

Release Notes

HP OpenView Storage Virtual Replicator

Product Version: 4.1.1

Tenth Edition (April 2005)

Part Number: T3591-96005

This document summarizes the features and known issues for version 4.1.1 of Storage Virtual Replicator (SVR).



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Intended audience

This document is intended for customers who purchased HP OpenView Storage Virtual Replicator (SVR) software.

Related documentation

Refer to the following documentation for detailed information about SVR:

- *HP OpenView Storage Virtual Replicator System Administrator's Guide*
- *HP OpenView Storage Virtual Replicator Installation Instructions*
- *HP OpenView Storage Virtual Replicator Command Line Interface Reference Guide*
- HP OpenView Storage Virtual Replicator Planning Charts
- HP OpenView Storage Virtual Replicator Online Help
- HP OpenView Storage Virtual Replicator Online Volume Growth Online Help
- HP OpenView Storage Virtual Replicator Scheduling Wizards Online Help

To access SVR documentation:

1. Go to the following HP web site:
<http://h18000.www1.hp.com/storage/software.html>
The Storage Software window opens.
2. Scroll to the Infrastructure services software section and select **HP OpenView Storage Virtual Replicator**.
The HP OpenView Storage Virtual Replicator window opens.
3. Select **technical documentation** from the **Product information** menu.
The technical support – HP OpenView Storage Virtual Replicator window opens.
4. Select **manuals (guides, supplements, addendums, etc)** from the **self-help resources** menu.
The manuals (guides, supplements, addendums, etc) – HP OpenView Storage Virtual Replicator window opens.
5. Select a manual.

Product features

Storage Virtual Replicator (SVR) enables you to centrally manage storage virtualization in Microsoft Windows 2000 and Windows Server 2003 computing environments. You can simplify storage configuration and management and enhance availability and scalability.

Version 4.1.1 provides the following functionality:

- **E-mail notification**—Use e-mail notification to customize the events for which you receive notification.
- **Enhanced pool deletion**—Use the `DELTREE` command to delete a pool that contains snapshots and virtual disks, or to delete a virtual disk that contains snapshots.
- **OVSM interoperability**—SVR supports interoperability with HP OpenView Storage Mirroring.
- **Enhanced policy descriptions**—The policy key descriptions have been updated to be more easily identifiable.

Installation and upgrade issues

This section describes issues concerning installation, uninstallation, and upgrades:

- [Prerequisites](#)
- [Upgrading to version 4.1.1](#)
- [Additional Windows prompt for reboot after 4.1.1 upgrade](#)
- [Rollback during 4.1.1 installation](#)
- [Installing 4.1.1 on a Windows 2000 or 2003 cluster with SVR resources](#)
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- [Reinstalling SVR](#)
- [Uninstalling and reinstalling previous versions on a Windows 2000 cluster or stand-alone system](#)
- [Uninstalling and reinstalling a cluster](#)
- [Upgrading to a cluster in Windows 2003](#)

Prerequisites

To install SVR successfully, you must have:

- Either of the following operating systems:
 - Microsoft Windows 2000 Server or Advanced Server with Service Pack 4
 - Microsoft Windows Server 2003, Standard Edition or Enterprise Edition (two node cluster)

To successfully install SVR on a configuration with an MSA1000 running Windows 2000 with Service Pack 4, upgrade Secure Path to version 4 (Windows Workgroup Edition).

- A cluster environment that is supported in a valid Microsoft Cluster Server Configuration.
- Internet Explorer version 5.01 or higher

Upgrading to version 4.1.1

If you are upgrading from any version prior to 4.0, you must uninstall SVR and reinstall it manually. After reinstalling SVR, run the Restore Drives and Namespace Recovery utilities.

To upgrade to 4.1.1:

1. Download the upgrade kit from the web into a folder.
2. Open the kit from the appropriate folder. Select all the files within the kit and extract them to the folder (the same folder to which the kit was copied).
3. Double-click **setup.exe**.
4. Select **Install Virtual Replicator** and follow the steps to complete the installation.

Additional Windows prompt for reboot after 4.1.1 upgrade

SVR uses a signed driver and Windows recognizes the virtual disks as newly added devices. Therefore, after upgrading to version 4.1.1 and rebooting the system, Windows may prompt you to reboot a second time. Complete the second reboot; you will not be prompted to reboot again.

Rollback during 4.1.1 installation

Installation of SVR may rollback or display an error if multiple instances of `msiexec.exe` are running. This problem is seen with installations that use MSI and run in the background such as Norton AntiVirus Corporate Edition 7.0.

Before installing SVR, ensure that multiple instances of `msiexec.exe` are not running. You can verify this in Windows Task Manager on the Processes tab.

Installing 4.1.1 on a Windows 2000 or 2003 cluster with SVR resources

To ensure a successful SVR version 4.1.1 upgrade on a Windows 2000 or Windows Server 2003 cluster with SVR resources:

1. It is mandatory that the node on which you are installing the upgrade kit does not own the cluster and SVR resources.
2. Install 4.1.1 on the node as described in [“Upgrading to version 4.1.1.”](#)
3. When the installation is complete and the node has been rebooted, move the cluster and SVR resources to this node.
4. Perform step 1 and 2 on the other node.

Uninstalling or modifying SVR

To uninstall or modify SVR, select **Start > Settings > Control Panel > Add or Remove Programs**. If SVR is not included in the list of installed programs, use the SVR installation CD. Start the installation process and select **Modify, Repair, or Remove**.

Reinstalling SVR

After you uninstall and reinstall SVR, you may:

- Encounter Windows Registry namespace errors.
- Find that previously mapped virtual disks and snapshots do not have the same drive letters.

To resolve these issues, run the Namespace Recovery and Restore Drives utilities after you complete the reinstallation. After running the utility, refresh the view in the Replication Manager window (**Action > Refresh**). All drive letters should be correctly mapped.

Uninstalling and reinstalling previous versions on a Windows 2000 cluster or stand-alone system

If you uninstall and reinstall version 3.0B SP1 or lower after upgrading to version 4.1.1, the SVR resources properties in Device Manager display the Microsoft signed driver instead of “Not Digitally Signed.”

This is applicable to Windows 2000 cluster or stand-alone systems.

Uninstalling and reinstalling a cluster

Follow these steps to ensure that SVR functions properly when you uninstall and then reinstall a cluster on a system running SVR:

1. Because the operating system removes the cluster registry when you uninstall a cluster, back up the following notification key:
`HKEY_LOCAL_MACHINE\Cluster\SOFTWARE\Hewlett-Packard\OpenView SVR Mail`
2. Uninstall the cluster.
3. Downgrade to a stand-alone environment by selecting **Start > Programs > hp OpenView storage virtual replicator > Configure Virtual Replicator**.
4. Select **Downgrade to Standalone**.
5. Install the Microsoft Cluster Service.
6. Upgrade to a cluster environment by selecting **Start > Programs > hp OpenView storage virtual replicator > Configure Virtual Replicator**.
7. Select **Upgrade to Cluster**.

Upgrading to a cluster in Windows 2003

To upgrade SVR to a cluster system in Windows Server 2003 using Quorum on a cluster aware disk:

1. Configure the cluster on the first node (N1) using either **Local Quorum** or **Majority Node Set** as the quorum.
2. Perform the SVR cluster upgrade on N1.
3. Take all the pools offline.
4. Create a cluster aware disk to be used as the Quorum resource.
5. In the console tree of the cluster administrator, right-click the cluster name and select **File Properties**.
6. On the Quorum tab, select the Quorum resource, and then select the Quorum disk created.
7. In the Partition field, select the partition on which the cluster-specific data will be kept, if the disk has more than one partition.
8. In the Root path field, enter the path to the folder on the partition (for example, \MSCS\).
9. Move the Quorum resource to the Cluster Group.
10. Create a dependency between the Quorum resource, the Cluster IP, and the Cluster Name.
11. Bring all the pools online
12. Join the second node (N2).
13. Perform the SVR cluster upgrade on N2.

Mount point considerations

Mount point information is stored in the registry, not on disk. If the mount point registry is lost, existing mount points will be lost.

You may lose mount points when:

- Migrating from Windows 2000 to Windows Server 2003
- Uninstalling SVR
- Upgrading SVR
- Upgrading to a cluster system or downgrading to a stand-alone system
- Repairing the operating system
- Editing the SVR registry keys manually
- The SVR registry keys are corrupted

Recovering mount points is not possible. You must recreate mount points to SVR volumes manually.

Mount points are only supported on volumes in a pool. If a scheduled task includes mount point assignments on volumes not in a pool, the scheduled task fails to mount the volumes. However, the volumes will be created as scheduled. If logging is enabled, the mount point failure is logged for your reference.

SVR does not support nested mount points. For example, if mount point `V:\temp` has a mount point, `V:\temp\xyz`, that mount point is not supported.

Known issues

This section describes all known issues and workarounds:

- [New issues](#)
- [Previously documented issues](#)

New issues

This section describes issues found during testing of SVR version 4.1.1:

- [Storage Mirroring interoperability](#)
- [Operating constraints for e-mail notification](#)
- [Pools go offline when uninstallation is cancelled](#)
- [Fatal error message during uninstallation](#)
- [Formatting virtual disks](#)
- [License expiration message](#)
- [Drive letter lost when creating a virtual disk and moving a cluster group](#)
- [Growing basic disks in Windows Server 2003 clusters](#)
- [Disk mapping](#)
- [Japanese character does not display when creating a pool](#)
- [Using the MS Gothic font](#)

Storage Mirroring interoperability

When using Storage Virtual Replicator with HP OpenView Storage Mirroring, follow the recommendations and other instructions listed below.

- After performing any of the following tasks, follow the instructions provided by Storage Mirroring or right-click on the replication set to begin replication or to remove orphans:
 - Creating a snapback (if you have configured multiple targets for each target replication set, ensure you follow the same procedure for each replication set)
 - Growing a volume on an SVR resource
 - Moving a cluster group
 - Uninstalling, reinstalling, or upgrading or downgrading a cluster of a previous version of SVR.
 - Changing the pool status in a cluster environment
 - Creating a replication set on a shared disk on a cluster (to resynchronize after import)
- Refer to the Storage Mirroring documentation for information about executing scripts or or resynchronizing replication after you complete the following tasks:
 - Formatting a disk
 - Changing a drive letter

These tasks remain the same on the SVR resource.

- Although you can add a snapshot with drive letter to a replication set, HP recommends that you do not, because a snapshot does not contain the most current data. (A snapshot is a point in time image of a virtual disk.)

Operating constraints for e-mail notification

The following operating constraints apply to the e-mail notification feature:

- You can use an existing Exchange server as an SMTP server or local SMTP server.
- By default, the local SMTP service is not installed. See your Microsoft documentation for instructions about installing the SMTP service.
- Numeric pager messages are not supported. Only e-mail addresses and cellphone or pager numbers with text messaging are supported. You must include the cellphone or pager number with the service provider as the e-mail ID.

Pools go offline when uninstallation is cancelled

If you cancel an uninstallation, all pools go offline. To recover the pools, reboot the system or uninstall and reinstall SVR.

Fatal error message during uninstallation

During an uninstallation, the following error message may be displayed:

```
Fatal error during installation
```

This error message displays sporadically when the system or disks are unstable. To resolve this issue, reboot the system and restart the uninstallation.

Formatting virtual disks

Using Windows Explorer to format a disk

HP strongly recommends that you do not use Windows Explorer to format a virtual disk. SVR does not support it.

Unable to format a virtual disk

On a Windows Server 2003 system, if you delete a snapshot and then format the virtual disk, the following error message may be displayed:

```
Unable to format virtual disk - disk in use.
```

Issue the `chkdsk /X` command on the virtual disk you want to format. You should now be able to format the virtual disk.

License expiration message

Due to known issues in the licensing component, the following message may be displayed occasionally:

```
License has expired
```

This message only displays when you install SVR with the 60-day instant-on feature. To resolve this issue, restart the SVR management service (`esmgrs`).

This message does not display after you obtain a permanent license.

Drive letter lost when creating a virtual disk and moving a cluster group

If a drive letter is lost when you create a virtual disk and move a cluster group, run the Restore Drives utility to restore the drive letter.

Growing basic disks in Windows Server 2003 clusters

In a Windows Server 2003 cluster, if you grow a basic disk using SVR or Storage Volume Growth (SVG), the disk is taken offline and the brought online when the operation is complete. HP recommends that you stop all I/O activity to the basic disk before you grow it.

During a grow and move group operation, you may find that the drive letter does not display in Windows Explorer. However, you can still view the drive letter from a command prompt window and Logical Disk Manager (LDM). After you reboot the nodes, the drive letter displays in Windows Explorer.

Disk mapping

When viewing the Disk Map window for a virtual disk, it only shows the disks to which the virtual disk is mapped. It does not show the disks to which snapshots of the virtual disk are mapped.

Japanese character does not display when creating a pool

When creating a pool, if you enter a Japanese character as part of the pool name, the character will not display in the Pool Name box. To resolve this issue, right-click the Pool Name box and select **Open IME**. Enter the pool name again and the Japanese character displays properly.

Using the MS Gothic font

SVR does not support the MS Gothic font.

Scheduling wizard logs failed events as successful

When using the Create Snapshot or Delete Snapshot scheduling wizard, if the task fails to complete, the scheduling wizard still logs the task as having succeeded.

Previously documented issues

This section describes issues and workarounds that were documented in the previous release:

- [Importing a cluster aware disk](#)
- [Managing SVR remotely](#)
- [Creating snapshots during heavy I/O activity](#)
- [Deleting partitions from storage units](#)
- ["Delayed Write Failed" errors](#)
- [Replication Manager refresh issue during cluster group move](#)
- [Plug-n-Play Manager warning when importing a partition](#)
- [Online restore from snapshot fails](#)
- [Assigning mapped network drive letters to SVR volumes](#)

Importing a cluster aware disk

When running SVR on a Windows 2000 cluster, if you import a cluster aware disk and the MaxVirtualPerPool policy is violated, an error message displays as expected. The standard procedure is to change the cluster aware disk owner. However, you may not be allowed to make changes to the owner. When this occurs, change the MaxVirtualPerPool policy value to 0. Then, move the pool that the cluster aware disk owned and import.

Managing SVR remotely

If you are using the Terminal Services client to manage SVR remotely, Windows Explorer does not display virtual disks and snapshots. However, the drives are visible on the local system. Also, when a unit is imported into a pool, the imported virtual disk is not accessible when using the Terminal Services client. It is believed that this is a Microsoft issue. Testing with other remote management software such as Netmeeting did not cause these problems.

Creating snapshots during heavy I/O activity

During heavy I/O activity on a virtual disk, creating snapshots may take longer than usual.

Deleting partitions from storage units

If you want to add a physical disk that has unformatted partitions to a pool, delete the partitions before adding the disk to the pool. Otherwise, data corruption may occur.

"Delayed Write Failed" errors

After importing storage units in a cluster, you may see error messages that Windows was unable to save all the data for a file and that data has been lost. You can ignore these messages. Click **OK** to close the message box.

These messages occur when Windows attempts to write system information to the imported disk for the node that does not own the pool group. Since only one node can own and access a cluster resource at any given time, the "Delayed Write Failed" error is spurious.

Replication Manager refresh issue during cluster group move

Performing cluster administrative tasks when Replication Manager is open causes inconsistencies in Replication Manager. When a cluster group is moved from one node to the other and Replication Manager is open, the SVR resources displayed in Replication Manager become inaccessible. To resolve this issue, relaunch Replication Manager. However, HP recommends that you perform cluster administrative tasks when Replication Manager is closed.

Plug-n-Play Manager warning when importing a partition

When you import a partition into a pool on a Windows Server 2003 system, the Plug-n-Play manager adds the following warning to the Event Log:

```
Timed out sending notification of target device change to  
window of LDM Service.
```

This warning is benign; you can ignore it.

Online restore from snapshot fails

The Online Restore from Snapshot scheduled task fails to complete on a Windows Server 2003 system. The scheduled task restores the data to a new virtual disk with a temporary drive letter. You must *manually* unmap and assign the original drive letter to the new virtual disk.

If you select **Delete Snapshot and Original Virtual Disk When Done**, the scheduled task restores the data to a new virtual disk. However, you must *manually* delete the original virtual disk/snapshot and assign the original drive to the new virtual disk.

Assigning mapped network drive letters to SVR volumes

When you assign a drive letter to a virtual disk or snapshot on a Windows Server 2003 system, mapped network drive letters are shown as available free drives.

This behavior is different from Windows 2000 in which mapped network drives are not listed. HP recommends that you do not select mapped network drives when assigning a drive letter to a virtual disk or snapshot.

Known issues with SVR VSS snapshots

From a Microsoft Volume Shadow copy Service (VSS) perspective, the SVR VSS Provider is categorized as a Hardware Provider because the SVR driver presents LUNs to the Windows Volume Manager. However, SVR is designed as a hardware-independent product. The contradiction in design principles causes certain incompatibilities that display as errors reported by the VSS framework. For the current implementation of VSS support within SVR, HP recommends that you ignore these errors while SVR Engineering works with Microsoft to resolve the contradictions.

This section describes the following topics:

- [SVR VSS Provider not listed as a VSS provider](#)
- [VDS event seen in the event log](#)
- [VSS event for clusters seen in event log](#)
- [Creating VSS snapshots](#)
- [Windows VSS information lost when importing a disk](#)

SVR VSS Provider not listed as a VSS provider

The SVR VSS Provider is not listed as a provider in the VSS framework. However, the provider is called during the VSS-assisted snapshot creation process.

To view the list of providers, open a command prompt window and enter:

```
vssadmin list providers
```

VDS event seen in the event log

When you create an SVR resource on Windows Server 2003 and either refresh or launch LDM, the following Virtual Disk Service (VDS) log entries display in the Event Log:

```
VDS fails to claim a disk
```

```
Failed to open device
```

You can ignore these events; they do not affect SVR.

VSS event for clusters seen in event log

The Windows Cluster Service does not support hardware shadow copies because the service cannot accommodate LUNs with duplicate signatures and partition layout. VSS snapshots in SVR are supported in clusters because SVR LUNs do not have duplicate signatures and partition layout. However, when you create a VSS snapshot in SVR, VSS logs errors in the cluster. You can ignore these errors; they do not affect SVR snapshot creation.

Creating VSS snapshots

This section describes errors or warning messages that may display when you create a VSS snapshot.

Veto error

The following error message may display:

```
The provider has been vetoed.
```

This is a VSS framework error message and it means that the snapshot was not created.

Reboot prompt

You may be prompted occasionally to reboot your system, but a reboot is not required to create a VSS snapshot. When prompted to reboot, click **No**.

VolSnap error

If you create a VSS snapshot of an imported volume that includes a Shadow copy, the following VolSnap error is entered in the Event Log:

```
A control item for shadow copies of volume was lost during detection.
```

You can ignore this event; it does not affect SVR.

FTdisk warning

The following warning message may be entered in the Event Log:

```
The system failed to flush data to the transaction log.  
Corruption may occur.
```

This warning message has been seen intermittently during testing. You can ignore this message; your data is intact.

Windows VSS information lost when importing a disk

VSS may lose contextual information about shadow copies after the volumes on which they reside are imported to a pool. The Shadow copy file is still available after the import operation on the new virtual disk is complete.