

application notes

hp OpenView storage virtual replicator

Product Version: 4.0

First Edition (July 2003)

Part Number: AA-RU5AA-TE

This document describes how Virtual Replicator supports the Volume Shadow Copy Service (VSS) of Microsoft Windows Server 2003.

For the latest version of these Application Notes and other Virtual Replicator documentation, access the HP storage website at: <http://www.hp.com/country/us/eng/prodserv/storage.html>. Select storage software and then select HP OpenView Storage Virtual Replicator under replication software.



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OpenView Storage Virtual Replicator Application Notes
First Edition (July 2003)
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About this Document

Application Notes Information

These Application Notes describe the following topics:

- [Volume Shadow Copy Service](#), page 4
- [Event Log Messages](#), page 6

Intended Audience

This document is intended for customers who purchased the HP OpenView Storage Virtual Replicator product.

Other Virtual Replicator Documentation

The Virtual Replicator kit also includes:

- Online Help/User Guide (accessible via the Web browser interface)
- Installation Card
- System Administrator's Guide
- Command Reference Card
- Planning Chart

Additional documentation, including white papers and best practices documents, are available via the HP website at: <http://www.hp.com>.

Volume Shadow Copy Service

Volume Shadow Copy Service (VSS) is a feature of Microsoft Windows Server 2003 that provides a general infrastructure for creating point-in-time copies of data on a volume. Virtual Replicator users can employ this infrastructure to create snapshots on the Windows Server 2003 platform. Refer to the Volume Shadow Copy Service documentation provided by Microsoft for more information on this feature.

Virtual Replicator enables the creation of VSS snapshots through the user interface and command line interface.

User Interface

On the Drive Letter Assignment window of the NewSnapshot Wizard, you can enable support of VSS.

After you choose to map a drive letter or create a mount point, select the **Enable Volume Shadow Copy** option (Figure 1).

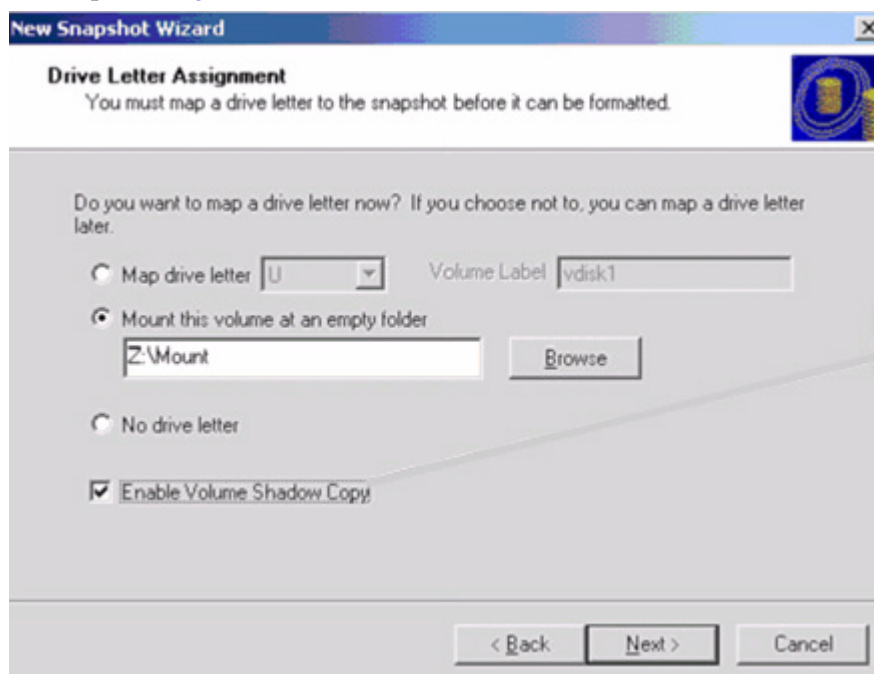


Figure 1: Creating snapshot with VSS

Note: The Enable Volume Shadow Copy option only displays if you are running VR on a Windows Server 2003 platform.

Command Line Interface

```
SNAPSHOT snapshot /PARENT:parent /VSS
```

Note: This command is supported in Windows Server 2003 only.

Notes and Best Practices

Whether using the user interface or command line interface, remember the following:

- VSS-assisted VR snapshots take longer than regular VR snapshots under normal I/O load on the parent disk. Replication Manager enters the Not Responding state in the Task Manager during this time. The Not Responding state is expected and the Replication Manager enters the Normal state once the snapshot creation is completed.
- Refer to the Volume Shadow Copy Service documentation provided by Microsoft for more information on this feature.

The following best practices are recommended when created VSS snapshots:

- Do not create VSS snapshots during heavy I/O load on the parent disk.
- Applications can register themselves as writers with the Volume Shadow Copy Service infrastructure. These writers can participate in the VSS snapshot creation. Before creating a VSS snapshot, ensure that the writer status is Stable.

To check the writer status, go to a Windows command prompt and type

```
"vssadmin list writers"
```

Ensure that the status of the displayed writers is Stable. This is not an absolute requirement, however if a writer status is not stable, the snapshot creation could fail.

- Do not take VR Volume Shadow Copy Service snapshots and shadow copies simultaneously; this causes either the snapshot or the shadow copy to fail.
- Add **VSS_** as a prefix to the VSS snapshot name (for example, **VSS_Sports_Snap**) so VSS snapshots are easily distinguished from other snapshots.

Event Log Messages

Event log messages will be generated for the most commonly used VR management operations, such as the creation or deletion of pools, virtual disks, and snapshots. You can view these messages in the Event Viewer.

Each time the system that contains Virtual Replicator is rebooted and the VR driver is successfully loaded into memory, an event log message is generated. An event log message is also generated each time a failover occurs in a cluster environment.

Pools

Event log messages for pools include:

Action	Event Log Message
A pool is created	Pool pool name created successfully
A pool is deleted	Pool pool name deleted successfully
A pool is bound on a reboot or a failover	Pool pool name bind completed successfully
A pool unbinds from a node during a failover	Pool pool name unbind completed successfully

Virtual Disks

Event log messages for virtual disks include:

Action	Event Log Message
A virtual disk is created	Virtual disk virtual disk name created successfully
A virtual disk is deleted	Virtual disk/Snapshot virtual disk name deleted successfully

Snapshots

Event log messages for snapshots include:

Action	Event Log Message
A snapshot is created	Snapshot snapshot name created successfully
A snapshot is deleted	Virtual disk/Snapshot snapshot name deleted successfully

Driver

The following event log message is generated when the system is rebooted:

The **SdDriver** driver has been started