLOCK": "true",
            "FSID": "5",
            "ID": "1",
            "subType":"0",
            "NAME": "llt",
            "SHAREPATH": "/FileSystem0050001/",
            "ENABLEIPCONTROL": "false",
            "OFFLINEFILEMODE": 1,
            "APPLYDEFAULTACL": "true"
        "ENABLESHOWPREVIOUSVERSIONS": "true",
            "ENABLESHOWSNAPSHOT": "true"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.4.7 Interface for Querying the Number of FTP Shares

Function

This interface is used to query the number of FTP shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FTP_SHARE_AUTH_CLIENT/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by ACCESSNAME and SHAREPATH is supported.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried FTP shares.

Example

- Querying the number of FTP shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/FTP_SHARE_AUTH_CLIENT/
count
```

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```
Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.8 Interface for Deleting an FTP Share

Function

This interface is used to delete an FTP share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FTP_SHARE_AUTH_CLIENT/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FTP Share ID.

Result

N/A

Example

- Deleting an FTP share.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
FTP_SHARE_AUTH_CLIENT/100000

Response:
{
    "data": {},
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.9 Interface for Deleting an NFS Share Client

Function

This interface is used to delete an NFS share client.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFS_SHARE_AUTH_CLIENT/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting an NFS share client.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
NFS_SHARE_AUTH_CLIENT/1

Response:
{
```

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```
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.10 Interface for Querying the Number of NFS Share Clients

Function

This interface is used to query the number of NFS share clients.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFS_SHARE_AUTH_CLIENT/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by PARENTID and NAME is supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried NFS shares.

Example

- Querying the number of NFS share clients.

```
Request: GET /deviceManager/rest/210235843910E6000009/NFS_SHARE_AUTH_CLIENT/
count

Response:
{
    "data": {
        "COUNT": "2"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.11 Interface for Modifying NFS Share Client Information

Function

This interface is used to modify a NFS share client.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFS_SHARE_AUTH_CLIENT

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ACCESSVAL	Mandatory	uint32	Permission. **The value is described as follows:** 0: read-only 1: read/write
SYNC	Mandatory	uint32	Write Mode. **The value is described as follows:** 0: synchronization 1: asynchronous
ALLSQUASH	Mandatory	uint32	Permission Constraint. **The value is described as follows:** 0: all_squash 1: no_all_squash
ROOTSQUASH	Mandatory	uint32	root Permission Constraint. **The value is described as follows:** 0: root_squash 1: no_root_squash
SECURE	Optional	uint32	Source Port Verification. **The value is described as follows:** 0: secure 1: insecure
ID	Mandatory	string	NFS Share Client ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying an NFS share client.

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```
Request: PUT /deviceManager/rest/210235843910E6000009/NFS_SHARE_AUTH_CLIENT
{
    "ACCESSVAL": 1,
    "ALLSQUASH": 1,
    "ROOTSQUASH": 0,
    "SYNC": 0,
    "ID": "1"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.12 Interface for Querying FTP Share Information

Function

This interface is used to query information about an FTP share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FTP_SHARE_AUTH_CLIENT/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	FTP Share ID.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	FTP Share ID.

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Parameter	Mandatory/ Conditional	Type	Description
DOMAIN	Mandatory	string(uint32)	Domain. **The value is described as follows:** 2: local user
ACCESSNAME	Mandatory	string	Name of the access object.
SHAREPATH	Mandatory	string	Share path.
FSID	Mandatory	string	File system ID.
UPBANDWIDTH	Mandatory	string(uint32)	Upload bandwidth limit. **Unit:**KB/s
DOWNBANDWIDTH	Mandatory	string(uint32)	Download bandwidth limit. **Unit:**KB/s
PERMISSION	Mandatory	string(uint32)	Share Permission. **The value is described as follows:** 5-bit binary number indicating whether a permission is supported. The permission can be directory creation, directory and file browse, upload, download, and deletion. The decimal number that corresponds to the binary number ranges from 0 to 31. From left to right, the digits of the binary number indicate deletion, download, upload, directory and file browse, and directory creation. 1 indicates permission enablement, whereas 0 indicates permission disablement.

Example

- Querying information about an FTP share.

```
Request: GET /deviceManager/rest/210235843910E6000009/FTP_SHARE_AUTH_CLIENT/
100000
```

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```
Response:
{
    "data": {
        "ACCESSNAME": "tangfuwang",
        "DOMAIN": "2",
        "DOWNBANDWIDTH": "0",
        "FSID": "4",
        "ID": "100000",
        "PERMISSION": "10",
        "SHAREPATH": "/FileSystem0050000/tfw",
        "UPBANDWIDTH": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.13 Interface for Modifying FTP Share Information

Function

This interface is used to modify an FTP share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FTP_SHARE_AUTH_CLIENT/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
ACCESSNAME	Optional	string	Name of the access object. **Length:**1-32
SHAREPATH	Optional	string	Share path. **Length:**1-256
FSID	Optional	string	File system ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
UPBANDWIDTH	Optional	uint32	Upload bandwidth limit. **The value is described as follows:** 0 indicates no limit. **Unit:**KB/s **Length:**0~102400
DOWNBANDWIDTH	Optional	uint32	Download bandwidth limit. **The value is described as follows:** 0 indicates no limit. **Unit:**KB/s **Length:**0~102400
PERMISSION	Optional	uint32	Indicates whether the notify function is enabled. **The value is described as follows:** 5-bit binary number indicating whether a permission is supported. The permission can be directory creation, directory and file browse, upload, download, and deletion. The decimal number that corresponds to the binary number ranges from 0 to 31. From left to right, the digits of the binary number indicate deletion, download, upload, directory and file browse, and directory creation. 1 indicates permission enablement, whereas 0 indicates permission disablement.

Result

N/A

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Example

- Modifying an FTP share.

```
Request: PUT /deviceManager/rest/210235843910E6000009/FTP_SHARE_AUTH_CLIENT/
100000
{
    "SHAREPATH": "/mytest10003/",
    "FSID": "82"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.14 Interface for Querying CIFS Share Information

Function

This interface is used to query basic information about CIFS shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFSHARE/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CIFS Share ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	CIFS Share ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
SHAREPATH	Mandatory	string	Share path.
subType	Mandatory	string(uint32)	**The value is described as follows:** 0: normal 1: homedir 2: all
ABEENABLE	Mandatory	string(bool)	After this function is enabled, users can only access folders for which the users have access permission.
FSID	Mandatory	string	File system ID.
ENABLEOPLOCK	Mandatory	string(bool)	Indicates whether Oplock is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLENOTIFY	Mandatory	string(bool)	Indicates whether the notify function is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLECA	Mandatory	string(bool)	Indicates whether failover is enabled. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEIPCONTROL	Mandatory	string(bool)	Whether to enable the IP address access control feature. **The value is described as follows:** true: enabled false: disabled
OFFLINEFILEMODE	Mandatory	string(enum)	Offline Cache Model. **The value is described as follows:** 0: none 1: manual 2: documents 3: programs
AUDITITEMS	Mandatory	array	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr 13: get xattr 14: set xattr
APPLYDEFAULTACL	Mandatory	string(bool)	Whether to enable the default ACL. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
ENABLEFILEEXTEN-SIONFILTER	Mandatory	string(bool)	Whether to enable the File name extension filtering feature. **The value is described as follows:** true: enabled false: disabled
ENABLESHOWPREVIOUSVERSIONS	Mandatory	string(bool)	Whether the function of showing previous versions is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLESHOWSNAPSHOT	Mandatory	string(bool)	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about CIFS shares.

```
Request: GET/deviceManager/rest/210235843910E6000009/CIFSHARE/1
Response: {
    "data": {
        "ABEENABLE": "false",
        "AUDITITEMS": "[2,3,5,7,8,10]",
        "DESCRIPTION": "",
        "ENABLECA": "false",
        "ENABLEFILEEXTENSIONFILTER": "false",
        "ENABLENOTIFY": "true",
        "ENABLEOPLOCK": "true",
        "FSID": "5",
        "ID": "1",
        "subType": "0",
```

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```
        "NAME": "llt",
        "SHAREPATH": "/FileSystem0050001/",
        "ENABLEIPCONTROL": "false",
        "OFFLINEFILEMODE": 1,
        "APPLYDEFAULTACL": "true",
        "ENABLESHOWPREVIOUSVERSIONS": "true",
        "ENABLESHOWSNAPSHOT": "true"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.15 Interface for Deleting an NFS Share

Function

This interface is used to delete an NFS share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFSHARE/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	NFS Share ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Deleting an NFS share.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/NFSHARE/2

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.16 Interface for Querying CIFS Share User (Group) Information

Function

This interface is used to query information about CIFS share users (user groups).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFS_SHARE_AUTH_CLIENT/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	ID.
NAME	Mandatory	string	Name of a user or user group.
PARENTID	Mandatory	string	CIFS share ID.
DOMAINTYPE	Mandatory	string(uint32)	Domain type. **The value is described as follows:** 0: AD domain user 2: local user
PERMISSION	Mandatory	string(uint32)	Permission. **The value is described as follows:** 0: read 1: full control 2: forbidden 5: read/write
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying information about CIFS share users (user groups).

```
Request: GET /deviceManager/rest/210235843910E6000009/CIFS_SHARE_AUTH_CLIENT/
4294967297

Response:
{
    "data": {
        "DOMAINTYPE": "2",
        "ID": "4294967297",
        "NAME": "tangfuwang",
        "PARENTID": "1",
        "PERMISSION": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.4.17 Interface for Modifying CIFS Share User (Group) Information

Function

This interface is used to modify a CIFS share user (user group).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFS_SHARE_AUTH_CLIENT/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
PERMISSION	Mandatory	enum	Permission. **The value is described as follows:** 0: read 1: full control 2: forbidden 5: read/write (cannot be deleted or renamed)
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Modifying a CIFS share user (user group).

```
Request: PUT /deviceManager/rest/210235843910E6000009/CIFS_SHARE_AUTH_CLIENT/
21474836483
{
    "PERMISSION": 5
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.18 Interface for Querying the Number of NFS Shares

Function

This interface is used to query the number of NFS shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFSHARE/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by DESCRIPTION, SHAREPATH, or FSID is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried NFS shares.

Example

- Querying the number of NFS shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/NFSHARE/count

Response:
{
    "data": {
        "COUNT": "3"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.19 Interface for Querying the Number of CIFS Share Users (Groups)

Function

This interface is used to query the number of CIFS share users (user groups).

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFS_SHARE_AUTH_CLIENT/count

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by PARANTID and NAME is supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried CIFS share users (user groups).

Example

- Querying the number of CIFS share users (user groups).

```
Request: GET /deviceManager/rest/210235843910E6000009/CIFS_SHARE_AUTH_CLIENT/
count?filter=PARENTID: : 1

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.20 Interface for Deleting a CIFS Share User (Group)

Function

This interface is used to delete a CIFS share user (user group).

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFS_SHARE_AUTH_CLIENT/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a CIFS share user (user group).

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
CIFS_SHARE_AUTH_CLIENT/21474836483

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.21 Interface for Batch Querying the IP Address/Address Segment for a CIFS Share

Function

This interface is used to batch querying the IP address/address segment for a CIFS share.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifs_ip_control_rule

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CIFSSHAREID	Optional	string	Share ID. **Length:**1~128
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	ID.
CIFSSHAREID	Mandatory	string	Share ID.

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Parameter	Mandatory/ Conditional	Type	Description
RULE	Mandatory	string	IP Control Rule. **The value is described as follows:** A maximum of 32 IP addresses or IP address segments can be added. The IP Address/Address Segment can be: 1. A single IPv4 or IPv6 address, for example, 192.168.1.100; 2. An IP address segment in the format of IP address/mask/prefix, for example, 192.168.1.100/16 or 192.168.1.10~192.168.1.11/30. The mask of IPv4 addresses ranges from 1 to 32, and the prefix of IPv6 addresses ranges from 1 to 128.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying the IP address/address segment for a CIFS share.

```
Request: GET /deviceManager/rest/210235843910E6000009/cifs_ip_control_rule?
CIFSSHAREID=6

Response:
{
    "data": [
        {
            "CIFSSHAREID":"6",
            "ID":"17179869190",
            "RULE":"1.1.1.1"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.4.22 Interface for Modifying the IP Address/Address Segment for a CIFS Share

Function

This interface is used to modify the IP Address/Address Segment for a CIFS Share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifs_ip_control_rule/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
CIFSSHAREID	Optional	string	Share ID. **Length:**1~128

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Parameter	Mandatory/Optional/Conditional	Type	Description
RULE	Mandatory	string	IP Control Rule. **The value is described as follows:** A maximum of 32 IP addresses or IP address segments can be added. The IP Address/Address Segment can be: 1. A single IPv4 or IPv6 address, for example, 192.168.1.100; 2. An IP address segment in the format of IP address/mask/prefix, for example, 192.168.1.100/16 or 192.168.1.10~192.168.1.11/30. The mask of IPv4 addresses ranges from 1 to 32, and the prefix of IPv6 addresses ranges from 1 to 128.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying the IP Address/Address Segment for a CIFS Share.

```
Request: PUT /deviceManager/rest/210235843910E6000009/cifs_ip_control_rule/
21474836483
{
    "ID": "21474836483",
    "CIFSSHAREID": "6",
    "RULE": "1.1.1.1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.4.23 Interface for Creating a CIFS Share

Function

This interface is used to create a CIFS share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFSHARE

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Cannot include special characters including " / \ [ ] : | < > + ; , ? * =, and cannot be the name reserved by the system such as ipc$, autohome, ~, and print$. **Length:**1~80
subType	Optional	uint32	**The value is described as follows:** 0: normal 1: homedir 2: all **Default:**0: normal
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
SHAREPATH	Mandatory	string	Share path. **The value is described as follows:** /file system name/Quata tree name. **Length:**2-1024
ABEENABLE	Optional	bool	After this function is enabled, users can only access folders for which the users have access permission. **The value is described as follows:** true: enabled false: disabled **Default:**false: disabled
ENABLEOPLOCK	Optional	bool	Indicates whether Oplock is enabled. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
ENABLENOTIFY	Optional	bool	Indicates whether the notify function is enabled. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
ENABLECA	Optional	bool	Indicates whether failover is enabled. **The value is described as follows:** true: enabled false: disabled **Default:**false: disabled
FSID	Optional	string	File system ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
OFFLINEFILEMODE	Optional	enum	Offline Cache Mode. **The value is described as follows:** 0: none 1: manual 2: documents 3: programs **Default:**1: manual
ENABLEIPCONTROL	Optional	bool	Whether to enable the IP address access control feature. **The value is described as follows:** true: enabled false: disabled **Default:**false: disabled
AUDITITEMS	Optional	array	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr 13: get xattr 14: set xattr **Default:**0: none

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Parameter	Mandatory/Optional/Conditional	Type	Description
APPLYDEFAULTACL	Optional	bool	Whether to enable the default ACL. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
ENABLEFILEEXTEN-SIONFILTER	Optional	bool	Whether to enable the File name extension filtering feature. **The value is described as follows:** true: enabled false: disabled **Default:**false: disabled
ENABLESHOWPREVIOUSVERSIONS	Optional	bool	Whether the function of showing previous versions is enabled. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
ENABLESHOWSNAPSHOT	Optional	bool	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	CIFS Share ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
SHAREPATH	Mandatory	string	Share path.
ABEENABLE	Mandatory	string(bool)	After this function is enabled, users can only access folders for which the users have access permission.
FSID	Mandatory	string	File system ID.
ENABLEOPLOCK	Mandatory	string(bool)	Indicates whether Oplock is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLENOTIFY	Mandatory	string(bool)	Indicates whether the notify function is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLECA	Mandatory	string(bool)	Indicates whether failover is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLEIPCONTROL	Mandatory	string(bool)	Whether to enable the IP address access control feature. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
OFFLINEFILEMODE	Mandatory	string(enum)	Offline Cache Mode. **The value is described as follows:** 0: None 1: Manual 2: Documents 3: Programs
AUDITITEMS	Mandatory	string(array)	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr 13: get xattr 14: set xattr
APPLYDEFAULTACL	Mandatory	string(bool)	Whether to enable the default ACL. **The value is described as follows:** true: enabled false: disabled
ENABLEFILEEXTEN-SIONFILTER	Mandatory	string(bool)	Whether to enable the File name extension filtering feature. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/ Conditional	Type	Description
ENABLESHOWPREVIOUSVERSIONS	Mandatory	string(bool)	Whether the function of showing previous versions is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLESHOWSNAPSHOT	Mandatory	string(bool)	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating a CIFS share.

```
Request: POST /deviceManager/rest/210235843910E6000009/CIFSHARE
{
    "NAME": "G1",
    "SHAREPATH": "/FileSystem010/",
    "DESCRIPTION": "1",
    "ABEENABLE": "false",
    "ENABLEOPLOCK": "false",
    "FSID": "5",
    "ENABLENOTIFY": "false",
    "ENABLECA": "false",
    "ENABLEFILEEXTENSIONFILTER": "false",
    "ENABLEIPCONTROL": "false",
    "OFFLINEFILEMODE": 1,
    "AUDITITEMS": [0],
    "APPLYDEFAULTACL": "true",
    "ENABLESHOWPREVIOUSVERSIONS": "true",
    "ENABLESHOWSNAPSHOT": "true"
}

Response:
{
    "data": {
        "ABEENABLE": "false",
        "AUDITITEMS": "[0]",
```

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```
        "DESCRIPTION": "1",
        "ENABLECA": "false",
        "ENABLEFILEEXTENSIONFILTER": "false",
        "ENABLENOTIFY": "false",
        "ENABLEOPLOCK": "false",
        "FSID": "5",
        "ID": "1",
        "subType":"0",
        "NAME": "G1",
        "SHAREPATH": "/FileSystem010/",
        "ENABLEIPCONTROL": "false",
        "OFFLINEFILEMODE": 1,
        "APPLYDEFAULTACL": "true",
        "ENABLESHOWPREVIOUSVERSIONS": "true",
        "ENABLESHOWSNAPSHOT": "true"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.24 Interface for Modifying CIFS Share Information

Function

This interface is used to modify a CIFS share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/CIFSHARE/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CIFS Share ID.
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
ABEENABLE	Optional	bool	After this function is enabled, users can only access folders for which the users have access permission. **The value is described as follows:** true: enabled false: disabled
ENABLEOPLOCK	Optional	bool	Indicates whether Oplock is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLENOTIFY	Optional	bool	Indicates whether the Notify function is enabled. **The value is described as follows:** true: enabled false: disabled
ENABLECA	Optional	bool	Indicates whether failover is enabled. **The value is described as follows:** true: enabled false: disabled
OFFLINEFILEMODE	Optional	enum	Offline Cache Mode. **The value is described as follows:** 0: none 1: manual 2: documents 3: programs
ENABLEIPCONTROL	Optional	bool	Whether to enable the IP address access control feature. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
AUDITITEMS	Optional	array	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr 13: get xattr 14: set xattr
APPLYDEFAULTACL	Optional	bool	Whether to enable the default ACL. **The value is described as follows:** true: enabled false: disabled
ENABLEFILEEXTEN-SIONFILTER	Optional	bool	Whether to enable the File name extension filtering feature. **The value is described as follows:** true: enabled false: disabled
ENABLESHOWPREVI OUSVERSIONS	Optional	bool	Whether the function of showing previous versions is enabled. **The value is described as follows:** true: enabled false: disabled

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLESHOWSNAPSHOT	Optional	bool	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying a CIFS share.

```
Request: PUT /deviceManager/rest/210235843910E6000009/CIFSHARE/1
{
    "DESCRIPTION": "",
    "ABEENABLE": "false",
    "ENABLEOPLOCK": "false",
    "ENABLENOTIFY": "false",
    "ENABLECA": "false",
    "ENABLEFILEEXTENSIONFILTER": "false",
    "AUDITITEMS": [0],
    "ENABLESHOWPREVIOUSVERSIONS": "true",
    "ENABLESHOWSNAPSHOT": "true"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.25 Interface for Querying NFS Share Client Information

Function

This interface is used to query information about NFS share authorized clients.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFS_SHARE_AUTH_CLIENT/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	NFS Share Client ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	NFS Share Client ID.
NAME	Mandatory	string	Client IP address, host name, or network group name.
PARENTID	Mandatory	string	ID of the parent object.
ACCESSVAL	Mandatory	string(uint32)	Permission. **The value is described as follows:** 0: read-only 1: read/write
SYNC	Mandatory	string(uint32)	Write Mode. **The value is described as follows:** 0: synchronization 1: asynchronous

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Parameter	Mandatory/ Conditional	Type	Description
ALLSQUASH	Mandatory	string(uint32)	Permission Constraint. **The value is described as follows:** 0: all_squash 1: no_all_squash
ROOTSQUASH	Mandatory	string(uint32)	root Permission Constraint. **The value is described as follows:** 0: root_squash 1: no_root_squash
SECURE	Mandatory	string(uint32)	Source Port Verification. **The value is described as follows:** 0: secure 1: insecure
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying information about NFS share authorized clients.

```
Request: GET /deviceManager/rest/210235843910E6000009/NFS_SHARE_AUTH_CLIENT/3

Response:
 {
    "data": {
        "ACCESSVAL": "0",
        "ALLSQUASH": "1",
        "ID": "3",
        "NAME": "*",
        "PARENTID": "1",
        "ROOTSQUASH": "0",
        "SYNC": "0",
        "SECURE": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.4.26 Interface for Adding an FTP Share

Function

This interface is used to add an FTP share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FTP_SHARE_AUTH_CLIENT

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ACCESSNAME	Mandatory	string	Name of the access object.
SHAREPATH	Mandatory	string	Share path. **Length:**2-1024
FSID	Mandatory	string	File system ID.
UPBANDWIDTH	Optional	uint32	Upload bandwidth limit. **The value is described as follows:** 0 indicates no limit. **Default:**0 **Unit:**KB/s **Length:**0~102400

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Parameter	Mandatory/Optional/Conditional	Type	Description
DOWNBANDWIDTH	Optional	uint32	Download bandwidth limit. **The value is described as follows:** 0 indicates no limit. **Default:**0 **Unit:**KB/s **Length:**0~102400
PERMISSION	Mandatory	uint32	Indicates whether the notify function is enabled. **The value is described as follows:** 5-bit binary number indicating whether a permission is supported. The permission can be directory creation, directory and file browse, upload, download, and deletion. The decimal number that corresponds to the binary number ranges from 0 to 31. From left to right, the digits of the binary number indicate deletion, download, upload, directory and file browse, and directory creation. 1 indicates permission enablement, whereas 0 indicates permission disablement.
DOMAIN	Optional	uint32	Type of the access object. **The value is described as follows:** 2: local user **Default:**2: local user

Result

N/A

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Example

- Adding an FTP share.

```
Request: POST /deviceManager/rest/210235843910E6000009/FTP_SHARE_AUTH_CLIENT
{
    "ACCESSNAME": "test1",
    "DOMAIN": 2,
    "DOWNBANDWIDTH": 0,
    "PERMISSION": 26,
    "SHAREPATH": "/mytest10001/",
    "FSID": "80"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.27 Interface for Adding an NFS Share Client

Function

This interface is used to add an NFS share client.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFS_SHARE_AUTH_CLIENT

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Host name, client IP address, or network group name. **The value is described as follows:** The host name must meet the following requirements: 1. contains 1 to 255 letters, digits, hyphens (-), periods (.) and underscores (_). 2. The value can begin with only a letter or digit and cannot end with a hyphen(-) or an underscore(_). 3. The valud cannot contain consecutive periods (.), pure digits, or a period before or after an underscore, for example, '_.', '._', '-.' or '.-'. The IP address must meet the following requirements: 1. You cant enter a single client IP address, a client IP address segment, or use asterisk (*) that represents all client IP addresses. 2. You can enter IPv4, IPv6, or their mixed IP addresses. 3. The mask of IPv4 ranges from 1 to 32. The mask of IPv6 ranges from 1 to 128. For example, 192.168.0.10, 192.168.0.0/24, or *. The network group name contains 1 to 254 letters, digits, underscores (_),

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Parameter	Mandatory/Optional/Conditional	Type	Description
			hyphens (-) and periods (.), and must start with an at sign @. **Length:**1~25600
PARENTID	Mandatory	string	ID of the parent object.
ACCESSVAL	Mandatory	uint32	Permission. **The value is described as follows:** 0: read-only 1: read/write
SYNC	Mandatory	uint32	Write Mode. **The value is described as follows:** 0: synchronization 1: asynchronous
ALLSQUASH	Mandatory	uint32	Permission Constraint. **The value is described as follows:** 0: all_squash 1: no_all_squash
ROOTSQUASH	Mandatory	uint32	root Permission Constraint. **The value is described as follows:** 0: root_squash 1: no_root_squash
TYPE	Optional	enum	Type number of the managed object. **The value is described as follows:** 16409: NFS_SHARE_AUTH_CLIENT **Default:**16409 **Note:**The field is not used.

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Parameter	Mandatory/Optional/Conditional	Type	Description
SECURE	Optional	uint32	Source Port Verification. **The value is described as follows:** 0: secure 1: insecure **Default:**1
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Adding an NFS share client.

```
Request: POST /deviceManager/rest/210235843910E6000009/NFS_SHARE_AUTH_CLIENT
{
    "ACCESSVAL": 0,
    "ALLSQUASH": 1,
    "NAME": "*",
    "PARENTID": "1",
    "ROOTSQUASH": 0,
    "SYNC": 0
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.28 Interface for Modifying NFS Share Information

Function

This interface is used to modify an NFS share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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HighRisk

You are about to change the character code of an NFS share. This operation may cause garbled display or service interruption after switching the language.

Suggestion: Confirm that you want to perform this operation based on the service type.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFSHARE/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	NFS Share ID.
DESCRIPTION	Optional	string	Description. **Length:**0~255
LOCKPOLICY	Optional	enum	NFS LOCK POLICY. **The value is described as follows:** 0: Mandatory locking 1: Advisory locking

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Parameter	Mandatory/Optional/Conditional	Type	Description
CHARACTERENCODING	Optional	enum	Character coding used by the current share. **The value is described as follows:** 0: UTF-8 11: ZH 12: GBK 13: EUC-TW 14: BIG5 21: EUC-JP 22: JIS 23: S-JIS 30: DE 31: PT 32: ES 33: FR 34: IT 40: KO
AUDITITEMS	Optional	array	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLESHOWSNAPSHOT	Optional	bool	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled

Result

N/A

Example

- Modifying an NFS share.

```
Request: PUT /deviceManager/rest/210235843910E6000009/NFSHARE/1
{
    "DESCRIPTION": "adsf",
    "AUDITITEMS": [0],
    "ENABLESHOWSNAPSHOT": "true"
}

Response:
 {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.29 Interface for Querying NFS Share Information

Function

This interface is used to query basic information about NFS shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFSHARE/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	NFS Share ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Object ID. **The value is described as follows:** NFS Share ID.
DESCRIPTION	Mandatory	string	Description.
SHAREPATH	Mandatory	string	Share path.
FSID	Mandatory	string	File system ID.
NAME	Mandatory	string	SHARE alias.
LOCKPOLICY	Mandatory	string(enum)	NFS LOCK POLICY. **The value is described as follows:** 0: Advisory locking 1: Mandatory locking

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Parameter	Mandatory/ Conditional	Type	Description
CHARACTERENCODING	Mandatory	string	Character coding used by the current share. **The value is described as follows:** 0: UTF-8 11: ZH 12: GBK 13: EUC-TW 14: BIG5 21: EUC-JP 22: JIS 23: S-JIS 30: DE 31: PT 32: ES 33: FR 34: IT 40: KO
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16401: NFSHARE

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Parameter	Mandatory/ Conditional	Type	Description
AUDITITEMS	Mandatory	string(array)	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ENABLESHOWSNAPSHOT	Mandatory	string(bool)	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled

Example

- Querying basic information about NFS shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/NFSHARE/1

Response:
{
    "data": {
        "DESCRIPTION": "",
        "AUDITITEMS": "[2,3,5,7,8,10]",
```

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```
        "FSID": "20",
        "ID": "1",
        "SHAREPATH": "/VMwareApp_001_ALL_200/",
        "CHARACTERENCODING": "0",
        "NAME": "/VMwareApp_001_ALL_200/",
        "LOCKPOLICY": "0",
        "TYPE":16401,
        "ENABLESHOWSNAPSHOT": "true"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.30 Interface for Creating an NFS Share

Function

This interface is used to create an NFS share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to enable the audit log function when creating an NFS share. This operation may cause NFS service performance to decrease.

Suggestion: Confirm that you want to perform this operation based on the service type.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFSHARE

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Optional	string	Share alias. **The value is described as follows:** The value must start with a slash (/). Except the first slash, the value contains 1 to 255 characters, only including letters, digits, spaces, and special characters (!\"#&%$'()*+-,.:;<=>?@[]^_`{|}~). **Length:**1-255
SHAREPATH	Mandatory	string	Share path. **Length:**2~1024
FSID	Optional	string	File system ID.
LOCKPOLICY	Optional	enum	NFS LOCK POLICY. **The value is described as follows:** 0: Mandatory locking 1: Advisory locking **Default:**0: Mandatory locking

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Parameter	Mandatory/Optional/Conditional	Type	Description
CHARACTERENCODING	Optional	enum	Character coding used by the current share. **The value is described as follows:** 0: UTF-8 11: ZH 12: GBK 13: EUC-TW 14: BIG5 21: EUC-JP 22: JIS 23: S-JIS 30: DE 31: PT 32: ES 33: FR 34: IT 40: KO **Default:**0: UTF-8
AUDITITEMS	Optional	array	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr **Default:**0

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Parameter	Mandatory/Optional/Conditional	Type	Description
ENABLESHOWSNAPSHOT	Optional	bool	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	NFS Share ID.
DESCRIPTION	Mandatory	string	Description.
NAME	Mandatory	string	Share alias.
SHAREPATH	Mandatory	string	Share path.
FSID	Mandatory	string	File system ID.
CHARACTERENCODING	Mandatory	string(enum)	Character coding used by the current share.
LOCKPOLICY	Mandatory	string(enum)	NFS LOCK POLICY. **The value is described as follows:** 0: Mandatory locking 1: Advisory locking
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16401: NFSHARE

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Parameter	Mandatory/ Conditional	Type	Description
AUDITITEMS	Mandatory	string(array)	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ENABLESHOWSNAPSHOT	Mandatory	string(bool)	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled

Example

- Creating an NFS share.

```
Request: POST /deviceManager/rest/210235843910E6000009/NFSHARE
{
    "SHAREPATH": "/FileSystem0050001/",
    "DESCRIPTION": "",
    "CHARACTERENCODING": 0,
    "AUDITITEMS": [0],
    "FSID": "5",
```

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```
    "ENABLESHOWSNAPSHOT": "true"
}

Response:
 {
    "data": {
        "DESCRIPTION": "",
        "FSID": "5",
        "ID": "1",
        "SHAREPATH": "/FileSystem0050001/",
        "CHARACTERENCODING": "0",
        "NAME": "/VMwareApp_001_ALL_200/",
        "LOCKPOLICY": "0",
        "AUDITITEMS": [0],
        "TYPE": 16401,
        "ENABLESHOWSNAPSHOT": "true"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.31 Interface for Batch Querying NFS Share Information

Function

This interface is used to batch query basic information about NFS shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/NFSHARE

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by SHAREPATH, DESCRIPTION, and FSID is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:** If filter is delivered, range is mandatory. A maximum of 100 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	NFS Share ID.
DESCRIPTION	Mandatory	string	Description.
SHAREPATH	Mandatory	string	Share path.
FSID	Mandatory	string	File system ID.
NAME	Mandatory	string	SHARE alias.
LOCKPOLICY	Mandatory	string(enum)	NFS LOCK POLICY. **The value is described as follows:** 0: Advisory locking 1: Mandatory locking

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Parameter	Mandatory/ Conditional	Type	Description
CHARACTERENCODING	Mandatory	string(enum)	Character Encoding. **The value is described as follows:** 0: UTF-8 11: ZH 12: GBK 13: EUC-TW 14: BIG5 21: EUC-JP 22: JIS 23: S-JIS 30: DE 31: PT 32: ES 33: FR 34: IT 40: KO
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 16401: NFSHARE
AUDITITEMS	Mandatory	string(array)	List of events that support auditing. **The value is described as follows:** 0: none 1: all 2: open 3: create 4: read 5: write 6: close 7: delete 8: rename 9: get security 10: set security 11: get attr 12: set attr

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
ENABLESHOWSNAPSHOT	Mandatory	string(bool)	Whether the function of showing the .snapshot folder is enabled. **The value is described as follows:** true: enabled false: disabled

Example

- Batch querying basic information about NFS shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/NFSHARE?range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "FSID": "20",
            "ID": "1",
            "SHAREPATH": "/VMwareApp_001_ALL_200/",
            "CHARACTERENCODING": "0",
            "NAME": "/VMwareApp_001_ALL_200/",
            "LOCKPOLICY": "0",
            "AUDITITEMS": [0],
            "TYPE":16401,
            "ENABLESHOWSNAPSHOT": "true"
        },
        {
            "DESCRIPTION": "",
            "FSID": "21",
            "ID": "2",
            "SHAREPATH": "/VMwareApp_002_ALL_210/",
            "CHARACTERENCODING": "0",
            "NAME": "/VMwareApp_001_ALL_210/",
            "LOCKPOLICY": "0",
            "AUDITITEMS": [0],
            "TYPE":16401,
            "ENABLESHOWSNAPSHOT": "true"
        },
        {
            "DESCRIPTION": "",
            "FSID": "22",
            "ID": "3",
            "SHAREPATH": "/VMwareApp_001_ALL_220/",
            "CHARACTERENCODING": "0",
```

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```
            "NAME": "/VMwareApp_001_ALL_220/",
            "LOCKPOLICY": "0",
            "AUDITITEMS": [0],
            "TYPE":16401,
            "ENABLESHOWSNAPSHOT": "true"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.32 Interface for Batch Querying FTP Share Information

Function

This interface is used to batch query information about FTP shares.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/FTP_SHARE_AUTH_CLIENT

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by ACCESSNAME and SHAREPATH is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	FTP Share ID.
DOMAIN	Mandatory	string(enum)	Domain. **The value is described as follows:** 2: local user
ACCESSNAME	Mandatory	string	Name of the access object.
SHAREPATH	Mandatory	string	Share path.
FSID	Mandatory	string	File system ID.
UPBANDWIDTH	Mandatory	string(uint32)	Upload bandwidth limit. **Unit:**KB/s
DOWNBANDWIDTH	Mandatory	string(uint32)	Download bandwidth limit. **Unit:**KB/s

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Parameter	Mandatory/ Conditional	Type	Description
PERMISSION	Mandatory	string(uint32)	Share Permission.. **The value is described as follows:** 5-bit binary number indicating whether a permission is supported. The permission can be directory creation, directory and file browse, upload, download, and deletion. The decimal number that corresponds to the binary number ranges from 0 to 31. From left to right, the digits of the binary number indicate deletion, download, upload, directory and file browse, and directory creation. 1 indicates permission enablement, whereas 0 indicates permission disablement.

Example

- Batch querying information about FTP shares.

```
Request: GET /deviceManager/rest/210235843910E6000009/FTP_SHARE_AUTH_CLIENT?
range=[0-100]

Response:
{
    "data": [
        {
            "ACCESSNAME": "tangfuwang",
            "DOMAIN": "2",
            "DOWNBANDWIDTH": "0",
            "FSID": "4",
            "ID": "100000",
            "PERMISSION": "10",
            "SHAREPATH": "/FileSystem0050000/tfw",
            "UPBANDWIDTH": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.4.33 Interface for Adding accessible IP Addresses or IP Address Segments for a CIFS Share

Function

This interface is used to add accessible IP Addresses or IP Address Segments for a CIFS Share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifs_ip_control_rule

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
CIFSSHAREID	Mandatory	string	Share ID. **Length:**1~128

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Parameter	Mandatory/Optional/Conditional	Type	Description
RULE	Mandatory	string	IP Control Rule. **The value is described as follows:** A maximum of 32 IP addresses or IP address segments can be added. The IP Address/Address Segment can be: 1. A single IPv4 or IPv6 address, for example, 192.168.1.100; 2. An IP address segment in the format of IP address/mask/prefix, for example, 192.168.1.100/16 or 192.168.1.10~192.168.1.11/30. The mask of IPv4 addresses ranges from 1 to 32, and the prefix of IPv6 addresses ranges from 1 to 128.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Object ID.
CIFSSHAREID	Mandatory	string	Share ID.
RULE	Mandatory	string	IP Control Rule.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Adding accessible IP addresses or IP address segments.

```
Request: POST /deviceManager/rest/210235843910E6000009/cifs_ip_control_rule
{
    "CIFSSHAREID": "6",
    "RULE": "1.1.1.1"
}

Response:
 {
    "data": {
       "CIFSSHAREID":"6",
       "ID":"17179869190",
       "RULE":"1.1.1.1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.34 Interface for Deleting an IP Address or IP Address Segment for a CIFS Share

Function

This interface is used to delete an IP Address or IP Address Segment for a CIFS Share.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifs_ip_control_rule/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting an IP address or IP address segment.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/cifs_ip_control_rule/
21474836483

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.35 Interface for Modifying the CIFS Homedir Share Mapping Rule

Function

This interface is used to modify the CIFS homedir share mapping rule.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to set rules for the Homedir to support the path mapping of multiple file systems. Creating rules with high priority and improving the rule priority may cause interruption of services accessed by users that have been configured with mapping rules of low priority. Deleting mapping rules and lowering priority of existing rules may cause interruption of services accessed by users that have been configured with these mapping rules.

Suggestion: Before performing this operation, confirm that users that have been configured with mapping rules of low priority do not access the share.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsshare_homedir_rule/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CIFS homedir share mapping rule ID.
priority	Optional	uint32	priority. **Length:**1~1024
autoCreate	Optional	bool	AutoCreate. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying the CIFS homedir share mapping rule.

```
Request: PUT /deviceManager/rest/210235843910E6000009/cifsshare_homedir_rule/0
{
    "ID": "0",
    "priority": 32,
    "autoCreate": true
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.4.36 Interface for Batch Querying the CIFS Homedir Share Mapping Rule

Function

This interface is used to batch query the CIFS homedir share mapping rule.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsshare_homedir_rule

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Filtering criteria. Query by specifying the parentID and NAME is supported. parentID must be queried precisely.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	CIFS homedir share mapping rule ID.
parentID	Mandatory	string	Homedir Share ID.
NAME	Mandatory	string	CIFS homedir share mapping rule NAME.
fsId	Mandatory	string	Filesystem ID.
fsPath	Mandatory	string	Share path.
priority	Mandatory	string(uint32)	priority.
autoCreate	Mandatory	string（bool）	AutoCreate. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreNAME	Conditional	string	vStore NAME. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying the CIFS homedir share mapping rule.

```
Request: GET /deviceManager/rest/210235843910E6000009/cifsshare_homedir_rule?
filter=parentID::0

Response:
{
    "data": [
```

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```
        {
            "ID": "0",
            "NAME": "adsfasdf",
            "autoCreate": "false",
            "fsId": "0",
            "fsPath": "/FileSystem001/",
            "parentID": "0",
            "priority": "20"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.37 Interface for Adding CIFS Homedir Share Mapping Rule

Function

This interface is used to add CIFS homedir share mapping rule .

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

HighRisk

You are about to set rules for the Homedir to support the path mapping of multiple file systems. Creating rules with high priority and improving the rule priority may cause interruption of services accessed by users that have been configured with mapping rules of low priority. Deleting mapping rules and lowering priority of existing rules may cause interruption of services accessed by users that have been configured with these mapping rules.

Suggestion: Before performing this operation, confirm that users that have been configured with mapping rules of low priority do not access the share.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsshare_homedir_rule

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	CIFS homedir share mapping rule NAME. **Length:**1~255
parentID	Mandatory	string	Homedir share ID.
fsId	Optional	string	Filesystem ID.
fsPath	Mandatory	string	Share path. **Length:**1~1023
priority	Optional	uint32	priority. **Default:**32 **Length:**1~1024
autoCreate	Optional	bool	autoCreate. **The value is described as follows:** true: enabled false: disabled **Default:**true: enabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	CIFS homedir share mapping rule ID.
parentID	Mandatory	string	Homedir Share ID.
NAME	Mandatory	string	CIFS homedir share mapping rule NAME.
fsId	Mandatory	string	Filesystem ID.
fsPath	Mandatory	string	Share path.
priority	Mandatory	string(uint32)	priority.

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Parameter	Mandatory/ Conditional	Type	Description
autoCreate	Mandatory	string（bool）	AutoCreate. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreNAME	Conditional	string	vStore NAME. **Note:**This field must be returned in vStore scenarios.

Example

- Adding CIFS homedir share mapping rule.

```
Request: POST /deviceManager/rest/210235843910E6000009/cifsshare_homedir_rule
{
       "NAME": "adsfasdf",
       "autoCreate": "false",
       "fsId": "0",
       "fsPath": "/FileSystem001/",
       "parentID": "0",
       "priority": "20"
}

Response:
 {
    "data": {
       "ID": "0",
       "NAME": "adsfasdf",
       "autoCreate": "false",
       "fsId": "0",
       "fsPath": "/FileSystem001/",
       "parentID": "0",
       "priority": "20"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.38 Interface for Deleting CIFS Homedir Share Mapping Rule

Function

This interface is used to delete CIFS homedir share mapping rule.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsshare_homedir_rule/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CIFS homedir share mapping rule ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting CIFS homedir share mapping rule.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
cifsshare_homedir_rule/0

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.4.39 Interface for Querying the Number of CIFS Homedir Share Mapping Rule

Function

This interface is used to query the number of CIFS Homedir Share Mapping Rule.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsshare_homedir_rule/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Filtering criteria. Query by specifying the parentID and NAME is supported. parentID must be queried precisely.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried CIFS Homedir Share Mapping Rule.

Example

- Querying the number of CIFS Homedir Share Mapping Rule.

```
Request: GET /deviceManager/rest/210235843910E6000009/cifsshare_homedir_rule/
count?filter=parentID::1

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.4.40 Interface for Querying CIFS Homedir Share Mapping Rule

Function

This interface is used to query basic information about CIFS homedir share mapping rule.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/cifsshare_homedir_rule/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	CIFS homedir share mapping rule ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	CIFS homedir share mapping rule ID.
parentID	Mandatory	string	Homedir Share ID.
NAME	Mandatory	string	CIFS homedir share mapping rule NAME.
fsId	Mandatory	string	Filesystem ID.
fsPath	Mandatory	string	Share path.
priority	Mandatory	string(uint32)	priority.
autoCreate	Mandatory	string（bool）	AutoCreate. **The value is described as follows:** true: enabled false: disabled
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreNAME	Conditional	string	vStore NAME. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about CIFS homedir share mapping rule.

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```
Request: GET/deviceManager/rest/210235843910E6000009/cifsshare_homedir_rule/0
Response: {
    "data": {
            "ID": "0",
            "NAME": "adsfasdf",
            "autoCreate": "false",
            "fsId": "0",
            "fsPath": "/FileSystem001/",
            "parentID": "0",
            "priority": "20"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5 resource_user

4.13.5.1 Interface for Testing whether the Target User Exists

Function

This interface is used to testing whether the Target User exists.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/toidentity_test

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
MAPPINGTYPE	Mandatory	enum	Mapping type. **The value is described as follows:** 0: Window to Unix 1: Unix to Windows
TOIDENTITY	Mandatory	string	Target user.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TOIDENTITYEXIST	Mandatory	string(bool)	Whether the target user exists. **The value is described as follows:** true: exist false: not exist

Example

- Testing whether the Target User exists.

```
Request: GET /deviceManager/rest/210235843910E6000009/toidentity_test?
MAPPINGTYPE=0&TOIDENTITY=user1

Response:
{
    "data": [{
        "TOIDENTITYEXIST": "false"
    }],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.2 Interface for Querying User Mapping Configuration

Function

This interface is used to query user mapping configuration.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymappingconfig

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Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
IDMUUSERMAPPINGDN	Mandatory	string	IDMU search DN.
IDMUUSERMAPPINGDNTIMEOUT	Mandatory	string(uint32)	IDMU search timeout duration. **Unit:**seconds
USERMAPPINGPROVIDER	Mandatory	string(enum)	Mapping type. **The value is described as follows:** 0: user mapping not supported 1: mapping rules set in local 2: mapping rules set in IDMU 3: mapping rules set in IDMU and local, IDMU preferentially 4: mapping rules set in local and IDMU, local preferentially

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying user mapping configuration.

```
Request: GET /deviceManager/rest/210235843910E6000009/identitymappingconfig

Response:
{
    "data": {
        "IDMUUSERMAPPINGDN": "",
        "IDMUUSERMAPPINGDNTIMEOUT": "15",
        "USERMAPPINGPROVIDER": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.3 Interface for Modifying User Mapping Configuration

Function

This interface is used to modify user mapping configuration.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymappingconfig

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
IDMUUSERMAPPINGDN	Optional	string	IDMU search DN. **Length:**0-255
IDMUUSERMAPPINGDNTIMEOUT	Optional	uint32	IDMU search timeout duration. **The value is described as follows:** The range is from 5 to 120. **Unit:**seconds
USERMAPPINGPROVIDER	Optional	enum	Mapping type. **The value is described as follows:** 0: user mapping not supported 1: mapping rules set in local 2: mapping rules set in IDMU 3: mapping rules set in IDMU and local, IDMU preferentially 4: mapping rules set in local and IDMU, local preferentially
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying user mapping configuration.

```
Request: PUT /deviceManager/rest/210235843910E6000009/identitymappingconfig
{
    "IDMUUSERMAPPINGDN": "name=aaa",
    "USERMAPPINGPROVIDER": "4"
}

Response:
{
```

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```
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.4 Interface for Creating a Local User

Function

This interface is used to create a local user.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESUSER

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** The maximum length of the name contains 32 characters, and the minimum length of the name is controlled by security policies. **Length:**1~32 **Note:**format requirement and cannot contain space, double quotation mark (\"), slash (/), backslash (\ \), square brackets ([]), less than (<), larger than (>), plus (+), colon (:), semicolon (;), comma (,), question mark (?), asterisk (*), vertical bar (|), equal mark (=), (@),or end with a period (.).
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
PASSWORD	Mandatory	string	Password. **The value is described as follows:** The password complexity is controlled by security policies. **Length:**8~32 **Note:** password: 1. Contains 8 to 32 characters. 2. Must contain special characters. Special characters include !"#$%&'()*+,-./:;<=>?@[\]^`{_|}~ and spaces. 3. The password must contain any two types of the uppercase letters, lowercase letters, and digits. 4 The same character cannot appear for more than three consecutive times. 5. The password cannot be the same as the username or mirror writing of the username.
PRIMARYGROUPID	Optional	string	ID of the primary group to which a user belongs. **Default:**100000 **Note:**When delivered with the PRIMARYGROUPNAME field, PRIMARYGROUPID takes effect.
PRIMARYGROUPNAME	Optional	string	Name of the primary group to which a user belongs. **Default:**default_group **Length:**1-32

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Parameter	Mandatory/Optional/Conditional	Type	Description
GROUPNAMES	Optional	array	List of temporary groups to which a user belongs. **The value is described as follows:** A maximum of 31 temporary groups are supported.Either a name or ID of the primary group is delivered.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
PRIMARYGROUPID	Mandatory	string	ID of the primary group to which a user belongs.
PRIMARYGROUPNAME	Mandatory	string	Name of the primary group to which a user belongs.
GROUPNAMES	Mandatory	string(array)	List of temporary groups to which a user belongs. **The value is described as follows:** A maximum of 31 temporary groups are supported.
USERTYPE	Mandatory	string(enum)	User type. **The value is described as follows:** 1: default 2: created by an administrator

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Parameter	Mandatory/ Conditional	Type	Description
STATUSENABLE	Mandatory	string(bool)	User status. **The value is described as follows:** true: enabled false: locked
PASSWORDVALIDPERIOD	Mandatory	string(uint32)	Remaining password validity period. **The value is described as follows:** The value ranges from 0 to 999. FFFFFFFF(4294967295) indicates disabled.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating a local user.

```
Request: POST /deviceManager/rest/210235843910E6000009/LOCAL_RESUSER
{
    "NAME": "test6",
    "PASSWORD": "xiaoyan@8158",
    "PRIMARYGROUPID": "100000",
    "PRIMARYGROUPNAME": "default_group",
    "DESCRIPTION": ""
}

Response:
 {
    "data": {
        "DESCRIPTION": "",
        "GROUPNAMES": "",
        "ID": "100000",
        "NAME": "test6",
        "PASSWORDVALIDPERIOD": "175",
        "PRIMARYGROUPID": "100000",
        "PRIMARYGROUPNAME": "default_group",
        "STATUSENABLE": "true",
        "USERTYPE": "2"
    },
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.5.5 Interface for Querying Local User Information

Function

This interface is used to query basic information about a local user.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESUSER/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	Object ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
PRIMARYGROUPID	Mandatory	string	ID of the primary group to which a user belongs.

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Parameter	Mandatory/ Conditional	Type	Description
PRIMARYGROUPNAME	Mandatory	string	Name of the primary group to which a user belongs.
GROUPNAMES	Mandatory	string(array)	List of temporary groups to which a user belongs. **The value is described as follows:** A maximum of 31 temporary groups are supported.
USERTYPE	Mandatory	string(enum)	User type. **The value is described as follows:** 1: default 2: created by an administrator
STATUSENABLE	Mandatory	string(bool)	User status. **The value is described as follows:** true: enabled false: locked
PASSWORDVALIDPERIOD	Mandatory	string(uint32)	Remaining password validity period. **The value is described as follows:** The value ranges from 0 to 999. FFFFFFFF(4294967295) indicates disabled.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about a local user.

```
Request: GET /deviceManager/rest/210235843910E6000009/LOCAL_RESUSER/100000
```

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```
Response:
 {
    "data": {
        "DESCRIPTION": "",
        "GROUPNAMES": "",
        "ID": "100000",
        "NAME": "tangfuwang",
        "PASSWORDVALIDPERIOD": "175",
        "PRIMARYGROUPID": "100000",
        "PRIMARYGROUPNAME": "default_group",
        "STATUSENABLE": "true",
        "USERTYPE": "2"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.6 Interface for Modifying a Local User

Function

This interface is used to modify a local user.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESUSER/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
DESCRIPTION	Optional	string	Description. **Length:**0~255

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Parameter	Mandatory/Optional/Conditional	Type	Description
PASSWORD	Optional	string	Password. **The value is described as follows:** password: 1. Contains 8 to 32 characters. 2. Must contain special characters. Special characters include !"#$%&'()*+,-./:;<=>?@[\]^` {_|}~ and spaces. 3. The password must contain any two types of the uppercase letters, lowercase letters, and digits. 4 The same character cannot appear for more than three consecutive times. 5. The password cannot be the same as the username or mirror writing of the username. **Length:**8-32
PRIMARYGROUPID	Optional	string	ID of the primary group to which a user belongs.
PRIMARYGROUPNAME	Optional	string	Name of the primary group to which a user belongs. **Length:**1-32
GROUPNAMES	Optional	array	List of temporary groups to which a user belongs. **The value is described as follows:** A maximum of 31 temporary groups are supported.
STATUSENABLE	Optional	bool	User status. **The value is described as follows:** true: enabled false: locked

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying a local user.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LOCAL_RESUSER/100000
{
    "DESCRIPTION": ""
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.7 Interface for Querying Local User Group Information

Function

This interface is used to query basic information about a local user group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESGROUP/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User Group ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
GROUPTYPE	Mandatory	string(enum)	User group type. **The value is described as follows:** 1: default 2: created by an administrator
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about a local user group.

```
Request: GET /deviceManager/rest/210235843910E6000009/LOCAL_RESGROUP/100000

Response:
 {
    "data": {
        "DESCRIPTION": "",
        "GROUPTYPE": "1",
        "ID": "100000",
        "NAME": "default_group"
    },
```

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```
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.8 Interface for Creating a Local User Group

Function

This interface is used to create a local user group.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESGROUP

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name. **The value is described as follows:** Must not include \"/\\[]<> +: ;,?*|=@ and control character. Must not end with periods (.). **Length:**1~63
DESCRIPTION	Optional	string	Description. **Length:**0~255
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	User Group ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
GROUPTYPE	Mandatory	string(enum)	User group type. **The value is described as follows:** 1: default 2: created by an administrator
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating a local user group.

```
Request: POST /deviceManager/rest/210235843910E6000009/LOCAL_RESGROUP
{
    "DESCRIPTION": "xzczc",
    "NAME": "test00000"
}

Response:
 {
    "data": {
        "DESCRIPTION": "xzczc",
        "GROUPTYPE": "2",
        "ID": "100001",
        "NAME": "test00000"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.9 Interface for Deleting a Local User Group

Function

This interface is used to delete a local user group.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESGROUP/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a local user group.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/LOCAL_RESGROUP/100001

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.10 Interface for Query the Number of Local User Groups

Function

This interface is used to query the number of local user groups.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESGROUP/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME is supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried local user groups.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.

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Example

- Querying the number of local user groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/LOCAL_RESGROUP/count

Response:
 {
    "data": {
        "COUNT": "2"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.11 Interface for Creating an User Mapping

Function

This interface is used to create an User Mapping.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymapping

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
MAPPINGTYPE	Mandatory	enum	Mapping type. **The value is described as follows:** 0: Window to Unix 1: Unix to Windows

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Parameter	Mandatory/Optional/Conditional	Type	Description
FROMIDENTITY	Mandatory	string	Source user. **The value is described as follows:** Source User cannot contain special characters including "/[]<>+: ;,?|=, or two consecutive asterisks (*), and cannot end with a period (.). **Length:**1~256
TOIDENTITY	Mandatory	string	Target user. **The value is described as follows:** Target User does not meet the format requirement and cannot contain double quotation mark ("), slash (/), square brackets ([]), less than (<), larger than (>), plus (+), colon (:), semicolon (;), comma (,), question mark (?), asterisk (*), vertical bar (|), equal mark (=), (@),or end with a period (.). **Length:**1~256
RULEPRIORITY	Optional	uint32	Priority. **The value is described as follows:** 1~32. **Default:**10
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User Mapping ID.

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Parameter	Mandatory/ Conditional	Type	Description
FROMIDENTITY	Mandatory	string	Source user.
MAPPINGTYPE	Mandatory	string(enum)	Mapping type. **The value is described as follows:** 0: Window to Unix 1: Unix to Windows
RULEPRIORITY	Mandatory	uint32	Priority.
TOIDENTITY	Mandatory	string	Target user.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating an User Mapping.

```
Request: POST /deviceManager/rest/210235843910E6000009/identitymapping
{
    "MAPPINGTYPE": "0",
    "FROMIDENTITY": "user1",
    "TOIDENTITY": "user2",
    "RULEPRIORITY": 10
}

Response:
{
    "data": {
        "FROMIDENTITY": "user1",
        "ID": "9",
        "MAPPINGTYPE": "0",
        "RULEPRIORITY": "10",
        "TOIDENTITY": "user2"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.12 Interface for Deleting an User Mapping

Function

This interface is used to delete an User Mapping.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymapping/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User Mapping ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting an User Mapping.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/identitymapping/0

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.13 Interface for Modiying an User Mapping

Function

This interface is used to modify an User Mapping.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymapping/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User Mapping ID.
MAPPINGTYPE	Optional	enum	Mapping type. **The value is described as follows:** 0: Window to Unix 1: Unix to Windows
FROMIDENTITY	Optional	string	Source user. **The value is described as follows:** Source User cannot contain special characters including "/[]<>+: ;,?|=, or two consecutive asterisks (*), and cannot end with a period (.). **Length:**1~256

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Parameter	Mandatory/Optional/Conditional	Type	Description
TOIDENTITY	Optional	string	Target user. **The value is described as follows:** Target User does not meet the format requirement and cannot contain double quotation mark ("), slash (/), square brackets ([]), less than (<), larger than (>), plus (+), colon (:), semicolon (;), comma (,), question mark (?), asterisk (*), vertical bar (|), equal mark (=), (@),or end with a period (.). **Length:**1~256
RULEPRIORITY	Optional	uint32	Priority. **The value is described as follows:** The range is from 1 to 32.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying an User Mapping.

```
Request: PUT/deviceManager/rest/210235843910E6000009/identitymapping/0
{
    "RULEPRIORITY": 3
}

Response: {
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.5.14 Interface for Query the Count of User Mapping

Function

This interface is used to query the count of user mapping.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymapping/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters FROMIDENTITY and TOIDENTITY are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried user mapping.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.
vstoreId	Conditional	string	vStore ID **Note:**This field must be returned in vStore scenarios.

Example

- Querying the count of user mapping.

```
Request: GET /deviceManager/rest/210235843910E6000009/identitymapping/count

Response:
{
    "data": {
        "COUNT": "4"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.15 Interface for Query an User Mapping

Function

This interface is used to query an User Mapping.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymapping/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	User Mapping ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User Mapping ID.
FROMIDENTITY	Mandatory	string	Source user.
MAPPINGTYPE	Mandatory	string(enum)	Mapping type. **The value is described as follows:** 0: Window to Unix 1: Unix to Windows
RULEPRIORITY	Mandatory	string(uint32)	Priority.
TOIDENTITY	Mandatory	string	Target user.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying an User Mapping.

```
Request: GET /deviceManager/rest/210235843910E6000009/identitymapping/9

Response:
{
    "data": {
        "FROMIDENTITY": "user1",
        "ID": "9",
        "MAPPINGTYPE": "0",
        "RULEPRIORITY": "10",
```

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```
        "TOIDENTITY": "user2"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.16 Interface for Batch Querying Local User Information

Function

This interface is used to batch query basic information about local users.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESUSER

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME, GROUPNAMES are supported. **Note:**GROUPNAMES::['onlyGroup']

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Search scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 50 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
PRIMARYGROUPID	Mandatory	string	ID of the primary group to which a user belongs.
PRIMARYGROUPNAME	Mandatory	string	Name of the primary group to which a user belongs.
GROUPNAMES	Mandatory	string(array)	List of temporary groups to which a user belongs. **The value is described as follows:** A maximum of 31 temporary groups are supported.

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Parameter	Mandatory/ Conditional	Type	Description
USERTYPE	Mandatory	string(enum)	User type. **The value is described as follows:** 1: default 2: created by an administrator
STATUSENABLE	Mandatory	string(bool)	User status. **The value is described as follows:** true: enabled false: locked
PASSWORDVALIDPERIOD	Mandatory	string(uint32)	Remaining password validity period. **The value is described as follows:** The value ranges from 0 to 999. FFFFFFFF(4294967295) indicates disabled.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying basic information about local users.

```
Request: GET /deviceManager/rest/210235843910E6000009/LOCAL_RESUSER?
range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "GROUPNAMES": "",
            "ID": "100000",
            "NAME": "tangfuwang",
            "PASSWORDVALIDPERIOD": "175",
            "PRIMARYGROUPID": "100000",
            "PRIMARYGROUPNAME": "default_group",
            "STATUSENABLE": "true",
            "USERTYPE": "2"
```

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```
        },
        {
            "DESCRIPTION": "",
            "GROUPNAMES": "",
            "ID": "100001",
            "NAME": "TFW123456",
            "PASSWORDVALIDPERIOD": "179",
            "PRIMARYGROUPID": "99997",
            "PRIMARYGROUPNAME": "Backup Operators",
            "STATUSENABLE": "true",
            "USERTYPE": "2"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```


4.13.5.17 Interface for Modifying Local User Group Information

Function

This interface is used to modify local user groups.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESGROUP/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
DESCRIPTION	Mandatory	string	Description. **Length:**0~255
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

N/A

Example

- Modifying local user groups.

```
Request: PUT /deviceManager/rest/210235843910E6000009/LOCAL_RESGROUP/99997
{
    "DESCRIPTION": "111"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.18 Interface for Batch Querying Local User Group Information

Function

This interface is used to batch query basic information about local user groups.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESGROUP

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Query by NAME is supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Conditional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:** If filter is delivered, range is mandatory. A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User Group ID.
NAME	Mandatory	string	Name.
DESCRIPTION	Mandatory	string	Description.
GROUPTYPE	Mandatory	string(enum)	User group type. **The value is described as follows:** 1: default 2: created by an administrator
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Example

- Batch querying basic information about local user groups.

```
Request: GET /deviceManager/rest/210235843910E6000009/LOCAL_RESGROUP?
range=[0-100]

Response:
{
    "data": [
        {
            "DESCRIPTION": "",
            "GROUPTYPE": "1",
            "ID": "99997",
            "NAME": "Backup Operators"
        },
        {
            "DESCRIPTION": "the antivirus group",
            "GROUPTYPE": "1",
            "ID": "99998",
            "NAME": "AntivirusGroup"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.19 Interface for Deleting a Local User

Function

This interface is used to delete a local user.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESUSER/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting a local user.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/LOCAL_RESUSER/100000

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.20 Interface for Querying the Number of Local Users

Function

This interface is used to query the number of local users.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/LOCAL_RESUSER/count

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters NAME and GROUPNAMES are supported.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
COUNT	Mandatory	string(uint32)	Number of queried local users.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying the number of local users.

```
Request: GET /deviceManager/rest/210235843910E6000009/LOCAL_RESUSER/count

Response:
{
    "data": {
        "COUNT": "1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.5.21 Interface for Deleting an Associated AD Domain User

Function

This interface is used to delete an Associated AD Domain User.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_SOURCE/REMOVE_ASSOCIATE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	Object ID.
ASSOCIATEOBJID	Mandatory	string	Associated object ID, invalid to a single object and only used to query the object that has relationship with this associated object.
accountType	Mandatory	string	Domain user type. **The value is described as follows:** 0: user 1: user group
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

N/A

Example

- Deleting an Associated AD Domain User.

```
Request: PUT /deviceManager/rest/210235843910E6000009/AD_SOURCE/
REMOVE_ASSOCIATE
{
    "ID":"S-1-5-21-958976781-1401430433-314257735-1140",
    "ASSOCIATEOBJID": "99998",
    "accountType": "0"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.22 Interface for Querying an AD Domain User

Function

This interface is used to query an AD Domain User.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2200 V3,2600 V3,2800 V3.

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_SOURCE

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	AD domain user ID.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	Store ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	AD domain user ID.
NAME	Mandatory	string	AD domain user name.
accountType	Mandatory	uint32	AD domain user type. **The value is described as follows:** 0: user 1: user group
accountId	Mandatory	string	uid or gid.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying an AD Domain User.

```
Request: GET /deviceManager/rest/210235843910E6000009/AD_SOURCE/
S-1-5-21-958976781-1401430433-314257735-1140

Response:
{
    "data": {
        "COMPRESSVALID": "false",
        "accountType": "0",
        "accountId": "60001140",
        "NAME": "AUTH2K8\gaoshanqin",
        "ID": "S-1-5-21-958976781-1401430433-314257735-1140"
    },
    "error": {
        "code": 0,
        "description": "0"
```

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```
    }
}
```

4.13.5.23 Interface for Querying the Number of Associated AD Domain Users

Function

This interface is used to query the Number of Associated AD Domain Users.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_SOURCE/count

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	Associated object ID, invalid to a single object and only used to query the object that has relationship with this associated object.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters accountType are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
count	Mandatory	uint32	count

Example

- Querying the Number of Associated AD Domain Users.

```
Request: GET /deviceManager/rest/210235843910E6000009/AD_SOURCE/count
{
    "ASSOCIATEOBJID": "99998"
}

Response:
{
    "data": {
        "count":"1"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.24 Interface for Implementing Associated Query of an AD Domain User

Function

This interface is used to implement Associated Query of an AD Domain User.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_SOURCE/associate

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ASSOCIATEOBJID	Mandatory	string	Associated object ID, invalid to a single object and only used to query the object that has relationship with this associated object.
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters accountType are supported.
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 10000 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string	AD domain user ID.
NAME	Mandatory	string	AD domain user name.
accountId	Mandatory	string	uid or gid.
accountType	Mandatory	uint32	AD domain user type. **The value is described as follows:** 0: user 1: user group
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Implementing Associated Query of an AD Domain User.

```
Request: GET /deviceManager/rest/210235843910E6000009/AD_SOURCE/associate
{
    "ASSOCIATEOBJID": "99998"
}

Response:
{
    "data": [
        {
            "ID":"S-1-5-21-958976781-1401430433-314257735-1140",
            "NAME": "AUTH2K8\gaoshanqin",
            "accountId": "60001140",
            "accountType": "0",

        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.25 Interface for Creating an Associated AD Domain User

Function

This interface is used to create an Associated AD Domain User.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AD_SOURCE/CREATE_ASSOCIATE

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	string	AD domain user ID.
ASSOCIATEOBJID	Mandatory	string	Associated object ID, invalid to a single object and only used to query the object that has relationship with this associated object.
accountType	Mandatory	uint32	Domain user type. **The value is described as follows:** 0: user 1: user group
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Creating an Associated AD Domain User.

```
Request: PUT/deviceManager/rest/210235843910E6000009/AD_SOURCE/
CREATE_ASSOCIATE
```

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```
{
    "ID":"S-1-5-21-958976781-1401430433-314257735-1140",
    "ASSOCIATEOBJID": "99998",
    "accountType": "0"
}

Response:
 {
    "data": {

    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.5.26 Interface for Batch Querying User Mapping

Function

This interface is used to Batch query user mapping.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/identitymapping

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
filter	Optional	string	Query criteria. **The value is described as follows:** Parameters FROMIDENTITY and TOIDENTITY are supported.

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Parameter	Mandatory/Optional/Conditional	Type	Description
range	Optional	string	Query scope. **The value is described as follows:** range:[i-j],"range" specifies that objects with subscripts from i to j-1 in the query result are returned. This parameter is used for paging query. **Note:**A maximum of 100 results can be returned.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.
sortby	Optional	string	Sort Condition.Support sort with FROMIDENTITY,TOIDENTITY,MAPPINGTYPE,RULEPRIORITY.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string	User Mapping ID.
FROMIDENTITY	Mandatory	string	Source user.
MAPPINGTYPE	Mandatory	string(enum)	Mapping type. **The value is described as follows:** 0: Window to Unix 1: Unix to Windows
RULEPRIORITY	Mandatory	uint32	Priority.
TOIDENTITY	Mandatory	string	Target user.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch Querying user mapping.

```
Request: GET /deviceManager/rest/210235843910E6000009/identitymapping

Response:
{
    "data": [
        {
            "FROMIDENTITY": "user1",
            "ID": "9",
            "MAPPINGTYPE": "0",
            "RULEPRIORITY": "10",
            "TOIDENTITY": "user2"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6 antivirus

4.13.6.1 Interface for Batch Querying Scan Policy

Function

This interface is used to batch query scan policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/scan_policy

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 291: SCAN_POLICY
ID	Mandatory	string(int)	ID of the scan policy.
NAME	Mandatory	string	Name of the scan policy.
unscannedFileSize	Mandatory	string(int)	Maximum size of the file that can be scanned. **Unit:**MB
unscannedFileType	Mandatory	string(array)	Type of the unscanned file.
unscannedTime	Mandatory	string(array)	Unscanned period.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Example

- Batch querying scan policy.

```
Request: GET /deviceManager/rest/210235843910E6000009/scan_policy

Response:
{
    "data": [
        {
            "TYPE": "291",
            "ID": "0",
            "NAME": "Default",
            "unscannedFileSize": "0",
            "unscannedFileType": "[]",
            "unscannedTime": "[]"
        }, {
            "TYPE": "291",
            "ID": "3",
            "NAME": "111",
            "unscannedFileSize": "0",
            "unscannedFileType": "[\"ddd\"]",
            "unscannedTime": "[\"00:00-01:00\"]"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.2 Interface for Creating Scan Policy

Function

This interface is used to create scan policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/scan_policy

Access Method

POST

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Name of the scan policy. **The value is described as follows:** The name can contain only 1 to 127 single-byte letters or digits, periods (.), underscores (_), and hyphens (-).
unscannedFileSize	Optional	uint32	Maximum size of the file that can be scanned. **The value is described as follows:** 0~4096 **Default:**0: The size of the scanned file is not limited. **Unit:**MB
unscannedFileType	Optional	array	Type of the unscanned file. **Default:**0: The type of the unscanned file is not limited. **Note:**A maximum of 500 types of files can be set as unscanned files. The length of a single file type cannot exceed 8 characters. Multiple file types must be separeted with commas (,).

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Parameter	Mandatory/Optional/Conditional	Type	Description
unscannedTime	Optional	array	Unscanned period. **Default:**0: The unscanned period is not limited. **Note:** 1. The start time cannot be later than or equal to the end time. 2. The format of unscanned period is HH:MM-HH:MM. For example, 09:00-12:00. 3. The number of unscanned periods cannot exceed 5. Multipel unscanned periods must be separeted with commas (,).
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 291: SCAN_POLICY
ID	Mandatory	string(int)	ID of the scan policy.
NAME	Mandatory	string	Name of the scan policy.
unscannedFileSize	Mandatory	string(int)	Maximum size of the file that can be scanned.
unscannedFileType	Mandatory	string(array)	Type of the unscanned file.
unscannedTime	Mandatory	string(array)	Unscanned period.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating scan policy.

```
Request: POST /deviceManager/rest/210235843910E6000009/scan_policy

{
    "unscannedTime": ["00:00-01:00"],
    "unscannedFileType": ["aaa"],
    "NAME": "mypolicy",
    "unscannedFileSize": 100
}

Response:
{
    "data": {
        "ID": "4",
        "NAME": "mypolicy",
        "TYPE": 291,
        "unscannedFileSize": "100",
        "unscannedFileType": "[\"aaa\"]",
        "unscannedTime": "[\"00:00-01:00\"]"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.3 Interface for Modifying Scan Policy

Function

This interface is used to modify scan policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2800 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/scan_policy/${id}

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Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	ID of the scan policy.
unscannedFileSize	Optional	uint32	Maximum size of the file that can be scanned. **The value is described as follows:** 0~4096 **Unit:**MB
unscannedFileType	Optional	array	Type of the unscanned file. **Note:**A maximum of 500 types of files can be set as unscanned files. The length of a single file type cannot exceed 8 characters. Multiple file types must be separeted with commas (,).
unscannedTime	Optional	array	Unscanned period. **Note:** 1. The start time cannot be later than or equal to the end time. 2. The format of unscanned period is HH:MM-HH:MM. For example, 09:00-12:00. 3. The number of unscanned periods cannot exceed 5. Multipel unscanned periods must be separeted with commas (,).

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying scan policy.

```
Request: PUT /deviceManager/rest/1016964156/scan_policy/4

{
    "unscannedFileSize": 4096,
    "unscannedFileType": ["aaa", "bbb"],
    "unscannedTime": ["00:00-01:00", "00:00-02:00"]
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.4 Interface for Deleting Scan Policy

Function

This interface is used to delete scan policy.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/scan_policy/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	ID of the scan policy.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting scan policy.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/scan_policy/2

{
    "vstoreId": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.5 Interface for Creating On-Access Scan

Function

This interface is used to create on-access scan.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/onaccess_scan_filesystem

Access Method

POST

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
fsID	Mandatory	string	File system ID.
fsName	Mandatory	string	File system name. **The value is described as follows:** Contains 1 to 255 digits, letters and underscores (_).
enable	Optional	bool	On-Access scan status. **The value is described as follows:** true：enabled false：disabled **Default:**false: disabled
scanPolicyID	Mandatory	string	Scan policy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string(int)	On-Access scan ID.
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 288: ONACCESS_SCAN_FILESYSTEM

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Parameter	Mandatory/ Conditional	Type	Description
enable	Mandatory	string(bool)	On-Access scan status. **The value is described as follows:** true：enabled false：disabled
fsID	Mandatory	string	File system ID.
fsName	Mandatory	string	File system name.
scanPolicyID	Mandatory	string	Scan policy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Creating on-access scan.

```
Request: POST /deviceManager/rest/210235843910E6000009/
onaccess_scan_filesystem

{
    "fsID": "4",
    "fsName": "FileSystem0040001",
    "enable": true,
    "scanPolicyID": "0"
}

Response:
{
    "data": {
        "TYPE": "288",
        "ID": "2",
        "enable": "true",
        "fsID": "4",
        "fsName": "FileSystem0040001",
        "scanPolicyID": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

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4.13.6.6 Interface for Modifying On-Access Scan

Function

This interface is used to modify on-access scan.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/onaccess_scan_filesystem/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	File system ID.
enable	Optional	bool	On-Access scan status. **The value is described as follows:** true：enabled false：disabled
scanPolicyID	Optional	string	Scan policy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying on-access scan.

```
Request: PUT /deviceManager/rest/210235843910E6000009/
onaccess_scan_filesystem/1
```

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```
{
    "scanPolicyID": "0",
    "enable": true
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.7 Interface for Deleting On-Access Scan

Function

This interface is used to delete on-access scan.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/onaccess_scan_filesystem/${id}

Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	On-Access scan ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Deleting on-access scan.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/
onaccess_scan_filesystem/2

{
    "vstoreId": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.8 Interface for Batch Querying Antivirus Server

Function

This interface is used to batch query antivirus server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_server

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 286: AV Server
ID	Mandatory	string(int)	Antivirus server ID.
IPADDRESS	Mandatory	string	Antivirus server address. **Note:**IPv4 and IPv6 are supported.
LIFS	Mandatory	string(array)	Logical ports. **Note:**A maximum of eight logical ports can be configured.
NAME	Mandatory	string	Antivirus server name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 35: invalid 89: overload 53:initializing
VENDOR	Mandatory	string(int)	Antivirus server vendor. **The value is described as follows:** 0: Symantec Protection Engine 1: Symantec Endpoint Protection 2: Trend Micro ServerProtect 3: McAfee 4: SOPHOS 6: Rising Antivirus
PORT	Mandatory	string(int)	Antivirus server port. **The value is described as follows:** 1~65535

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying antivirus server.

```
Request: GET /deviceManager/rest/210235843910E6000009/av_server

Response:
{
    "data": [
        {
            "TYPE": "286",
            "ID": "0",
            "IPADDRESS": "45.6.6.9",
            "LIFS": "[\"0\"]",
            "NAME": "avserver001",
            "PORT": "26810",
            "RUNNINGSTATUS": "35",
            "VENDOR": "0"
        }, {
            "TYPE": "286",
            "ID": "1",
            "IPADDRESS": "45.66.99.8",
            "LIFS": "[\"0\"]",
            "NAME": "dfd",
            "PORT": "26810",
            "RUNNINGSTATUS": "35",
            "VENDOR": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.9 Interface for Creating Antivirus Server

Function

This interface is used to create antivirus server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_server

Access Method

POST

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Antivirus server name. **Length:**1~127
VENDOR	Optional	enum	Antivirus server vendor. **The value is described as follows:** 0: Symantec Protection Engine 1: Symantec Endpoint Protection 2: Trend Micro ServerProtect 3: McAfee 4: SOPHOS 6: Rising Antivirus **Default:**0
PORT	Mandatory	uint32	Antivirus server port. **The value is described as follows:** The value ranges from 1 to 65535.
LIFS	Mandatory	array	Logical ports. **Note:**A maximum of eight logical ports can be configured.
IPADDRESS	Mandatory	string	Antivirus server address.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 286: AV Server
ID	Mandatory	string(int)	Antivirus server ID.
IPADDRESS	Mandatory	string	Antivirus server address.
LIFS	Mandatory	string(array)	Logical ports.
NAME	Mandatory	string	Antivirus server name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status.
VENDOR	Mandatory	string(enum)	Antivirus server vendor. **The value is described as follows:** 0: Symantec Protection Engine 1: Symantec Endpoint Protection 2: Trend Micro ServerProtect 3: McAfee 4: SOPHOS 6: Rising Antivirus
PORT	Mandatory	string(int)	Antivirus server port. **The value is described as follows:** The value ranges from 1 to 65535.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Example

- Creating antivirus server.

```
Request: POST /deviceManager/rest/210235843910E6000009/av_server

{
    "PORT": "26810",
    "VENDOR": "0",
    "NAME": "avser02",
    "IPADDRESS": "1234::4568",
    "LIFS": ["0"]
}

Response:
{
    "data": {
        "TYPE": 286,
        "ID": "2",
        "IPADDRESS": "1234::4568",
        "LIFS": "[\"0\"]",
        "NAME": "avser02",
        "PORT": "26810",
        "RUNNINGSTATUS": "35",
        "VENDOR": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.10 Interface for Modifying Antivirus Server

Function

This interface is used to modify antivirus server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_server/${id}

Access Method

PUT

User Privilege

Super administrator,Administrator

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Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Antivirus server ID.
LIFS	Mandatory	array	Logical ports. **Note:**A maximum of eight logical ports can be configured.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Modifying antivirus server.

```
Request: PUT /deviceManager/rest/1016964156/av_server/4

{
    "LIFS": ["0", "1", "2", "3"]
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.11 Interface for Deleting Antivirus Server

Function

This interface is used to delete antivirus server.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_server/${id}

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Access Method

DELETE

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	uint32	Antivirus server ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Deleting antivirus server.

```
Request: DELETE /deviceManager/rest/210235843910E6000009/av_server/2

{
    "vstoreId": "1"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.12 Interface for Checking Antivirus Server Connection

Function

This interface is used to check antivirus server connection.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AV_SERVER/test_av_server

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
NAME	Mandatory	string	Antivirus server name. **Length:**1~127
VENDOR	Mandatory	enum	Antivirus server vendor. **The value is described as follows:** 0:Symantec Protection Engine 1:Symantec Endpoint Protection 2:Trend Micro ServerProtect 3:McAfee 4:SOPHOS 6:Rising Antivirus
PORT	Mandatory	uint32	Antivirus server port. **The value is described as follows:** The value ranges from 1 to 65535.
IPADDRESS	Mandatory	string	Antivirus server address.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

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Example

- Checking antivirus server connection.

```
Request: PUT /deviceManager/rest/1016964156/AV_SERVER/test_av_server

{
    "PORT": "26810",
    "VENDOR": "0",
    "NAME": "avserver03",
    "IPADDRESS": "45.6.9.99"
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.13 Interface for Querying Scan Service

Function

This interface is used to query scan service.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_config

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 285: AV Config
enableScan	Mandatory	string(enum)	Whether to enable scan. **The value is described as follows:** 0:close 1:open
maxLIFCount	Mandatory	string(uint32)	Maximum supported logical ports.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying scan service.

```
Request: GET /deviceManager/rest/210235843910E6000009/av_config

Response:
{
    "data": {
        "TYPE": 285,
        "enableScan": "0",
        "maxLIFCount": "8"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.14 Interface for Modifying Scan Service

Function

This interface is used to modify scan service.

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Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_config

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
enableScan	Optional	enum	Whether to enable scan. **The value is described as follows:** 0:close 1:open
preSharedKeyPassphrases	Optional	string	Pre-shared key password. **The value is described as follows:** 1. Contains 16 to 63 characters. 2. Must contain spaces and special characters including !"#$%&\'()*+,-./:;<=>?@[\\]^` {_|}~ 3. Must contain any two of uppercase letters, lowercase letters, and digits. **Length:**16~63
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

N/A

Example

- Modifying scan service.

```
Request: PUT /deviceManager/rest/210235843910E6000009/av_config
{
    "enableScan": 1
}

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.15 Interface for Batch Querying On-Access Scan

Function

This interface is used to batch query on-access scan.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/onaccess_scan_filesystem

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
ID	Mandatory	string(int)	On-Access scan ID.
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 288: ONACCESS_SCAN_FILESYSTEM
enable	Mandatory	string(bool)	On-Access scan status. **The value is described as follows:** true：enabled false：disabled
fsID	Mandatory	string	File system ID.
fsName	Mandatory	string	File system name.
scanPolicyID	Mandatory	string	Scan policy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Batch querying on-access scan.

```
Request: GET /deviceManager/rest/210235843910E6000009/onaccess_scan_filesystem

Response:
{
    "data": [
        {
            "TYPE": "288",
            "ID": "0",
            "enable": "true",
            "fsID": "1",
            "fsName": "FileSystem0010001",
            "scanPolicyID": "0"
        }, {
            "TYPE": "288",
            "ID": "1",
            "enable": "true",
```

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```
            "fsID": "0",
            "fsName": "FileSystem0010000",
            "scanPolicyID": "0"
        }
    ],
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.16 Interface for Querying Antivirus Server Settings

Function

This interface is used to query antivirus server settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/av_server/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	int	Antivirus server ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 286: antivirus server
ID	Mandatory	string(int)	Antivirus server ID.
IPADDRESS	Mandatory	string	Antivirus server address. **Note:**IPv4 and IPv6 are supported.
LIFS	Mandatory	string(array)	Logical ports. **Note:**A maximum of eight logical ports can be configured.
NAME	Mandatory	string	Antivirus server name.
RUNNINGSTATUS	Mandatory	string(enum)	Running status. **The value is described as follows:** 1: normal 35: invalid 89: overload 53: initializing
VENDOR	Mandatory	string(int)	Antivirus server vendor. **The value is described as follows:** 0: Symantec Protection Engine 1: Symantec Endpoint Protection 2: Trend Micro ServerProtect 3: McAfee 4: SOPHOS 6: Rising Antivirus
PORT	Mandatory	string(int)	Antivirus server port. **The value is described as follows:** The value ranges from 1 to 65535.

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Parameter	Mandatory/ Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying settings about the antivirus server whose ID is "0".

```
Request: GET /deviceManager/rest/210235843910E6000009/av_server/0

Response:
{
    "data": {
        "ID": "0",
        "IPADDRESS": "1.1.1.1",
        "LIFS": "[\"4278321152\"]",
        "NAME": "hhhhhhh",
        "PORT": "26810",
        "RUNNINGSTATUS": "35",
        "TYPE": 286,
        "VENDOR": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.17 Interface for Querying On-Access Scan Settings

Function

This interface is used to query on-access scan settings.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/onaccess_scan_filesystem/${id}

Access Method

GET

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User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	int	On-Access scan ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
ID	Mandatory	string(int)	On-Access scan ID.
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 288: ONACCESS_SCAN_FILESYSTEM
enable	Mandatory	string(bool)	On-Access scan status. **The value is described as follows:** true: enabled false: disabled
fsID	Mandatory	string	File system ID.
fsName	Mandatory	string	File system name.
scanPolicyID	Mandatory	string	Scan policy ID.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

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Example

- Querying settings of the on-access scan whose ID is "0".

```
Request: GET /deviceManager/rest/210235843910E6000009/
onaccess_scan_filesystem/0

Response:
{
    "data": {
        "TYPE": "288",
        "ID": "0",
        "enable": "true",
        "fsID": "1",
        "fsName": "FileSystem0010001",
        "scanPolicyID": "0"
    }
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.18 Interface for Querying Scan Policies

Function

This interface is used to query scan policies.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/scan_policy/${id}

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
ID	Mandatory	int	ID of the scan policy.

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Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Length:**1~256 **Note:**This field must be delivered in vStore scenarios.

Result

Parameter	Mandatory/Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the object. **The value is described as follows:** 291: SCAN_POLICY
ID	Mandatory	string(int)	ID of the scan policy.
NAME	Mandatory	string	Name of the scan policy.
unscannedFileSize	Mandatory	string(int)	Maximum size of the file that can be scanned. **Unit:**MB
unscannedFileType	Mandatory	string(array)	Type of the unscanned file.
unscannedTime	Mandatory	string(array)	Unscanned period.
vstoreId	Conditional	string	vStore ID. **Note:**This field must be returned in vStore scenarios.
vstoreName	Conditional	string	vStore name. **Note:**This field must be returned in vStore scenarios.

Example

- Querying basic information about the scan policy whose ID is "0".

```
Request: GET /deviceManager/rest/210235843910E6000009/scan_policy/0

Response:
{
    "data": {
```

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```
        "TYPE": "291",
        "ID": "0",
        "NAME": "Default",
        "unscannedFileSize": "0",
        "unscannedFileType": "[]",
        "unscannedTime": "[]"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.19 Interface for Querying Antivirus Statistics

Function

This interface is used to query antivirus statistics.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AV_STATISTIC_INFO

Access Method

GET

User Privilege

Super administrator,Administrator,Read-only user

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

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Result

Parameter	Mandatory/ Conditional	Type	Description
TYPE	Mandatory	enum	Type number of the managed object. **The value is described as follows:** 287: antivirus statistics
scanFileNum	Mandatory	string(uint64)	Number of files scanned in real time.
scanFailedFileNum	Mandatory	string(uint64)	Number of files that fail to be scanned in real time.

Example

- Query antivirus statistics.

```
Request: GET /deviceManager/rest/210235843710E7000007/AV_STATISTIC_INFO?
t=1501580768852

Response: {
    "data": {
        "TYPE": 287,
        "scanFailedFileNum": "0",
        "scanFileNum": "0"
    },
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.13.6.20 Interface for Deleting Antivirus Statistics

Function

This interface is used to delete antivirus statistics.

Applicable Model

Applicable to 5000 V3 series,6000 V3 series,18000 V3 series,2000F V3 series,5000F V3 series,6000F V3 series,18000F V3 series,2600 V3,2200 V3 (16 GB memory).

URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/AV_STATISTIC_INFO

Access Method

DELETE

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User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
vstoreId	Conditional	string	vStore ID. **Note:**This field must be delivered in vStore scenarios.

Result

N/A

Example

- Delete antivirus statistics.

```
Request: DELETE /deviceManager/rest/210235843710E7000007/AV_STATISTIC_INFO?
t=1501581630836

Response: {
    "data":{},
    "error":{
        "code":0,
        "description":"0"
    }
}
```

4.14 SVP management

4.14.1 svp

4.14.1.1 Interface for Restarting the SVP

Function

This interface is used to restart the SVP.

Applicable Model

Applicable to 18000 V3 series,18000F V3 series.

HighRisk

You are about to restart the SVP. The restart may take several minutes.

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This operation interrupts all services running on the SVP.

Suggestion: Before performing this operation, stop all services running on the SVP.

URI

https://${ip}:${port}/deviceManager/rest/SVP/SYSTEM/REBOOT

Access Method

PUT

User Privilege

Super administrator,Administrator

Parameters

N/A

Result

N/A

Example

- Restarting the SVP.

```
Request: PUT /deviceManager/rest/SVP/SYSTEM/REBOOT

Response:
{
    "data": {},
    "error": {
        "code": 0,
        "description": "0"
    }
}
```

4.15 Others

4.15.1 Other

4.15.1.1 Interface for Obtaining Performance Data in Batches

Function

This interface is used to obtain the performance data in batches.

Applicable Model

Applicable to V3 all series.

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URI

https://${ip}:${port}/deviceManager/rest/${deviceId}/performance_data

Access Method

GET

User Privilege

Super administrator,Administrator

Parameters

Parameter	Mandatory/Optional/Conditional	Type	Description
object_type	Mandatory	enum	Enumeration value number of the object type. **The value is described as follows:** 10: disk 207: controller 11: LUN 213: Ethernet Port 235: bond port 212: Fibre Channel Port 16500: IB_PORT 40: file system 252: FCoE Port 216: Storage Pool **Note:**2200 V3 (8 GB memory), 2600 V3 for Video and 2800 V3 do not support 40: file system.
object_list	Optional	array	Object ID list. **The value is described as follows:** Multiple IDs are separated by commas (,).

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Parameter	Mandatory/Optional/Conditional	Type	Description
indicators	Optional	array	List of enumeration numbers (each maps to a performance indicator). **The value is described as follows:** If the list contains multiple enumeration numbers, the numbers are separated by commas (,). For details, see appendix "Object Performance Indicators."

Result

Parameter	Mandatory/Conditional	Type	Description
timestamp	Mandatory	string(uint64)	Performance collection time (device UTC time). **Unit:**ms
indicator_values	Mandatory	array	Value of the object performance indicator. **The value is described as follows:** The sequence is the same as that of the delivered performance indicator value.
indicators	Mandatory	array	List of enumeration numbers (each maps to a performance indicator). **The value is described as follows:** If the list contains multiple enumeration numbers, the numbers are separated by commas (,). For details, see appendix "Object Performance Indicators."
object_id	Mandatory	string	Object ID.

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Usage Guidelines

You can obtain the performance data after enabling the performance monitoring function. If the function is disabled, data cannot be obtained. This interface cannot be invoked concurrently.

Example

- Obtaining performance data in batches.

```
Request: GET /deviceManager/rest/210235843910E6000009/performance_data?
object_type=10&object_list=[5,8]&indicators=[21,22]

Response: {
    "data": [
            {
                "indicator_values":[0,0],
                "indicators":[21,22],
                "object_id":"5",
                "timestamp":1512364495
           },
           {
                "indicator_values":[0,0],
                "indicators":[21,22],
                "object_id":"8",
                "timestamp":1512364495
           }
  ],
  "error":{
        "code":0,
         "description":"0"
    }
}
```

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5 Appendix

About This Chapter

5.1 List of escape characters
5.2 Table of Defining Role Permissions
5.3 Object Performance Indicators

5.1 List of escape characters

Before	After
<	<
>	>
(	(
)	)
&	&

5.2 Table of Defining Role Permissions

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5.2.1 Table of Defining Role Permissions in the System View

Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
user	User	Read-write								NO
role	Role	Read-write								NO
ldap	Lightweight Directory Access Protocol	Read-write	Read-only							NO
safe_strategy	Security Policies	Read-write	Read-only	Read-write						NO
disk_domain	Disk Domain	Read-write	Read-write			Read-write	Read-write			YES
storage_pool	Storage Pool	Read-write	Read-write			Read-write	Read-write	Read-only		YES
vstore	Vstore	Read-write	Read-write	Read-only	Read-only	Read-only	Read-only	Read-only		YES
lun	Logical Unit Number	Read-write	Read-write	Read-only		Read-write		Read-write	Read-only	YES

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
remote_resource	Remote Resource	Read-write	Read-write			Read-write		Read-write		YES
initiator	Initiator	Read-write	Read-write			Read-write				YES
isns	Internet Storage Name Service	Read-write	Read-write			Read-write				YES
mapping_view	Mapping View	Read-write	Read-write			Read-write			Read-only	YES
lun_group	LUN Group	Read-write	Read-write			Read-write		Read-write	Read-write	YES
host_group	Host Group	Read-write	Read-write			Read-write				YES
host	Host	Read-write	Read-write			Read-write				YES
port_group	Port Group	Read-write	Read-write			Read-write				YES
file_system	File System	Read-write	Read-write				Read-write	Read-write		YES

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
quota_tree	Quota Tree	Read-write	Read-write				Read-write			YES
quota	Quota	Read-write	Read-write				Read-write			YES
share	Share	Read-write	Read-write				Read-write			YES
nfs_service	NFS Service	Read-write	Read-write				Read-write			YES
cifs_service	CIFS Service	Read-write	Read-write				Read-write			YES
http_service	HTTP Service	Read-write	Read-write				Read-write			YES
ftp_service	FTP Service	Read-write	Read-write				Read-write			YES
domain	Domain	Read-write	Read-write				Read-write			YES
resource_user	Resource User	Read-write	Read-write				Read-write			YES

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
port	Port	Read-write	Read-write		Read-write	Read-write	Read-only	Read-only		YES
logical_port	Logical Port	Read-write	Read-write	Read-only	Read-write		Read-write			YES
vlan	VLAN	Read-write	Read-write		Read-write		Read-write			YES
failover_group	Failover Group	Read-write	Read-write		Read-write		Read-write			YES
remote_device	Remote Device	Read-write	Read-write					Read-write		YES
mirror_lun	MirrorLUN	Read-write	Read-write					Read-write		YES
lun_snapshot	LUN Snapshot	Read-write	Read-write					Read-write	Read-write	YES
lun_clone	LUN Clone	Read-write	Read-write					Read-write	Read-write	YES
fs_snapshot	FS Snapshot	Read-write	Read-write					Read-write		YES

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
lun_copy	LUN Copy	Read-write	Read-write					Read-write	Read-write	YES
hyper_vault	HyperVault Copy	Read-write	Read-write					Read-write		YES
remote_replication	Remote Replication	Read-write	Read-write					Read-write	Read-write	YES
ndmp_service	NDMP Service	Read-write	Read-write					Read-write		YES
consistency_group	Consistency Group	Read-write	Read-write					Read-write		YES
hyper_metro_consistency_group	Consistency Groups of HyperMetro	Read-write	Read-write					Read-write		YES
hyper_metro_domain	HperMetro Domain	Read-write	Read-write					Read-write		YES
hyper_metro_pair	HyperMetro Pair	Read-write	Read-write					Read-write		YES
hyper_metro_vstore_pair	HyperMetro Vstore Pair	Read-write	Read-write					Read-write		YES

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
quorum_server	Quorum Server	Read-write	Read-write					Read-write		YES
smart_qos	SmartQoS	Read-write	Read-write							YES
smart_partition	Smartcache Partition	Read-write	Read-write							YES
smart_cache	Smart Cache	Read-write	Read-write							YES
smart_migration	Smart Migration	Read-write	Read-write							YES
performance	Performance	Read-write	Read-write							YES
disk	Disk	Read-write	Read-write	Read-write						NO
disk_readonly	Disk Read-only	Read-only	Read-only	Read-only		Read-only	Read-only			YES
controller	Controller	Read-write	Read-write							NO

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
controller_readonly	Controller Read-only	Read-only	Read-only		Read-only	Read-only	Read-only	Read-only		YES
bbu	Backup Battery Unit	Read-write	Read-write							NO
interface_module	Interface Module	Read-write	Read-write							NO
interface_module_readonly	Interface Module Read-only	Read-only	Read-only		Read-only	Read-only	Read-only	Read-only		YES
fan	Fan	Read-write	Read-write							NO
expansion_module	Expansion Module	Read-write	Read-write							NO
cabinet	Cabinet	Read-write	Read-write							NO
enclosure	Enclosure	Read-write	Read-write							NO
enclosure_readonly	Enclosure Read-only	Read-only	Read-only	Read-only		Read-only	Read-only			YES

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
power_supply	Power	Read-write	Read-write							NO
virtual_machine	Virtual Machine	Read-write	Read-write							NO
alarm	Alarm	Read-write	Read-write							NO
dns_server	DNS Service	Read-write	Read-write							NO
system	Storage System	Read-write	Read-write							NO
license	License	Read-write	Read-only							NO
running_data	Running Data	Read-write	Read-write							NO
snmp	Simple Network Management Protocol	Read-write	Read-write							NO
mirror_domain	Mirror Domain	Read-write	Read-write							NO

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Object Name	Terminology	Super Administrator (Built-In Role)	Administrator (Built-In Role)	Securtity Administrator (Built-In Role)	Network Administrator (Built-In Role)	SAN Resource Administrator (Built-In Role)	NAS Resource Administrator (Built-In Role)	DataProtection Administrator (Built-In Role)	Backup Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
certificate	Certificate	Read-write	Read-only	Read-write						NO
audit_strategy	Audit Logs	Read-write	Read-only	Read-write						NO
antivirus	Antivirus	Read-write	Read-write	Read-write						NO
svp	Service Processor	Read-write	Read-write							NO
remote_replication_vstore_pair	Remote Replication vStore Pairs	Read-write	Read-write					Read-write		YES

5.2.2 Table of Defining Role Permissions in the vStore View

Object Name	Terminology	VStore Administrator (Built-In Role)	VStore Protocol Administrator (Built-In Role)	VStore DataProtection Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
user	User				NO
role	Role				NO

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Object Name	Terminology	VStore Administrator (Built-In Role)	VStore Protocol Administrator (Built-In Role)	VStore DataProtection Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
ldap	Lightweight Directory Access Protocol				NO
safe_strategy	Security Policies				NO
disk_domain	Disk Domain				NO
storage_pool	Storage Pool	Read-only		Read-only	YES
vstore	Vstore				NO
lun	Logical Unit Number	Read-write			YES
remote_resource	Remote Resource	Read-write		Read-write	YES
initiator	Initiator				NO
isns	Internet Storage Name Service				NO
mapping_view	Mapping View				NO
lun_group	LUN Group				NO
host_group	Host Group				NO
host	Host				NO
port_group	Port Group				NO
file_system	File System	Read-write	Read-only	Read-write	YES
quota_tree	Quota Tree	Read-write	Read-only		YES
quota	Quota	Read-write			YES
share	Share	Read-write	Read-write		YES
nfs_service	NFS Service	Read-write			YES

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Object Name	Terminology	VStore Administrator (Built-In Role)	VStore Protocol Administrator (Built-In Role)	VStore DataProtection Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
cifs_service	CIFS Service	Read-write			YES
http_service	HTTP Service				NO
ftp_service	FTP Service				NO
domain	Domain	Read-write	Read-write		YES
resource_user	Resource User	Read-write	Read-write		YES
port	Port	Read-only			YES
logical_port	Logical Port	Read-only			YES
vlan	VLAN	Read-only			YES
failover_group	Failover Group	Read-only			YES
remote_device	Remote Device	Read-only		Read-only	YES
mirror_lun	Mirror LUN				NO
lun_snapshot	LUN Snapshot				NO
lun_clone	LUN Clone				NO
fs_snapshot	FS Snapshot	Read-write		Read-write	YES
lun_copy	LUN Copy				NO
hyper_vault	HyperVault Copy	Read-write		Read-write	YES
remote_replication	Remote Replication	Read-write		Read-write	YES
ndmp_service	NDMP Service	Read-write		Read-write	YES
consistency_group	Consistency Group				NO

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Object Name	Terminology	VStore Administrator (Built-In Role)	VStore Protocol Administrator (Built-In Role)	VStore DataProtection Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
hyper_metro_consistency_group	Consistency Groups of HyperMetro	Read-only		Read-only	YES
hyper_metro_domain	HperMetro Domain	Read-only		Read-only	YES
hyper_metro_pair	HyperMetro Pair	Read-write		Read-write	YES
hyper_metro_vstore_pair	HyperMetro Vstore Pair	Read-only		Read-only	YES
quorum_server	Quorum Server	Read-only		Read-only	YES
smart_qos	SmartQoS				NO
smart_partition	Smartcache Partition				NO
smart_cache	Smart Cache				NO
smart_migration	Smart Migration				NO
performance	Performance				NO
disk	Disk				NO
controller	Controller				NO
bbu	Backup Battery Unit				NO
interface_module	Interface Module				NO
fan	Fan				NO
expansion_module	Expansion Module				NO
cabinet	Cabinet				NO
enclosure	Enclosure				NO
power_supply	Power				NO
virtual_machine	Virtual Machine				NO
alarm	Alarm				NO

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Object Name	Terminology	VStore Administrator (Built-In Role)	VStore Protocol Administrator (Built-In Role)	VStore DataProtection Administrator (Built-In Role)	Whether a Self-Defined Role Can Be Configured
dns_server	DNS Service				NO
system	Storage System				NO
license	License				NO
running_data	Running Data				NO
snmp	Simple Network Management Protocol				NO
mirror_domain	Mirror Domain				NO
certificate	Certificate	Read-write			NO
audit_strategy	Audit Logs				NO
antivirus	Antivirus	Read-write			NO
svp	Service Processor				NO
remote_replication_vstore_pair	Remote Replication vStore Pairs	Read-only		Read-only	YES

5.3 Object Performance Indicators

5.3.1 DeviceManager

Indicator	ID	Statistics Type	
		bond port	FCoE_PORT
Type		235	252
Usage(%)	18	√	√
Queue length	19	√	√
Block Bandwidth(MB/s)	21	√	√

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Total IOPS(IO/s)	22	√	√
Read bandwidth(MB/s)	23	√	√
Avg. read I/O size(KB)	24	√	√
Read IOPS(IO/s)	25	√	√
Write bandwidth(MB/s)	26	√	√
Avg. write I/O size(KB)	27	√	√
Write IOPS(IO/s)	28	√	√
Service Time	29	√	√
Read I/O Granularity Distribution: [0K, 1K)(%)	30	√	√
Read I/O Granularity Distribution: [1K, 2K)(%)	31	√	√
Read I/O Granularity Distribution: [2K, 4K)(%)	32	√	√
Read I/O Granularity Distribution: [4K, 8K)(%)	33	√	√
Read I/O Granularity Distribution: [8K, 16K)(%)	34	√	√
Read I/O Granularity Distribution: [16K, 32K)(%)	35	√	√
Read I/O Granularity Distribution: [32K, 64K)(%)	36	√	√

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Read I/O Granularity Distribution: [64K, 128K)(%)	37	√	√
Read I/O Granularity Distribution: [128K, 256K)(%)	38	√	√
Read I/O Granularity Distribution: [256K, 512K)(%)	39	√	√
Read I/O Granularity Distribution: [512K, +∞)(%)	40	√	√
Write I/O Granularity Distribution: [0K, 1K)(%)	41	√	√
Write I/O Granularity Distribution: [1K, 2K)(%)	42	√	√
Write I/O Granularity Distribution: [2K, 4K)(%)	43	√	√
Write I/O Granularity Distribution: [4K, 8K)(%)	44	√	√
Write I/O Granularity Distribution: [8K, 16K)(%)	45	√	√
Write I/O Granularity Distribution: [16K, 32K)(%)	46	√	√
Write I/O Granularity Distribution: [32K, 64K)(%)	47	√	√

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Write I/O Granularity Distribution: [64K, 128K)(%)	48	√	√
Write I/O Granularity Distribution: [128K, 256K)(%)	49	√	√
Write I/O Granularity Distribution: [256K, 512K)(%)	50	√	√
Write I/O Granularity Distribution: [512K, +∞)(%)	51	√	√
Avg. I/O response time(ms)	78	√	√
Max. I/O response time(ms)	79	√	√
Avg. read I/O response time(ms)	197	√	√
Avg. write I/O response time(ms)	198	√	√
Ratio of read I/Os to total I/Os(%)	265	√	√
Ratio of write I/Os to total I/Os(%)	266	√	√
Max. IOPS(IO/s)	307	√	√
Avg. I/O response time(us)	370	√	√
Max. I/O response time(us)	371	√	√
Avg. read I/O response time(us)	384	√	√
Avg. write I/O response time(us)	385	√	√
Total NFS bandwidth(KB/s)	703	√	
Total CIFS bandwidth(KB/s)	706	√	

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NFS read bandwidth(KB/s)	709	√	
CIFS read bandwidth(KB/s)	712	√	
NFS write bandwidth(KB/s)	715	√	
CIFS write bandwidth(KB/s)	718	√	
Total NFS OPS	721	√	
Total CIFS OPS	724	√	
Total NFS read OPS	727	√	
Total CIFS read OPS	730	√	
Total NFS write OPS	733	√	
Total CIFS write OPS	736	√	
Other NFS OPS	739	√	
Other CIFS OPS	742	√	
Average NFS I/O response time(us)	745	√	
Average CIFS I/O response time(us)	748	√	
Average NFS read I/O response time(us)	751	√	
Average CIFS read I/O response time(us)	754	√	
Average NFS write I/O response time(us)	757	√	
Average CIFS write I/O response time(us)	760	√	
Average response time of other NFS I/Os(us)	763	√	

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Average response time of other CIFS I/Os(us)	766	√	
Total Bandwidth(MB/s)	767	√	
Block read bandwidth(MB/s)	768	√	
Block write bandwidth(MB/s)	769	√	
Average block read I/O response time(us)	775	√	
Average block write I/O response time(us)	776	√	
Average block I/O response time(us)	777	√	

5.3.2 EAM

Indicator	**ID**	Statistics Type					
		Ethernet Port	Controller	FC Port	IB_Port	LIF	SAS Port
Type		213	207	212	16500	279	214
Usage(%)	18	√		√	√		√
Queue length	19	√	√	√	√		
Block Bandwidth(MB/s)	21	√	√	√	√		√
Total IOPS(IO/s)	22	√	√	√	√		√
Read bandwidth(MB/s)	23	√	√	√	√		√
Avg. read I/O size(KB)	24	√	√	√	√		

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Read IOPS(IO/s)	25	√	√	√	√		√
Write bandwidth(MB/s)	26	√	√	√	√		√
Avg. write I/O size(KB)	27	√	√	√	√		
Write IOPS(IO/s)	28	√	√	√	√		√
Service Time	29	√	√	√	√		
Read I/O Granularity Distribution: [0K, 1K)(%)	30	√	√	√	√		
Read I/O Granularity Distribution: [1K, 2K)(%)	31	√	√	√	√		
Read I/O Granularity Distribution: [2K, 4K)(%)	32	√	√	√	√		
Read I/O Granularity Distribution: [4K, 8K)(%)	33	√	√	√	√		
Read I/O Granularity Distribution: [8K, 16K)(%)	34	√	√	√	√		

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Read I/O Granularity Distribution: [16K, 32K)(%)	35	√	√	√	√		
Read I/O Granularity Distribution: [32K, 64K)(%)	36	√	√	√	√		
Read I/O Granularity Distribution: [64K, 128K)(%)	37	√	√	√	√		
Read I/O Granularity Distribution: [128K, 256K)(%)	38	√	√	√	√		
Read I/O Granularity Distribution: [256K, 512K)(%)	39	√	√	√	√		
Read I/O Granularity Distribution: [512K, +∞)(%)	40	√	√	√	√		

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Write I/O Granularity Distribution: [0K, 1K)(%)	41	√	√	√	√		
Write I/O Granularity Distribution: [1K, 2K)(%)	42	√	√	√	√		
Write I/O Granularity Distribution: [2K, 4K)(%)	43	√	√	√	√		
Write I/O Granularity Distribution: [4K, 8K)(%)	44	√	√	√	√		
Write I/O Granularity Distribution: [8K, 16K)(%)	45	√	√	√	√		
Write I/O Granularity Distribution: [16K, 32K)(%)	46	√	√	√	√		

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Write I/O Granularity Distribution: [32K, 64K)(%)	47	√	√	√	√		
Write I/O Granularity Distribution: [64K, 128K) (%)	48	√	√	√	√		
Write I/O Granularity Distribution: [128K, 256K) (%)	49	√	√	√	√		
Write I/O Granularity Distribution: [256K, 512K) (%)	50	√	√	√	√		
Write I/O Granularity Distribution: [512K, +∞)(%)	51	√	√	√	√		
Avg. CPU usage(%)	68		√				

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Avg. cache usage(%)	69		√				
Avg. I/O response time(ms)	78	√	√	√	√		√
Max. I/O response time(ms)	79	√	√	√	√		√
Cache flushes to write requests ratio(%)	81		√				
Cache flushing bandwidth(MB/s)	82		√				
Full-stripe write request ratio(%)	86		√				
Read cache hit ratio(%)	93		√				
Write cache hit ratio(%)	95		√				
Cache read usage(%)	110		√				
Cache write usage(%)	120		√				
Max. read I/O response time(ms)	195						√

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Max. write I/O response time(ms)	196						√
Avg. read I/O response time(ms)	197	√	√	√	√		√
Avg. write I/O response time(ms)	198	√	√	√	√		√
Ratio of read I/Os to total I/Os(%)	265	√		√	√		
Ratio of write I/Os to total I/Os(%)	266	√		√	√		
Hit ratio(%)	303		√				
Max. IOPS(IO/s)	307	√		√	√		
Cache water(%)	333		√				
Avg. I/O response time(us)	370	√	√	√	√		√
Max. I/O response time(us)	371	√	√	√	√		√
Max. read I/O response time(us)	382						√
Max. write I/O response time(us)	383						√

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Avg. read I/O response time(us)	384	√	√	√	√		√
Avg. write I/O response time(us)	385	√	√	√	√		√
File OPS	476		√				
File Bandwidth	511		√				
NFS operation count per second	627		√				
Total NFS bandwidth(KB/s)	703	√				√	
Total CIFS bandwidth(KB/s)	706	√				√	
NFS read bandwidth(KB/s)	709	√				√	
CIFS read bandwidth(KB/s)	712	√				√	
NFS write bandwidth(KB/s)	715	√				√	
CIFS write bandwidth(KB/s)	718	√				√	
Total NFS OPS	721	√				√	

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Total CIFS OPS	724	√				√	
Total NFS read OPS	727	√				√	
Total CIFS read OPS	730	√				√	
Total NFS write OPS	733	√				√	
Total CIFS write OPS	736	√				√	
Other NFS OPS	739	√				√	
Other CIFS OPS	742	√				√	
Average NFS I/O response time(us)	745	√				√	
Average CIFS I/O response time(us)	748	√				√	
Average NFS read I/O response time(us)	751	√				√	
Average CIFS read I/O response time(us)	754	√				√	

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Average NFS write I/O response time(us)	757	√				√	
Average CIFS write I/O response time(us)	760	√				√	
Average response time of other NFS I/Os(us)	763	√				√	
Average response time of other CIFS I/Os(us)	766	√				√	
Total Bandwidth(MB/s)	767	√					
Block read bandwidth(MB/s)	768	√					
Block write bandwidth(MB/s)	769	√					
Average block read I/O response time(us)	775	√					
Average block write I/O response time(us)	776	√					

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Average block I/O response time(us)	777	√					
Request Queue Usage(%)	784	√		√			
Receiving bandwidth for replication(MB/s)	786	√		√			
Sending bandwidth for replication(MB/s)	787	√		√			
Cache page utilization(%)	1055		√				
Cache chunk utilization/(%)	1056		√				
Cache pageUnit utilization(%)	1057		√				
ISCSI IOPS(IO/s)	1073		√				
CIFS operation count per second	1074		√				
Disk Max. Usage(%)	1075		√				

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Total Disk IOPS(IO/s)	1076		√				
Read Disk IOPS(IO/s)	1077		√				
Write Disk IOPS(IO/s)	1078		√				
SCSI IOPS(IO/s)	1079		√				

5.3.3 IO

Indicator	**ID**	Statistics Type		
		IO Class	CachePartition	SmartCachePartition
Type		230	268	273
Max. bandwidth(MB/s)	5	√		
Usage(%)	18	√		
Queue length	19	√		
Block Bandwidth(MB/s)	21	√	√	
Total IOPS(IO/s)	22	√	√	
Read bandwidth(MB/s)	23	√	√	
Avg. read I/O size(KB)	24	√		
Read IOPS(IO/s)	25	√	√	

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Write bandwidth(MB/s)	26	√	√	
Avg. write I/O size(KB)	27	√		
Write IOPS(IO/s)	28	√	√	
Service Time	29	√		
Read I/O Granularity Distribution: [0K,1K)(%)	30	√		
Read I/O Granularity Distribution: [1K,2K)(%)	31	√		
Read I/O Granularity Distribution: [2K,4K)(%)	32	√		
Read I/O Granularity Distribution: [4K,8K)(%)	33	√		
Read I/O Granularity Distribution: [8K,16K)(%)	34	√		
Read I/O Granularity Distribution: [16K,32K)(%)	35	√		
Read I/O Granularity Distribution: [32K,64K)(%)	36	√		
Read I/O Granularity Distribution: [64K,128K)(%)	37	√		

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Read I/O Granularity Distribution: [128K,256K)(%)	38	√		
Read I/O Granularity Distribution: [256K,512K)(%)	39	√		
Read I/O Granularity Distribution: [512K,+∞)(%)	40	√		
Write I/O Granularity Distribution: [0K,1K)(%)	41	√		
Write I/O Granularity Distribution: [1K,2K)(%)	42	√		
Write I/O Granularity Distribution: [2K,4K)(%)	43	√		
Write I/O Granularity Distribution: [4K,8K)(%)	44	√		
Write I/O Granularity Distribution: [8K,16K)(%)	45	√		
Write I/O Granularity Distribution: [16K,32K)(%)	46	√		
Write I/O Granularity Distribution: [32K,64K)(%)	47	√		

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Write I/O Granularity Distribution: [64K,128K)(%)	48	√		
Write I/O Granularity Distribution: [128K,256K)(%)	49	√		
Write I/O Granularity Distribution: [256K,512K)(%)	50	√		
Write I/O Granularity Distribution: [512K,+∞)(%)	51	√		
Avg. I/O response time(ms)	78	√	√	
Max. I/O response time(ms)	79	√		
Read cache hit ratio(%)	93		√	
Write cache hit ratio(%)	95		√	
Avg. read I/O response time(ms)	197	√	√	
Avg. write I/O response time(ms)	198	√	√	
Avg. I/O size(KB)	228	√		
Ratio of read I/Os to total I/Os(%)	265	√		
Ratio of write I/Os to total I/Os(%)	266	√		

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Max. IOPS(IO/s)	307	√		
Cache water(%)	333		√	
Avg. I/O response time(us)	370	√	√	
Max. I/O response time(us)	371	√		
Avg. read I/O response time(us)	384	√	√	
Avg. write I/O response time(us)	385	√	√	
Read SmartCache Hit Ratio(%)	1095			√
Cached Capacity(KB)	1096			√
Cached Capacity(KB)	1097			√

5.3.4 POOL

Indicator	**ID**	Statistics Type	
		Storage Pool	Disk
Type		216	10
Usage(%)	18	√	√
Queue length	19	√	√
Block Bandwidth(MB/s)	21	√	√
Total IOPS(IO/s)	22	√	√
Read bandwidth(MB/s)	23	√	√
Avg. read I/O size(KB)	24	√	√
Read IOPS(IO/s)	25	√	√

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Write bandwidth(MB/s)	26	√	√
Avg. write I/O size(KB)	27	√	√
Write IOPS(IO/s)	28	√	√
Service Time	29	√	√
Read I/O Granularity Distribution: [0K, 1K)(%)	30	√	√
Read I/O Granularity Distribution: [1K, 2K)(%)	31	√	√
Read I/O Granularity Distribution: [2K, 4K)(%)	32	√	√
Read I/O Granularity Distribution: [4K, 8K)(%)	33	√	√
Read I/O Granularity Distribution: [8K, 16K)(%)	34	√	√
Read I/O Granularity Distribution: [16K, 32K)(%)	35	√	√
Read I/O Granularity Distribution: [32K, 64K)(%)	36	√	√
Read I/O Granularity Distribution: [64K, 128K)(%)	37	√	√
Read I/O Granularity Distribution: [128K, 256K)(%)	38	√	√

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Read I/O Granularity Distribution: [256K, 512K)(%)	39	√	√
Read I/O Granularity Distribution: [512K, +∞)(%)	40	√	√
Write I/O Granularity Distribution: [0K, 1K)(%)	41	√	√
Write I/O Granularity Distribution: [1K, 2K)(%)	42	√	√
Write I/O Granularity Distribution: [2K, 4K)(%)	43	√	√
Write I/O Granularity Distribution: [4K, 8K)(%)	44	√	√
Write I/O Granularity Distribution: [8K, 16K)(%)	45	√	√
Write I/O Granularity Distribution: [16K, 32K)(%)	46	√	√
Write I/O Granularity Distribution: [32K, 64K)(%)	47	√	√
Write I/O Granularity Distribution: [64K, 128K)(%)	48	√	√
Write I/O Granularity Distribution: [128K, 256K)(%)	49	√	√

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Write I/O Granularity Distribution: [256K, 512K)(%)	50	√	√
Write I/O Granularity Distribution: [512K, +∞)(%)	51	√	√
Avg. I/O response time(ms)	78	√	√
Max. I/O response time(ms)	79	√	√
OPS(per second)	182	√	
Avg. read I/O response time(ms)	197	√	√
Avg. write I/O response time(ms)	198	√	√
Avg. I/O size(KB)	228	√	
Read OPS(per second)	232	√	
Write OPS(per second)	233	√	
SCSI commands executed per second	241		√
Verify commands per second	242		√
Back-end read/write requests per second	257	√	
Back-end read requests per second	258	√	
Back-end write requests per second	259	√	
Back-End traffic(MB/s)	260	√	
Back-end read traffic(MB/s)	261	√	
Back-end write traffic(MB/s)	262	√	
Ratio of read I/Os to total I/Os(%)	265	√	

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Ratio of write I/Os to total I/Os(%)	266	√	
Back-end read response time(ms)	274	√	
Back-end write response time(ms)	275	√	
Avg. back-end response time(ms)	276	√	
Ratio of back-end read requests(%)	277	√	
Ratio of back-end write requests(%)	278	√	
Avg. I/O response time(us)	370	√	√
Max. I/O response time(us)	371	√	√
Avg. read I/O response time(us)	384	√	√
Avg. write I/O response time(us)	385	√	√
Total capacity(GB)	90001	√	√
Used capacity(GB)	90002		√
Free capacity(GB)	90003	√	
Capacity usage(%)	90004	√	√
Allocated capacity(GB)	90005	√	
Free capacity ratio(%)	90006		√
File Bandwidth	511	√	
Total amount of migrated data	513	√	
Amount of data migrated to SSDs(Amount of data migrated to High Performance Tier)	514	√	

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Amount of data migrated to SAS disks(Amount of data migrated to Performance Tier)	515	√	
Amount of data migrated to NL-SAS disks(Amount of data migrated to Capacity Tier)	516	√	
Amount of data migrated from SAS disks to SSDs(Amount of data migrated from Performance Tier to High Performance Tier)	517	√	
Amount of data migrated from NL-SAS disks to SSDs(Amount of data migrated from Capacity Tier to High Performance Tier)	518	√	
Amount of data migrated from SSDs to SAS disks(Amount of data migrated from High Performance Tier to Performance Tier)	519	√	
Amount of data migrated from NL-SAS disks to SAS disks(Amount of data migrated from Capacity Tier to Performance Tier)	520	√	

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Amount of data migrated from SSDs to NL-SAS disks(Amount of data migrated from High Performance Tier to Capacity Tier)	521	√	
Amount of data migrated from SAS disks to NL-SAS disks(Amount of data migrated from Performance Tier to Capacity Tier)	522	√	
Total Bandwidth(MB/s)	767	√	
Block read bandwidth(MB/s)	768	√	
Block write bandwidth(MB/s)	769	√	
File read bandwidth(KB/s)	770	√	
File write bandwidth(KB/s)	771	√	
Block service time(us)	772	√	
File service time(us)	773	√	

5.3.5 SPACE

Indicator	**ID**	Statistics Type		
		LUN	LUNPriorityStatistic	Snapshot
Type		11	272	27
Max. bandwidth(MB/s)	5	√		
Usage(%)	18	√		
Queue length	19	√		

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Block Bandwidth(MB/s)	21	√	√	
Total IOPS(IO/s)	22	√	√	
Read bandwidth(MB/s)	23	√	√	
Avg. read I/O size(KB)	24	√		
Read IOPS(IO/s)	25	√	√	
Write bandwidth(MB/s)	26	√	√	
Avg. write I/O size(KB)	27	√		
Write IOPS(IO/s)	28	√	√	
Service Time	29	√		
Read I/O Granularity Distribution: [0K,1K)(%)	30	√		
Read I/O Granularity Distribution: [1K,2K)(%)	31	√		
Read I/O Granularity Distribution: [2K,4K)(%)	32	√		
Read I/O Granularity Distribution: [4K,8K)(%)	33	√		
Read I/O Granularity Distribution: [8K,16K)(%)	34	√		

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Read I/O Granularity Distribution: [16K,32K)(%)	35	√		
Read I/O Granularity Distribution: [32K,64K)(%)	36	√		
Read I/O Granularity Distribution: [64K,128K)(%)	37	√		
Read I/O Granularity Distribution: [128K,256K)(%)	38	√		
Read I/O Granularity Distribution: [256K,512K)(%)	39	√		
Read I/O Granularity Distribution: [512K,+∞)(%)	40	√		
Write I/O Granularity Distribution: [0K,1K)(%)	41	√		
Write I/O Granularity Distribution: [1K,2K)(%)	42	√		
Write I/O Granularity Distribution: [2K,4K)(%)	43	√		
Write I/O Granularity Distribution: [4K,8K)(%)	44	√		

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Write I/O Granularity Distribution: [8K,16K)(%)	45	√		
Write I/O Granularity Distribution: [16K,32K)(%)	46	√		
Write I/O Granularity Distribution: [32K,64K)(%)	47	√		
Write I/O Granularity Distribution: [64K,128K)(%)	48	√		
Write I/O Granularity Distribution: [128K,256K)(%)	49	√		
Write I/O Granularity Distribution: [256K,512K)(%)	50	√		
Write I/O Granularity Distribution: [512K,+∞)(%)	51	√		
Avg. I/O response time(ms)	78	√	√	
Max. I/O response time(ms)	79	√		
Full-stripe write request ratio(%)	86	√		
Prefetch rate(%)	88	√		
Read cache hit ratio(%)	93	√		
Write cache hit ratio(%)	95	√		

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Read requests to the snapshot LUN	101			√
Read requests redirected to the source LUN	102			√
COW requests to the source LUN	103			√
COW requests from the snapshot LUN	104			√
Write requests to the snapshot LUN	105			√
Write requests to the source LUN exceeding the grain size	106			√
Avg. read I/O response time(ms)	197	√	√	
Avg. write I/O response time(ms)	198	√	√	
Read I/O Latency Distribution: [10ms,20ms) (%)	200	√		
Read I/O Latency Distribution: [20ms,50ms) (%)	201	√		
Read I/O Latency Distribution: [50ms,100ms) (%)	202	√		

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Read I/O Latency Distribution: [100ms,200ms) (%)	203	√		
Read I/O Latency Distribution: [200ms,+∞) (%)	204	√		
WriteI/O Latency Distribution: [10ms,20ms) (%)	206	√		
Write I/O Latency Distribution: [20ms,50ms) (%)	207	√		
Write I/O Latency Distribution: [50ms,100ms) (%)	208	√		
Write I/O Latency Distribution: [100ms,200ms) (%)	209	√		
Write I/O Latency Distribution: [200ms,+∞) (%)	210	√		
Avg. I/O size(KB)	228	√		
Ratio of read I/Os to total I/Os(%)	265	√		
Ratio of write I/Os to total I/Os(%)	266	√		
Hit ratio(%)	303	√		

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Max. IOPS(IO/s)	307	√		
Avg. I/O response time(us)	370	√	√	
Max. I/O response time(us)	371	√		
Avg. read I/O response time(us)	384	√	√	
Avg. write I/O response time(us)	385	√	√	
Read I/O Latency Distribution: [5ms,10ms)(%)	396	√		
Write I/O Latency Distribution: [5ms,10ms)(%)	402	√		
Total capacity(GB)	90001	√		
Capacity usage(%)	90004	√		
Allocated capacity(GB)	90005	√		
Free capacity ratio(%)	90006	√		
Total amount of migrated data	513	√		
Amount of data migrated to SSDs(Amount of data migrated to High Performance Tier)	514	√		

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Amount of data migrated to SAS disks(Amount of data migrated to Performance Tier)	515	√		
Amount of data migrated to NL-SAS disks(Amount of data migrated to Capacity Tier)	516	√		
Read I/O Latency Distribution: [0ms,5ms)(%)	530	√		
Write I/O Latency Distribution: [0ms,5ms)(%)	531	√		
Number of failed read I/Os	532	√		
Number of failed write I/Os	533	√		
Cache page preservation(%)	1059	√		
Cache chunk preservation(%)	1060	√		

5.3.6 复制

Indicator	**ID**	Statistics Type						
		FC Link	iSCSI_LINK	eFC_LINK	eISCSI_LINK	REPLICATION PAIR	LUN Copy	Consistent Group
Type		225	243	303	304	263	219	221

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Max. bandwidth(MB/s)	5	√	√	√	√			
Usage(%)	18	√	√	√	√			
Queue length	19	√	√	√	√			
Block Bandwidth(MB/s)	21			√	√	√	√	
Total IOPS(IO/s)	22	√	√	√	√			
Read bandwidth(MB/s)	23	√	√	√	√			
Avg. read I/O size(KB)	24	√	√	√	√			
Read IOPS(IO/s)	25	√	√	√	√			
Write bandwidth(MB/s)	26	√	√	√	√			
Avg. write I/O size(KB)	27	√	√	√	√			
Write IOPS(IO/s)	28	√	√	√	√			
Service Time	29	√	√	√	√			

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Avg. I/O response time(ms)	78	√	√	√	√			
Max. I/O response time(ms)	79	√	√	√	√			
Time since last synchronization(s)	99					√		
Unsynchronized data amount(MB)	100						√	
Max. IOPS(IO/s)	307	√	√	√	√			
Total number of failed I/Os	308	√	√	√	√			
Number of failed I/Os per second	309	√	√	√	√			
Faulty I/O ratio(%)	310	√	√	√	√			
Avg. I/O response time(us)	370	√	√	√	√			

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Max. I/O response time(us)	371	√	√	√	√			
Logical Bandwidth(MB/s)	473					√		
Time difference(s)	699					√		
Total Bandwidth(MB/s)	767	√	√					
Receiving bandwidth for replication(MB/s)	786	√	√					
Sending bandwidth for replication(MB/s)	787	√	√					
Synchronization Duration(s)	1054					√		√

5.3.7 协议

Indicator	**ID**	Statistics Type									
		Host	ControllerSMB1	ControllerNFSV4	ControllerNFSV3	ControllerSMB2	FileSystem	Lun Group	CIFS share of file	NFS share of file	Host Group

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Type		21	1002	1001	1000	1003	40	256	16402	16401	14
Max. bandwidth(MB/s)	5	√									
Usage(%)	18	√									
Queue length	19	√									
Block Bandwidth(MB/s)	21	√						√			√
Total IOPS(IO/s)	22	√						√			√
Read bandwidth(MB/s)	23	√					√				
Avg. read I/O size(KB)	24	√									
Read IOPS(IO/s)	25	√									
Write bandwidth(MB/s)	26	√					√				

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Avg. write I/O size(KB)	27	√									
Write IOPS(IO/s)	28	√									
Service Time	29	√					√				
Read I/O Granularity Distribution: [0K, 1K) (%)	30	√									
Read I/O Granularity Distribution: [1K, 2K) (%)	31	√	√	√	√	√					
Read I/O Granularity Distribution: [2K, 4K) (%)	32	√	√	√	√	√					

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Read I/O Granularity Distribution: [4K, 8K) (%)	33	√	√	√	√	√					
Read I/O Granularity Distribution: [8K, 16K) (%)	34	√	√	√	√	√					
Read I/O Granularity Distribution: [16K, 32K) (%)	35	√	√	√	√	√					
Read I/O Granularity Distribution: [32K, 64K) (%)	36	√	√	√	√	√					

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Read I/O Granularity Distribution: [64K, 128K) (%)	37	√	√	√	√	√					
Read I/O Granularity Distribution: [128K, 256K) (%)	38	√	√	√	√	√					
Read I/O Granularity Distribution: [256K, 512K) (%)	39	√									

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Read I/O Granularity Distribution: [512K, +∞) (%)	40	√									
Write I/O Granularity Distribution: [0K, 1K) (%)	41	√									
Write I/O Granularity Distribution: [1K, 2K) (%)	42	√	√	√	√	√					
Write I/O Granularity Distribution: [2K, 4K) (%)	43	√	√	√	√	√					

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Write I/O Granularity Distribution: [4K, 8K) (%)	44	√	√	√	√	√					
Write I/O Granularity Distribution: [8K, 16K) (%)	45	√	√	√	√	√					
Write I/O Granularity Distribution: [16K, 32K) (%)	46	√	√	√	√	√					
Write I/O Granularity Distribution: [32K, 64K) (%)	47	√	√	√	√	√					

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Write I/O Granularity Distribution: [64K, 128K) (%)	48	√	√	√	√	√					
Write I/O Granularity Distribution: [128K, 256K) (%)	49	√	√	√	√	√					
Write I/O Granularity Distribution: [256K, 512K) (%)	50	√									

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Write I/O Granularity Distribution: [512K, +∞) (%)	51	√									
Avg. I/O response time(ms)	78	√						√			√
Max. I/O response time(ms)	79	√									
Read bandwidth(KB/s)	123						√				
Write bandwidth(KB/s)	124						√				
OPS(per second)	182		√	√	√	√	√				
Avg. read I/O response time(ms)	197	√									

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Avg. write I/O response time(ms)	198	√									
Read I/O Latency Distribution: [0ms, 10ms) (%)	199		√	√	√	√					
Read I/O Latency Distribution: [10ms, 20ms) (%)	200		√	√	√	√					
Read I/O Latency Distribution: [20ms, 50ms) (%)	201		√	√	√	√					

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Read I/O Latency Distribution: [50ms, 100 ms) (%)	202		√	√	√	√					
Read I/O Latency Distribution: [100 ms, 200 ms) (%)	203		√	√	√	√					
Read I/O Latency Distribution: [200 ms, +∞) (%)	204		√	√	√	√					
Write I/O Latency Distribution: [0ms, 10ms) (%)	205		√	√	√	√					

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WriteI/O Latency Distribution: [10ms, 20ms) (%)	206		√	√	√	√					
Write I/O Latency Distribution: [20ms, 50ms) (%)	207		√	√	√	√					
Write I/O Latency Distribution: [50ms, 100 ms) (%)	208		√	√	√	√					
Write I/O Latency Distribution: [100 ms, 200 ms) (%)	209		√	√	√	√					

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Write I/O Latency Distribution: [200 ms, +∞) (%)	210		√	√	√	√					
Read OPS(per second)	232						√				
Write OPS(per second)	233						√				
Max. IOPS(IO/s)	307	√									
Avg. I/O response time(us)	370	√						√			√
Max. I/O response time(us)	371	√									
Avg. read I/O response time(us)	384	√									

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Avg. write I/O response time(us)	385	√									
Average Latency For Operations(ms)	428		√	√	√	√					
Max Latency For Operations(ms)	429		√	√	√	√					
Average Read OPS Response Time(ms)	464						√				
Average Write OPS Response Time(ms)	465						√				

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Read I/O Granularity Distribution: [0K, 512 B) (%)	466		√	√	√	√					
Read I/O Granularity Distribution: [512 B, 1K) (%)	467		√	√	√	√					
Read I/O Granularity Distribution: [256 K, +∞) (%)	468		√	√	√	√					
Write I/O Granularity Distribution: [0K, 512 B) (%)	469		√	√	√	√					

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Write I/O Granularity Distribution: [512 B, 1K) (%)	470		√	√	√	√					
Write I/O Granularity Distribution: [256 K, +∞) (%)	471		√	√	√	√					
Min Latency For Operations(ms)	472		√	√	√	√					
Capacity usage(%)	90004							√			
Average Latency For Operations(us)	508		√	√	√	√					

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Max Latency For Operations(us)	509		√	√	√	√					
Min Latency For Operations(us)	510		√	√	√	√					
Throughput(KB/s)	512		√	√	√	√					
Service Time(Excluding Queue Time)(us)	523						√				
Average Read OPS Response Time(us)	524						√				
Average Write OPS Response Time(us)	525						√				

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Cumulative count of file I/O operations	1024								√	√	
Cumulative bytes transferred(Byte)	1026								√	√	
Cumulative count of read I/O operations	1028								√	√	
Cumulative count of write I/O operations	1030								√	√	
Cumulative count of other I/O operations	1032								√	√	

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Cache page preservation(%)	1059						√				
Cache chunk preservation(%)	1060						√				

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