SolidFire VSS Hardware Provider Release Notes

Version: 2.0.1.3

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Introduction

The SolidFire VSS Hardware Provider integrates VSS shadow copies with SolidFire snapshots and clones. The Provider runs on Microsoft® Windows® 2008 R2 and 2012 R2 editions and supports shadow copies created using DiskShadow and other VSS Requesters. A GUI-based configuration utility is provided to add, modify, and remove cluster information used by the SolidFire VSS Hardware Provider.

Utilizing VSS snapshot capabilities with the SolidFire VSS Hardware Provider ensures that snapshots are application consistent with business applications that use SolidFire volumes on a system. A coordinated effort between VSS components provides this functionality. SolidFire snapshots and clones minimize recovery time without affecting stability and performance and provide instant volume recovery.

Hardware Prerequisites

Component	Description
System processor	1.5 GHz (dual core recommended), Intel compatible 64-bit
System memory	Minimum 4 GB recommended
Free disk space required for installation	Minimum 5 MB required and recommended 100 MB
Networking	Ethernet ports for cluster communication and Ethernet ports for iSCSI or Fibre Channel ports
SolidFire cluster	A cluster of SolidFire nodes

Software Prerequisites

Component	Application	Description
Operating system	Microsoft® Windows® Server	Windows Server 2008 R2 64-bit Windows Server 2012 R2 64-bit Windows Server 2016 64-bit
	Microsoft® Hyper-V	Windows Server 2012 R2 64-bit Windows Server 2016 64-bit
.NET framework		4.5
SolidFire cluster		Element OS version 7.0 and later

Supported Configurations

VSS Hardware Provider configurations leverage directly connected SolidFire iSCSI or Fibre Channel volumes. Only the configurations described in the proceeding tables are supported.

Supported 64-Bit Operating Systems	
Windows Server 2008 R2	✓
Windows Server 2012 R2	✓
Windows Server 2016	✓
Hyper-V Server 2012 R2	✓
Hyper-V Server 2016	✓

The following OS and SQL Server combinations are supported.

OS/SQL Version	Stand Alone	Shared Storage Cluster	AlwaysOn Cluster
Windows Server 2008 R2			
SQL Server 2008 R2 SP3	✓	✓	
SQL Server 2012 SP2	✓		✓
SQL 2014		✓	✓
Windows Server 2012 R2			
SQL Server 2012 SP2	✓	✓	✓
SQL 2014	✓	✓	✓
SQL 2016	✓	✓	✓
Windows Server 2016			
SQL 2014	✓	✓	✓
SQL 2016	✓	✓	✓

What's New in this Release

The following new features and improvements are available in the SolidFire VSS Hardware Provider 2.0.1.3 release.

- Fibre Channel support:
  - Create shadow copies of connected volumes.
  - Unmask (import) shadow copy clones.
  - Mask (remove) clones.
- Expanded iSCSI support:
  - Create shadow copies of connected volumes.
  - Unmask (import) shadow copy clones.
  - Mask (remove) clones.
- VLAN support:
  - Create shadow copies of connected volumes.
  - Create iSCSI sessions that are connected to the cluster SVIP or one or more VLAN vSVIPs.
  - Disconnect iSCSI sessions that are connected to the cluster SVIP or one or more VLAN vSVIPS.
- Fibre Channel and iSCSI Multipathing support:
  - Discover Fibre Channel or iSCSI protocol endpoints for host connections.
  - Validate that a host is configured for multipath storage.
  - Multipathing configurations that use host NICs, vNICs, or multiple vSVIPs on the SolidFire cluster.
  - Creates multiple iSCSI sessions for multipathing to a shadow copy volume.
  - Log messaging for suboptimal or unsupported volume access group configurations.
- Improved event logging and tracing.
- Improved key encryption security for configuration data.
- Snapshot and clone prefix naming for all snapshots and clones created by the VSS Hardware Provider.
- Unique naming for each clone or snapshot.
- Configuration tool usability enhancements.

Resolved Issues

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

Ticket #	Description
VSS-4	Using Windows 2012 R2 with Hyper-V role, VSS Hardware Provider v1.1.1.1 successfully creates a snapshot or clone on a SolidFire cluster but freezes waiting for metadata to be returned to the host.
VSS-115 (FB-20808)	When importing shadow copies, multiple iSCSI discovery portals might be created.

Known Issues and Workarounds

The following items are known issues that have been identified in the SolidFire system. Every effort is being made to design and provide solutions for the issues. The original ticket number is listed for reference.

Ticket #	Description	Details and Workaround
16135	VSS service fails with LUN resynchronization error during Resync operation in SQL shared storage cluster environment	This issue is applicable for SQL on a shared storage cluster. Perform one of the following procedures: 1. Disconnect the LUNs from the MSiSCSI initiator. 2. Reconnect the LUNs. 3. Make the disk *Online* manually from the Disk Management or DiskPart utility. 4. Restart the SQL Server service. Alternatively, perform the following in the Failover Cluster Manager: 1. Take the clustered disk offline on which resync is performed. 2. Bring the clustered disk online. 3. Restart the SQL service. The database is now accessible and the data is restored
16193	Resync of primary server snapshot on the secondary server is not supported in AlwaysOn cluster configuration	With AlwaysOn cluster configuration, the transportable snapshot that was created on a primary server (for database) cannot be used to restore the database once it is copied to a secondary server. This occurs because VSS Hardware Provider supports volume level restore and the storage LUNs mapped to the servers in Availability group are not shared. Resync of a transportable snapshot of one server to another is not supported.
16219	A VSS Writer error occurs when performing a Resync in an AlwaysOn cluster setup.	See the *Resync a Volume for AlwaysOn Clustered Setup* topic in the SolidFire VSS Hardware Provider User Guide.
VSS-16	When metadata is copied to a new host that is utilizing CHAP for volume access, attempts to import shadows will fail. The SolidFire VSS Hardware Provider leverages Volume Access Groups (VAG) for access. When a host uses CHAP, the Provider is unable to discover or mount new volumes offered by the VSS metadata file.	Configure hosts that will be used to expose or mount VSS shadow copies with volume access groups. Hosts currently configured to use CHAP can be converted to use volume access groups with minimal planned downtime. You can also mount a volume manually using CHAP.

Contacting SolidFire Active Support

If you have any questions or comments about SolidFire documents or products in general, contact SolidFire support or email support@solidfire.com.

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