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|  | **eSDK Storage Plugins 1.0.RC3 OpenStack Driver** | | 附件1-16K |
|  | |
| **Issue** | **01** |
| **Date** | **2017-03-10** |
|  | |
| HUAWEI TECHNOLOGIES CO., LTD. | |
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# Version Requirements

1. About This Chapter

This chapter describes the relationship between OpenStack and storage plug-ins.

[1.1 Product Version](#_Product_Version)

[1.2 Storage Product Versions](#_Version_Requirements_on)

## Product Version

Product version

|  |  |
| --- | --- |
| Product Name | eSDK Storage Plugins OpenStack Driver |
| Product Version | 1.0.RC3 |

## Storage Product Versions

Storage product versions supported by Cinder Driver (√: supported; x: not supported)

| Product Version | IceHouse | Juno | Kilo | Liberty | Mitaka | Newton |
| --- | --- | --- | --- | --- | --- | --- |
| T series V100R005C02/C30 | x | √ | √ | √ | √ | √ |
| T series V200R002C00 | √ | √ | √ | √ | √ | √ |
| T series V200R002C20 | √ | √ | √ | √ | √ | √ |
| T series V200R002C30 | √ | √ | √ | √ | √ | √ |
| OceanStor V3 V300R001C10 | √ | √ | √ | √ | √ | √ |
| OceanStor V3 V300R001C20 | √ | √ | √ | √ | √ | √ |
| OceanStor V3 V300R002C10 | √ | √ | √ | √ | √ | √ |
| OceanStor V3 V300R003C00 | x | √ | √ | √ | √ | √ |
| OceanStor V3 V300R003C10 | x | √ | √ | √ | √ | √ |
| OceanStor 2200 V3 V300R005C00 | x | √ | √ | √ | √ | √ |
| OceanStor 2600 V3 V300R005C00 | x | √ | √ | √ | √ | √ |
| OceanStor 18500/18800 V100R001C00 | √ | √ | √ | √ | √ | √ |
| OceanStor 18500/18800 V100R001C20 | √ | √ | √ | √ | √ | √ |
| OceanStor 18500/18800 V100R001C30 | √ | √ | √ | √ | √ | √ |
| OceanStor 18500/18800 V300R003C00 | x | √ | √ | √ | √ | √ |
| OceanStor Dorado V3 V300R001C00 | x | √ | √ | √ | √ | √ |

Features supported by Cinder Driver (√: supported; x: not supported)

| Feature | IceHouse | Juno | Kilo | Liberty | Mitaka | Newton |
| --- | --- | --- | --- | --- | --- | --- |
| Create Volume | √ | √ | √ | √ | √ | √ |
| Delete Volume | √ | √ | √ | √ | √ | √ |
| Attach Volume | √ | √ | √ | √ | √ | √ |
| Detach Volume | √ | √ | √ | √ | √ | √ |
| Extend Volume | √ | √ | √ | √ | √ | √ |
| Create Snapshot | √ | √ | √ | √ | √ | √ |
| Delete Snapshot | √ | √ | √ | √ | √ | √ |
| List Snapshots | √ | √ | √ | √ | √ | √ |
| Create Volume from  Snapshot | √ | √ | √ | √ | √ | √ |
| Create Volume from  Image | √ | √ | √ | √ | √ | √ |
| Create Volume from Volume | √ | √ | √ | √ | √ | √ |
| Create Image from  Volume | √ | √ | √ | √ | √ | √ |
| Volume Migration | x | √ | √ | √ | √ | √ |
| QoS | √ | √ | √ | √ | √ | √ |
| Auto zoning | x | √ | √ | √ | √ | √ |
| SmartTier | x | √ | √ | √ | √ | √ |
| SmartCache | x | √ | √ | √ | √ | √ |
| SmartThin/Thick | x | √ | √ | √ | √ | √ |
| SmartPartition | x | √ | √ | √ | √ | √ |
| HyperMetro | x | √ | √ | √ | √ | √ |
| Retype | x | √ | √ | √ | √ | √ |
| Manage/Unmanage Volume | x | √ | √ | √ | √ | √ |
| Manage/Unmanage Snapshot | x | x | x | x | √ | √ |
| Replication V2.1 | x | x | x | x | √ | √ |
| HyperMetro Consistency Group | x | x | x | √ | √ | √ |
| Assign StoragePool | x | √ | √ | √ | √ | √ |
| Assign DiskType | x | √ | √ | √ | √ | √ |
| Backup Snapshot | x | x | x | x | √ | √ |
| Snapshot Consistency Group | x | x | x | x | √ | √ |
| Multipath | √ | √ | √ | √ | √ | √ |
| Consistency Group | x | x | x | √ | √ | √ |

Storage product versions and features supported by Cinder Driver (√: supported; x: not supported)

| Feature | T Series | | OceanStor V3 | | | | OceanStor 18500/18800 | | OceanStor Dorado V3 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | V1R5 | V2R2 | V3R1/V3R2 | V3R3 | 2200  V3R5 | 2600  V3R5 | V1R1 | V3R3 | V3R1 |
| Create Volume | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Delete Volume | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Attach Volume | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Detach Volume | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Extend Volume | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Create Snapshot | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Delete Snapshot | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| List Snapshots | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Create Volume  from Snapshot | √ | √ | √ | √ | √ | √ | √ | √ | x |
| Create Volume  from Image | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Create Volume  from Volume | √ | √ | √ | √ | √ | √ | √ | √ | x |
| Create Image from Volume | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Volume Migration | x | √ | √ | √ | √ | √ | √ | √ | √ |
| QoS | x | √ | √ | √ | √ | √ | √ | √ | x |
| Auto zoning | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| SmartTier | x | √ | √ | √ | √ | √ | √ | √ | x |
| SmartCache | x | √ | √ | √ | √ | √ | √ | √ | x |
| SmartThin | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| SmartThick | √ | √ | √ | √ | √ | √ | √ | √ | x |
| SmartPartition | x | √ | √ | √ | x | √ | √ | √ | x |
| HyperMetro | x | x | x | √ | x | √ | x | √ | x |
| Retype | x | √ | √ | √ | √ | √ | √ | √ | x |
| Manage/Unmanage Volume | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Manage/Unmanage Snapshot | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Replication V2.1 | x | √ | √ | √ | √ | √ | √ | √ | √ |
| HyperMetro Consistency Group | x | x | x | √ | x | √ | x | √ | x |
| Assign StoragePool | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Assign DiskType | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Backup Snapshot | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Snapshot Consistency Group | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Multipath | x | √ | √ | √ | √ | √ | √ | √ | √ |
| Consistency Group | x | √ | √ | √ | √ | √ | √ | √ | √ |

Storage product versions supported by Manila Driver (√: supported; x: not supported)

| Product Version | Kilo | Liberty | Mitaka | Newton |
| --- | --- | --- | --- | --- |
| OceanStor V3 V300R002C10 | √ | √ | √ | √ |
| OceanStor V3 V300R003C00 | √ | √ | √ | √ |
| OceanStor 2200 V3 V300R005C00 | x | x | x | x |
| OceanStor 2600 V3 V300R005C00 | √ | √ | √ | √ |
| OceanStor 18500/18800 V300R003C00 | √ | √ | √ | √ |

Features supported by Manila Driver (√: supported; x: not supported)

| Feature | Kilo | Liberty | Mitaka | Newton |
| --- | --- | --- | --- | --- |
| Create Share | √ | √ | √ | √ |
| Delete Share | √ | √ | √ | √ |
| Allow access | √ | √ | √ | √ |
| Deny access | √ | √ | √ | √ |
| Create Snapshot | √ | √ | √ | √ |
| Delete Snapshot | √ | √ | √ | √ |
| Manage/Unmanage Share | x | √ | √ | √ |
| Extend Share | x | √ | √ | √ |
| Shrink Share | x | √ | √ | √ |
| SmartCompression | x | √ | √ | √ |
| SmartDedupe | x | √ | √ | √ |
| SmartCache | x | √ | √ | √ |
| SmartThin/Thick | x | √ | √ | √ |
| SmartPartition | x | √ | √ | √ |
| SmartQoS | x | x | √ | √ |
| Multi-tenancy | x | x | √ | √ |
| Ensure Share | x | x | √ | √ |
| Create Share from Snapshot | x | x | √ | √ |
| Manage/Unmanage Snapshot | x | x | x | √ |
| Assign StoragePool | x | x | x | √ |
| Assign DiskType | x | x | x | √ |
| SectorSize | x | x | x | √ |
| Replication | x | x | x | √ |

Storage product versions and features supported by Manila Driver (√: supported; x: not supported)

| Feature | OceanStor V3 | | | | OceanStor 18500/18800 |
| --- | --- | --- | --- | --- | --- |
|  | V3R2 | V3R3 | 2200  V3R5 | 2600  V3R5 | V3R3 |
| Create Share | √ | √ | x | √ | √ |
| Delete Share | √ | √ | x | √ | √ |
| Allow access | √ | √ | x | √ | √ |
| Deny access | √ | √ | x | √ | √ |
| Create Snapshot | √ | √ | x | √ | √ |
| Delete Snapshot | √ | √ | x | √ | √ |
| Manage/Unmanage Share | √ | √ | x | √ | √ |
| Extend Share | √ | √ | x | √ | √ |
| Shrink Share | √ | √ | x | √ | √ |
| SmartCompression | √ | √ | x | √ | √ |
| SmartDedupe | √ | √ | x | √ | √ |
| SmartCache | √ | √ | x | √ | √ |
| SmartThin/Thick | √ | √ | x | √ | √ |
| SmartPartition | √ | √ | x | √ | √ |
| SmartQoS | x | √ | x | √ | √ |
| Multi-tenancy | √ | √ | x | √ | √ |
| Ensure Share | √ | √ | x | √ | √ |
| Create Share from Snapshot | √ | √ | x | √ | √ |
| Manage/Unmanage Snapshot | √ | √ | x | √ | √ |
| Assign StoragePool | √ | √ | x | √ | √ |
| Assign DiskType | √ | √ | x | √ | √ |
| SectorSize | √ | √ | x | √ | √ |
| Replication | √ | √ | x | √ | √ |

# Self-Testing Environment Description

Self-testing environment of Cinder Driver

| Operating System | Network Type | Remarks |
| --- | --- | --- |
| Ubuntu 14.04 | iSCSI, Fibre Channel | None |

Self-testing environment of Manila Driver

| Operating System | Protocol | Remarks |
| --- | --- | --- |
| Ubuntu 14.04 | NFS, CIFS | None |

# Version Compatibility

Following tables describe the compatibility between earlier versions.

Version compatibility of Cinder Driver

| Product Version | OpenStack Version | Date | Compatibility |
| --- | --- | --- | --- |
| eSDK Storage Plugins 1.0.RC3 | IceHouse, Juno, Kilo, Liberty, Mitaka, and Newton | 2017-03-10 | None |

Version compatibility of Manila Driver

| Product Version | OpenStack Version | Date | Compatibility |
| --- | --- | --- | --- |
| eSDK Storage Plugins 1.0.RC3 | Kilo, Liberty, Mitaka, and Newton | 2017-03-10 | None |

# Important Notes

Important notes

| Precaution | Description | Remarks |
| --- | --- | --- |
| Restrictions of Manila Driver | 1. The multi-tenant feature is not supported.  2. The NFS access permission only supports IP configuration.  3. To grant permission for CIFS shares, you need to add a user on the array first. |  |

# What's New

1. About This Chapter

This chapter describes the updates of different versions of OpenStack Driver.

If this chapter does not describe updates in an official version, the version is the same as the last version.

[5.1 Feature Update](#_Feature_Update)

[5.2 Resolved Issues](#_Resolved_Issues)

[5.3 Known Issues](#_Known_Issues)

## Feature Update

None

## Resolved Issues

The following table lists resolved issues of Cinder Driver.

|  |  |
| --- | --- |
| Issue No. | Issue Description |
| 1 | Original metadata will be overwritten during snapshot restoration or creation. |
| 2 | If more than 32 FC initiators exist on the array when the version corresponding to the V3R2 storage arrays is being restored, information about only 32 FC initiators will be returned. |
| 3 | When the version corresponding to the V3R2 storage arrays is being restored, the WWN recorded in the snapshot metadata is **--**. |
| 4 | Certain misoperations will cause the mirror switch to be disabled. |

## Known Issues

None

# Upgrade Impact

1. About This Chapter

This chapter describes the upgrade impacts of OpenStack Driver.

[6.1 Impact on Services](#_Impact_on_Services)

## Impact on Services

Cinder Driver upgrade impacts on services

| Impact | Description | Remarks |
| --- | --- | --- |
| The Cinder Driver services are interrupted. | The **cinder-volume** service needs to be restarted during the upgrade of OpenStack Cinder Driver, interrupting services on the storage management plane. | Management services are interrupted. |
| Reads and writes of storage data are not affected. | Related links on the OpenStack service plane are functioning, ensuring normal reads and writes. | Reads and writes of storage data are not affected. |

Manila Driver upgrade impacts on services

| Impact | Description | Remarks |
| --- | --- | --- |
| The Manila Driver services are interrupted. | The **manila-share** service needs to be restarted during the upgrade of OpenStack Manila Driver, interrupting services on the storage management plane. | Management services are interrupted. |
| Reads and writes of storage data are not affected. | Related links on the OpenStack service plane are functioning, ensuring normal reads and writes. | Reads and writes of storage data are not affected. |

# Related Documentation

1. About This Chapter

This chapter lists the related documentation and explains how to obtain them.

[7.1 Related Documentation](#_Related_Documentation)

[7.2 Updates to Related Documentation](#_Updates_to_Related)

[7.3 Obtaining Documentation](#_Obtaining_Documentation)

## Related Documentation

Table 7-1 lists the eSDK Storage Plugins 1.0.RC3 OpenStack Driver documentation.

Documentation list

| Document | Description | Delivery Mode |
| --- | --- | --- |
| *OpenStack Cinder Driver Configuration Guide.pdf* | Introduces how to configure Cinder Driver. | Delivered with the software. |
| *OpenStack Manila Driver Configuration Guide.pdf* | Introduces how to configure Manila Driver. | Delivered with the software. |

## Updates to Related Documentation

None

## Obtaining Documentation

1. OpenStack Official Website

You can view or download related documentation from <http://docs.openstack.org/>.

note

You can view the configuration documents of the host plug-ins on the website.

1. Procedure

Access <http://docs.openstack.org> and select **Configuration Reference**.

On the page that is displayed, choose **Block Storage service** > **Volume drivers** >**Huawei volume driver** if you want to view the Cinder Driver configuration guide, or choose **Shared File Systems service** > **Share drivers** > **Huawei driver** if you want to view the Manila Driver configuration guide.

On the page that is displayed, you can view the configuration guide of the storage plug-in.

**----End**