



*The All-Flash Array Built for the Next Generation Data Center*

# SolidFire PowerShell Tools Release Notes

**Version: 1.0**

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## Introduction

The SolidFire PowerShell Tools is a collection of Microsoft® Windows® PowerShell functions that use SolidFire API to control a SolidFire storage system. These functions allow administrators to query for information, make changes to objects in a storage system, and develop complex scripts on a single platform. Users can implement this module with other modules and snap-ins, such as VMware® PowerCLI and Cisco® UCS PowerTool, to extend capabilities throughout the infrastructure.

Any user with a SolidFire storage system and Windows PowerShell can take advantage of the SolidFire PowerShell Tools. Users of the SolidFire PowerShell Tools should have an understanding of Windows PowerShell functions. The SolidFire PowerShell Tools module can be obtained through the SolidFire Support [FTP](#) site.

## Upgrading the SolidFire PowerShell Tools

To upgrade the SolidFire PowerShell Tools, download the latest MSI release from the SolidFire public [GitHub](#) repository or from [BrickFTP](#). Once the MSI is downloaded and brought into your existing PowerShell environment, double-click the MSI file and follow the installation prompts. For a description of the installation process, see the SolidFire PowerShell Tools user guide.

## Software Prerequisites

Component	Application	Description
PowerShell	PowerShell 4.0 or 5.0	Version 4.0* is the minimum recommended version to use with SolidFire PowerShell Tools. Functionality may vary on earlier versions. It is also recommended to additionally enable PowerShell 2.0 on your system. PowerShell 2.0 is a prerequisite for other PowerShell snap-ins and modules, such as PowerCLI and UCSPowerTool.
Operating system options**	Microsoft® Windows® 8.1	PowerShell is installed by default. Install the KB2883200 update.
	Microsoft® Windows® 7 SP1	PowerShell is supported but not installed.
	Windows® Server 2012 R2 64-bit	PowerShell is installed by default.
	Windows® Server 2008 R2 with SP1	PowerShell is supported but not installed. Install the PowerShell ISE role prior to installing Windows Management Framework (WMF) 4.0.
.NET framework		4.5.1 or later
SolidFire OS		Element versions 6, 7, and 8

\*Additional components might be required in order to take full advantage of PowerShell 4.0 and the SolidFire PowerShell Tools. These components include WS-Management 3.0 and Windows Management Instrumentation (WMI) 3.0.

\*\*The installer for SolidFire PowerShell Tools requires a 64-bit operating system to successfully complete installation.

## What's New in this Release

The following cmdlets are included in the version 1.0 release:

- **Add-SFDrive:** Adds available drives to the cluster.
- **Add-SFInitiatorToVolumeAccessGroup:** Add initiators to/from volume access groups (VAG).
- **Add-SFNode:** Adds a SolidFire node to the cluster.
- **Add-SFSnmpNetwork:** Adds an SNMP network object that is used to configure SNMP on the cluster nodes.
- **Add-SFSnmpTrapRecipient:** Adds a host that receives traps generated by the cluster master.
- **Add-SFSnmpUsmUser:** Adds an SNMP v3 USM users object that is used to configure SNMP on the cluster.
- **Add-SFVolumeToVolumeAccessGroup:** Adds one or more volumes to the existing volumes in a VAG.
- **Connect-SFCluster:** Initiates a connection sequence that establishes a SolidFire node or cluster connection by validating credentials, checking target Element OS version, setting API version to that of target cluster, and storing information in a global variable.
- **Disconnect-SFCluster:** Disconnects session and removes connection information from the global variable.
- **Enable-SFSnmp:** Enables SNMP on the cluster nodes.
- **Get-SFAccount:** Retrieves information on all active volume accounts on a SolidFire cluster.
- **Get-SFAccountEfficiency:** Retrieves storage efficiency information on a volume account.
- **Get-SFActiveNode:** Retrieves information about the active SolidFire nodes in the cluster.
- **Get-SFASyncResult:** Retrieves the result of asynchronous method calls.
- **Get-SFBootstrapConfig:** Retrieves the names of other nodes that have been configured with the same cluster information as the polled node.
- **Get-SFBulkVolumeJob:** Retrieves information about each bulk volume read and write operation occurring in the system.
- **Get-SFClusterAdmin:** Retrieves a list of all cluster administrators for the cluster.
- **Get-SFClusterCapacity:** Retrieves high-level capacity measurements of an entire cluster.
- **Get-SFClusterConfig:** Retrieves the cluster configuration of a node
- **Get-SFClusterFault:** Retrieves information about faults detected on the cluster.
- **Get-SFClusterFullThreshold:** Retrieves cluster fullness levels.
- **Get-SFClusterInfo:** Retrieves configuration information about the cluster.
- **Get-SFClusterMasterNodeID:** Retrieves the ID of the node that performs cluster-wide administration tasks and contains the storage virtual IP (SVIP) and management virtual IP (MVIP).
- **Get-SFClusterStats:** Retrieves high-level activity measurements for the cluster.
- **Get-SFClusterVersionInfo:** Retrieves information about the Element OS software running on each node in the cluster.
- **Get-SFConfig:** Retrieves all configuration information of a node.
- **Get-SFDefaultQoS:** Retrieves the default QoS values that are set for a volume if QoS is not supplied.
- **Get-SFDeletedVolume:** Retrieves the entire list of volumes that have been marked for deletion and purged from the system.
- **Get-SFDrive:** Retrieves a list of drives that exists in the cluster's active nodes.
- **Get-SFDriveConfig:** Retrieves drive information for each drive in the cluster.
- **Get-SFDriveHardwareInfo:** Retrieves hardware information for a specified drive.
- **Get-SFDriveStats:** Retrieves high-level activity measurements for a SolidFire drive.
- **Get-SFEvent:** Retrieves events detected on cluster.

- **Get-SFGroupSnapshot:** Retrieves information about all group snapshots that have been created.
- **Get-SFIscsiSession:** Retrieves information about the iSCSI session connection for each volume.
- **Get-SFNetworkConfig:** Retrieves the network configuration of a node.
- **Get-SFNtpInfo:** Retrieves the current network time protocol (NTP) configuration information.
- **Get-SFPendingNode:** Retrieves information on pending SolidFire nodes that could be added to the cluster.
- **Get-SFSnapshot:** Retrieves the attributes of each snapshot taken on a volume.
- **Get-SFSnmpAcl:** Retrieves the current SNMP access permissions on cluster nodes.
- **Get-SFSnmpInfo:** Retrieves the current simple network management protocol (SNMP) configuration information.
- **Get-SFSnmpState:** Retrieves the current state of the SNMP feature.
- **Get-SFSnmpTrapInfo:** Retrieves current SNMP trap configuration information.
- **Get-SFSyncJob:** Retrieves information about the synchronization jobs that are running on a SolidFire cluster.
- **Get-SFVolume:** Retrieves a list of volumes that are in the cluster.
- **Get-SFVolumeAccessGroup:** Retrieves information about a SolidFire VAG.
- **Get-SFVolumeAccessGroupEfficiency:** Retrieves efficiency information about all volumes in a VAG.
- **Get-SFVolumeEfficiency:** Retrieves storage information about a volume.
- **Get-SFVolumeStats:** Retrieves high-level activity measurements for every volume.
- **Invoke-SFSecureEraseDrive:** Removes any residual data from a drive using a Security Erase Unit command and resetting the encryption key on the drive.
- **New-SFAccount:** Adds a new account to the system.
- **New-SFClone:** Creates a copy of the volume.
- **New-SFCloneMultiple:** Creates a clone of a group of specified volumes.
- **New-SFCluster:** Initializes the node in a cluster that has ownership of the MVIP and SVIP addresses.
- **New-SFClusterAdmin:** Adds a new cluster admin.
- **New-SFGroupSnapshot:** Creates a point-in-time copy of a group of volumes.
- **New-SFSnapshot:** Creates a point-in-time copy of a volume.
- **New-SFVolume:** Creates a new SolidFire volume.
- **New-SFVolumeAccessGroup:** Creates a new VAG.
- **Remove-SFAccount:** Removes an existing account.
- **Remove-SFClusterAdmin:** Removes a cluster admin.
- **Remove-SFDeletedVolume:** Immediately and permanently purges a volume that has been deleted.
- **Remove-SFDrive:** Removes drives that are part of the cluster and ensures data is migrated to other drives in the cluster prior to removal.
- **Remove-SFGroupSnapshot:** Removes a group snapshot.
- **Remove-SFInitiatorFromVolumeAccessGroup:** Adds and removes initiators to/from volume access groups (VAG).
- **Remove-SFNode:** Removes one or more nodes from the cluster.
- **Remove-SFSnapshot:** Deletes a snapshot that is not active.
- **Remove-SFVolume:** Marks an active volume for deletion and then purges the volume after the cleanup interval elapses.
- **Remove-SFVolumeAccessGroup:** Removes a VAG from the cluster.
- **Remove-SFVolumeFromVolumeAccessGroup:** Removes one or more volumes from existing volumes in a VAG.
- **Set-SFAccount:** Modifies an existing an account.

- `Set-SFClusterConfig`: Sets the cluster configuration options for a node.
- `Set-SFNetworkConfig`: Sets the network configuration options for a node.
- `Set-SFNtpInfo`: Configures the NTP on cluster nodes.
- `Set-SFSnmpAcl`: Configures SNMP access permissions on the cluster node.
- `Set-SFSnmpInfo`: Configures SNMP v2 and v3 on the cluster nodes.
- `Set-SFSnmpTrapInfo`: Enables and disables generation of SolidFire SNMP notifications (traps) and specifies the set of network host computers that receive notifications.
- `Set-SFVolume`: Configures settings of an existing volume.
- `Set-SFVolumeAccessGroup`: Configures the name or attributes of a VAG.

## Contacting PowerShell Tools Support

If you have any questions or comments about this product, contact [powershell@solidfire.com](mailto:powershell@solidfire.com). Your feedback helps us focus our efforts on new features and capabilities.



1600 Pearl Street, Suite 200  
Boulder, Colorado 80302

Phone: 720.523.3278

Email: [info@solidfire.com](mailto:info@solidfire.com)

Web: [www.solidfire.com](http://www.solidfire.com)

SolidFire Support: [www.solidfire.com/support/](http://www.solidfire.com/support/)

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