



NetApp SolidFire .NET SDK Release Notes

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Introduction

The SolidFire .NET SDK is a collection of libraries that facilitate integration and orchestration between proprietary systems and third-party applications. The .NET SDK allows developers to deeply integrate SolidFire system API with the C# or Visual Basic programming languages. The SolidFire .NET SDK reduces the amount of additional coding time required for integration.

The intended audience for this document is C# or Visual Basic developers who are responsible for integrating SolidFire into other applications.

Installing the SolidFire .NET SDK

Complete the following steps to bring the SolidFire .NET SDK into your environment.

Prerequisites

- [NuGet](#) package manager for the Microsoft development platform including .NET.
- Microsoft .NET Framework 4.6 or later.
- Visual Studio 2015 update 3 or later.
- SolidFire Element OS version 7 through 9.0.

Procedure

1. Open the Nuget Package Manager Console in Visual Studio by selecting **Tools > Nuget Package Manager > Package Manager Console**.
2. From the **Package source** drop-down menu, select **nuget.org**.
3. Type the following command in the Package Manager Console command prompt:
`Install-Package SolidFire.SDK`
4. Review the [GitHub](#) project page for examples of higher level classes and links to supplemental MSDN documentation.

What's New in this Release

The .NET SDK version 1.2.1.3 release expands the set of available SolidFire Element OS APIs from version 7.0 through version 9.0.

New SolidFire SDK API Methods

The following new SolidFire API methods are available in .NET wrappers in SolidFire .NET SDK version 1.2.1.3:

Element OS 9	Element OS 8
CancelClone	AddLdapClusterAdmin
CancelGroupClone	CreateCluster
CopyVolume	CreateSupportBundle
CreateInitiators	DeleteAllSupportBundles
CreateStorageContainer	DisableLdapAuthentication
CreateVirtualVolumeHost	EnableLdapAuthentication
DeleteInitiators	GetBootstrapConfig

Element OS 9	Element OS 8
DeleteStorageContainers	GetClusterHardwareInfo
DeleteVolumes	GetClusterMasterNodeID
EnableFeature	GetClusterState
GetFeatureStatus	GetDefaultQoS
GetHardwareInfo	GetDriveConfig
GetStorageContainerEfficiency	GetHardwareConfig
GetVirtualVolumeCount	GetLdapConfiguration
GetVirtualVolumeTaskUpdate	GetLoginSessionInfo
GetVirtualVolumeUnsharedChunks	GetNodeHardwareInfo
InvokeSFApi	GetNtpInfo
ListDriveStats	GetNvramInfo
ListInitiators	GetPendingOperation
ListProtocolEndpoints	GetRemoteLoggingHosts
ListStorageContainers	GetSystemStatus
ListVirtualVolumeBindings	GetVolumeAccessGroupLunAssignments
ListVirtualVolumeHosts	ListAsyncResults
ListVirtualVolumes	ListBulkVolumeJobs
ListVirtualVolumeTasks	ListFibreChannelPortInfo
ListVolumeStats	ListFibreChannelSessions
ListVolumeStatsByVirtualVolume	ListNodeFibreChannelPortInfo
ModifyInitiators	ListSyncJobs
ModifyStorageContainer	ModifyVolumeAccessGroupLunAssignments
PrepareVirtualSnapshot	ModifyVolumes
PurgeDeletedVolumes	SetLoginSessionInfo
SetDefaultQoS	SetNtpInfo
	SetRemoteLoggingHosts
	StartBulkVolumeRead
	StartBulkVolumeWrite
	TestLdapAuthentication
	UpdateBulkVolumeStatus

All SolidFire SDK API Methods

The following SolidFire API methods are available in .NET wrappers in SolidFire .NET SDK version 1.2.1.3:

Element OS 9	Element OS 8	Element OS 7
AddAccount	AddAccount	AddAccount
AddClusterAdmin	AddClusterAdmin	
AddDrives	AddDrives	
AddInitiatorsToVolumeAccessGroup	AddInitiatorsToVolumeAccessGroup	AddInitiatorsToVolumeAccessGroup
AddLdapClusterAdmin		
AddLdapClusterAdmin	AddLdapClusterAdmin	
AddNodes	AddNodes	
AddVirtualNetwork	AddVirtualNetwork	
AddVolumesToVolumeAccessGroup	AddVolumesToVolumeAccessGroup	AddVolumesToVolumeAccessGroup
CancelClone		
CancelGroupClone		
ClearClusterFaults	ClearClusterFaults	
CloneMultipleVolumes	CloneMultipleVolumes	
CloneVolume	CloneVolume	CloneVolume
CompleteClusterPairing	CompleteClusterPairing	
CompleteVolumePairing	CompleteVolumePairing	
CopyVolume		
CreateBackupTarget	CreateBackupTarget	
CreateCluster	CreateCluster	
CreateGroupSnapshot	CreateGroupSnapshot	CreateGroupSnapshot
CreateInitiators		
CreateSchedule	CreateSchedule	
CreateSnapshot	CreateSnapshot	CreateSnapshot
CreateStorageContainer		
CreateSupportBundle	CreateSupportBundle	
CreateVirtualVolumeHost		
CreateVolume	CreateVolume	CreateVolume
CreateVolumeAccessGroup	CreateVolumeAccessGroup	CreateVolumeAccessGroup
DeleteAllSupportBundles	DeleteAllSupportBundles	
DeleteGroupSnapshot	DeleteGroupSnapshot	DeleteGroupSnapshot
DeleteInitiators		
DeleteSnapshot	DeleteSnapshot	DeleteSnapshot

Element OS 9	Element OS 8	Element OS 7
DeleteStorageContainers		
DeleteVolume	DeleteVolume	DeleteVolume
DeleteVolumeAccessGroup	DeleteVolumeAccessGroup	DeleteVolumeAccessGroup
DeleteVolumes		
DisableEncryptionAtRest	DisableEncryptionAtRest	
DisableLdapAuthentication	DisableLdapAuthentication	
DisableSnmpp	DisableSnmpp	
EnableEncryptionAtRest	EnableEncryptionAtRest	
EnableFeature		
EnableLdapAuthentication	EnableLdapAuthentication	
EnableSnmpp	EnableSnmpp	
GetAccountByID	GetAccountByID	GetAccountByID
GetAccountByName	GetAccountByName	GetAccountByName
GetAccountEfficiency	GetAccountEfficiency	
GetAPI	GetAPI	GetAPI
GetAsyncResult	GetAsyncResult	GetAsyncResult
GetBackupTarget	GetBackupTarget	
GetBootstrapConfig	GetBootstrapConfig	
GetClusterCapacity	GetClusterCapacity	
GetClusterConfig	GetClusterConfig	
GetClusterFullThreshold	GetClusterFullThreshold	
GetClusterHardwareInfo	GetClusterHardwareInfo	
GetClusterInfo	GetClusterInfo	
GetClusterMasterNodeID	GetClusterMasterNodeID	
GetClusterState	GetClusterState	
GetClusterStats	GetClusterStats	
GetClusterVersionInfo	GetClusterVersionInfo	
GetCompleteStats	GetCompleteStats	
GetConfig	GetConfig	
GetCurrentClusterAdmin	GetCurrentClusterAdmin	
GetDefaultQoS	GetDefaultQoS	
GetDriveConfig	GetDriveConfig	

Element OS 9	Element OS 8	Element OS 7
GetDriveHardwareInfo	GetDriveHardwareInfo	
GetDriveStats	GetDriveStats	
GetFeatureStatus		
GetHardwareConfig	GetHardwareConfig	
GetHardwareInfo		
GetLdapConfiguration	GetLdapConfiguration	
GetLimits	GetLimits	
GetLoginSessionInfo	GetLoginSessionInfo	
GetNetworkConfig	GetNetworkConfig	
GetNodeHardwareInfo	GetNodeHardwareInfo	
GetNodeStats	GetNodeStats	
GetNtpInfo	GetNtpInfo	
GetNvramInfo	GetNvramInfo	
GetPendingOperation	GetPendingOperation	
GetRawStats	GetRawStats	
GetRemoteLoggingHosts	GetRemoteLoggingHosts	
GetSchedule	GetSchedule	
GetSnmpACL	GetSnmpACL	
GetSnmpInfo	GetSnmpInfo	
GetSnmpState	GetSnmpState	
GetSnmpTrapInfo	GetSnmpTrapInfo	
GetStorageContainerEfficiency		
GetSystemStatus	GetSystemStatus	
GetVirtualVolumeCount		
GetVirtualVolumeTaskUpdate		
GetVirtualVolumeUnsharedChunks		
GetVolumeAccessGroupEfficiency	GetVolumeAccessGroupEfficiency	
GetVolumeAccessGroupLunAssignments	GetVolumeAccessGroupLunAssignments	
GetVolumeEfficiency	GetVolumeEfficiency	GetVolumeEfficiency
GetVolumeStats	GetVolumeStats	GetVolumeStats
InvokeSFApi		
ListAccounts	ListAccounts	ListAccounts

Element OS 9	Element OS 8	Element OS 7
ListActiveNodes	ListActiveNodes	
ListActivePairedVolumes	ListActivePairedVolumes	
ListActiveVolumes	ListActiveVolumes	ListActiveVolumes
ListAllNodes	ListAllNodes	
ListAsyncResults	ListAsyncResults	
ListBackupTargets	ListBackupTargets	
ListBulkVolumeJobs	ListBulkVolumeJobs	
ListClusterAdmins	ListClusterAdmins	
ListClusterFaults	ListClusterFaults	
ListClusterPairs	ListClusterPairs	
ListDeletedVolumes	ListDeletedVolumes	ListDeletedVolumes
ListDriveHardware	ListDriveHardware	
ListDrives	ListDrives	
ListDriveStats		
ListEvents	ListEvents	
ListFibreChannelPortInfo	ListFibreChannelPortInfo	
ListFibreChannelSessions	ListFibreChannelSessions	
ListGroupSnapshots	ListGroupSnapshots	ListGroupSnapshots
ListInitiators		
ListISCSISessions	ListISCSISessions	
ListNodeFibreChannelPortInfo	ListNodeFibreChannelPortInfo	
ListNodeStats	ListNodeStats	
ListPendingNodes	ListPendingNodes	
ListProtocolEndpoints		
ListSchedules	ListSchedules	
ListSnapshots	ListSnapshots	ListSnapshots
ListStorageContainers		
ListSyncJobs	ListSyncJobs	
ListTests	ListTests	
ListUtilities	ListUtilities	
ListVirtualNetworks	ListVirtualNetworks	
ListVirtualVolumeBindings		

Element OS 9	Element OS 8	Element OS 7
ListVirtualVolumeHosts		
ListVirtualVolumes		
ListVirtualVolumeTasks		
ListVolumeAccessGroups	ListVolumeAccessGroups	ListVolumeAccessGroups
ListVolumes	ListVolumes	
ListVolumesForAccount	ListVolumesForAccount	ListVolumesForAccount
ListVolumeStats		
ListVolumeStatsByAccount	ListVolumeStatsByAccount	ListVolumeStatsByAccount
ListVolumeStatsByVirtualVolume		
ListVolumeStatsByVolume	ListVolumeStatsByVolume	ListVolumeStatsByVolume
ListVolumeStatsByVolumeAccessGroup	ListVolumeStatsByVolumeAccessGroup	ListVolumeStatsByVolumeAccessGroup
ModifyAccount	ModifyAccount	ModifyAccount
ModifyBackupTarget	ModifyBackupTarget	
ModifyClusterAdmin	ModifyClusterAdmin	
ModifyClusterFullThreshold	ModifyClusterFullThreshold	
ModifyGroupSnapshot	ModifyGroupSnapshot	
ModifyInitiators		
ModifySchedule	ModifySchedule	
ModifySnapshot	ModifySnapshot	
ModifyStorageContainer		
ModifyVirtualNetwork	ModifyVirtualNetwork	
ModifyVolume	ModifyVolume	ModifyVolume
ModifyVolumeAccessGroup	ModifyVolumeAccessGroup	ModifyVolumeAccessGroup
ModifyVolumeAccessGroupLunAssignments	ModifyVolumeAccessGroupLunAssignments	
ModifyVolumePair	ModifyVolumePair	
ModifyVolumes	ModifyVolumes	
PrepareVirtualSnapshot		
PurgeDeletedVolume	PurgeDeletedVolume	PurgeDeletedVolume
PurgeDeletedVolumes		
RemoveAccount	RemoveAccount	RemoveAccount
RemoveBackupTarget	RemoveBackupTarget	

Element OS 9	Element OS 8	Element OS 7
RemoveClusterAdmin	RemoveClusterAdmin	
RemoveClusterPair	RemoveClusterPair	
RemoveDrives	RemoveDrives	
RemoveInitiatorsFromVolumeAccessGroup	RemoveInitiatorsFromVolumeAccessGroup	RemoveInitiatorsFromVolumeAccessGroup
RemoveNodes	RemoveNodes	
RemoveVirtualNetwork	RemoveVirtualNetwork	
RemoveVolumePair	RemoveVolumePair	
RemoveVolumesFromVolumeAccessGroup	RemoveVolumesFromVolumeAccessGroup	RemoveVolumesFromVolumeAccessGroup
ResetDrives	ResetDrives	
RestoreDeletedVolume	RestoreDeletedVolume	RestoreDeletedVolume
RollbackToGroupSnapshot	RollbackToGroupSnapshot	RollbackToGroupSnapshot
RollbackToSnapshot	RollbackToSnapshot	RollbackToSnapshot
SecureEraseDrives	SecureEraseDrives	
SetClusterConfig	SetClusterConfig	
SetConfig	SetConfig	
SetDefaultQoS		
SetLoginSessionInfo	SetLoginSessionInfo	
SetNetworkConfig	SetNetworkConfig	
SetNtpInfo	SetNtpInfo	
SetRemoteLoggingHosts	SetRemoteLoggingHosts	
SetSnmpACL	SetSnmpACL	
SetSnmpInfo	SetSnmpInfo	
SetSnmpTrapInfo	SetSnmpTrapInfo	
SnmpSendTestTraps	SnmpSendTestTraps	
StartBulkVolumeRead	StartBulkVolumeRead	
StartBulkVolumeWrite	StartBulkVolumeWrite	
StartClusterPairing	StartClusterPairing	
StartVolumePairing	StartVolumePairing	
TestConnectEnsemble	TestConnectEnsemble	
TestConnectMvip	TestConnectMvip	
TestConnectSvip	TestConnectSvip	

Element OS 9	Element OS 8	Element OS 7
TestDrives	TestDrives	
TestLdapAuthentication	TestLdapAuthentication	
TestPing	TestPing	
UpdateBulkVolumeStatus	UpdateBulkVolumeStatus	

For more detail on SolidFire API methods, refer to the SolidFire Element API Reference Guide for your operating system.

Resolved Issues

The following items have been corrected. The original ticket number is listed for reference.

Ticket #	Description
SDK-493	Cannot connect to an Element OS version 8.6 cluster.
SDK-494	<code>-node</code> switch not working for Element OS version 9.0 Fluorine.
SDK-495	Verbose mode not working using <code>connect-sfcluster</code> .
SDK-496	Element OS version 8.7 Oxygen not down shifting to a lower version.

Contacting SolidFire SDK Support

If you have any questions or comments about this product, contact ng-sf-host-integrations-sdk@netapp.com or reach out to the development community at [ThePub](#). Your feedback helps us focus our efforts on new features and capabilities.



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