

Open Systems SnapVault® 3.0

Release Notes

NetApp, Inc.
495 East Java Drive
Sunnyvale, CA 94089 U.S.A.
Telephone: +1 (408) 822-6000
Fax: +1 (408) 822-4501
Support telephone: +1 (888) 4-NETAPP
Documentation comments: doccomments@netapp.com
Information Web: <http://www.netapp.com>

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Topics covered

About this release

Open Systems SnapVault® 3.0 introduces following new features:

- ◆ Microsoft SQL Server™ database backup and restore
- ◆ Microsoft Cluster Services
- ◆ Changelog minifilter driver
- ◆ Volume mountpoint backup and recovery
- ◆ Client-based bandwidth throttling
- ◆ IPv6 support
- ◆ Primary storage system reporting through AutoSupport

For details about bug fixes, see Bugs Online in the NetApp Support Site at <http://now.netapp.com/NOW/cgi-bin/bol>.

These release notes include enhancements and known issues for Open Systems SnapVault 3.0. For hardware specifications, software requirements, and configuration settings, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

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Enhancements

Microsoft SQL Server Backup and Restore

Starting with Open Systems SnapVault 3.0, you can back up and restore the Microsoft SQL Server application database. The support of Microsoft SQL Server enables backup administrators to perform scheduled backups of a specific SQL database and enables the administrator to restore and recover database when required. You can use Protection Manager 3.8 and the Open Systems SnapVault command-line utility for the backup and restore of Microsoft SQL Server database.

Note

You must use the 32-bit version of Open Systems SnapVault to back up a 32-bit version of Microsoft SQL Server installed on a 32-bit Microsoft Windows Server. Likewise, for the 64-bit version Open Systems SnapVault.

For more information about the Microsoft SQL Server database backup and restore, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Microsoft Cluster Services Support on Open Systems SnapVault

Starting with Open Systems SnapVault 3.0, you can back up and restore local and cluster file system and MSSQL application data from the nodes in a Microsoft Cluster Services (MSCS) and Windows Server 2008 Failover Clustering solution. You can install Open Systems SnapVault on two-node cluster configurations in active/active or active/passive mode. All the Open Systems SnapVault features are available on MSCS. For more information about Microsoft Cluster Services support on Open Systems SnapVault, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Changelog minifilter driver

The Changelog minifilter driver is a new feature in Open Systems SnapVault 3.0, which enables you to perform faster incremental backups after initial baseline transfer. The driver is a file system filter driver, which is based on the Microsoft minifilter model. It supports all Windows platforms. For more information about Changelog minifilter driver, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Volume mountpoint backup and restore

Starting with Open Systems SnapVault 3.0, you can back up and restore NTFS file system mounted folders. A volume mountpoint is an association between a volume and a directory on another volume.

The following Windows platforms support mountpoint backup and restore operations:

- ◆ Windows 2003
- ◆ Windows 2008
- ◆ Windows 2003 R2
- ◆ Windows 2008 R2

Open Systems SnapVault 3.0 enables you to back up data inside a volume mountpoint.

For more information about volume mountpoint backup and restore, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

IPv6 support

Open Systems SnapVault 3.0 supports both Internet Protocol version 6 (IPv6) and IPv4. In IPv6, the IP address size is 128 bits, which is larger than the IPv4 address size of 32 bits. This larger address space provides expanded routing, security, and addressing capabilities.

You can use Open Systems SnapVault 3.0 in a network environment with either IPv6 or IPv4 only, or in a mixed network environment with both IPv4 and IPv6.

Open Systems SnapVault 3.0 can communicate with all IPv6-enabled platforms. You can use IPv6 and IPv4 addresses for backup and restore purposes. The command-line interface of Open Systems SnapVault and Logical Replication (LREP) tool support IPv6 addresses for backup and restore purposes.

For more information about IPv6 support, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Client-based bandwidth throttling

This client-based throttling feature enables you to manage network bandwidth during a SnapVault backup process from a primary storage system to a secondary storage system. It enables you to schedule bandwidth throttling and modify the schedule for the transfers that are currently active. Any changes in the bandwidth throttle also apply to the transfers that are currently active. This feature is available in all Open Systems SnapVault supported platforms. You can allocate the required bandwidth for Open Systems SnapVault backups after analyzing the bandwidth usage by other applications in the network. The throttle value must be

in KBps (kilobytes per second). For more information about client-based bandwidth throttling, see the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Primary storage system reporting through AutoSupport

Starting with Open Systems SnapVault 3.0, the primary storage system sends system information to the secondary storage system during backup. If AutoSupport feature is enabled on the secondary storage system, it sends the information to technical support on a weekly basis. By default, the option is enabled on your primary storage system. You can disable or enable this option from the *snapvault.cfg* file. For more information, see *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Bug fixes

Bugs fixed in Open Systems SnapVault 3.0 and earlier releases

The following table lists the bugs that were fixed in Open Systems SnapVault 3.0 and earlier releases. For more information about any of these bugs, see the Bugs Online and Release Tools page on the NetApp Support Site. To access this page, launch your Web browser, navigate to <http://now.netapp.com/NOW/cgi-bin/bol>, type the bug ID in the Enter Bug ID(s) field, and then click **Go!**

Bug ID	Description
213034	On Linux® and UNIX® platforms, Open Systems SnapVault installation does not accept NDMP passwords that contain special characters, for example, %, \$, (), @.
228757	Non-ASCII characters in the restore path on Open Systems SnapVault client is incorrect when restored from DataFabric® Manager.
254124	When backup is performed from DataFabric Manager, the Open Systems SnapVault backup fails for root directory that have non-ASCII characters. You should have the supported DataFabric Manager and the Data ONTAP version.
307970	Open Systems SnapVault should retry on the error message <i>“source is not a valid name or qtree path”</i> .
307492	The relation between SnapVault log and the output of <code>snapvault status -l</code> command.
231152	Open Systems SnapVault: Better error string required: Error creating volume snapshot: VSS_E_OBJECT_NOT_FOUND
384016	Open Systems SnapVault should support paths of the form 'c:' (drive:) during backup and restore.

Limitations

Limitations of Open Systems SnapVault 3.0

In addition to the information in this section, familiarize yourself with the limitations of Open Systems SnapVault 3.0 that are listed in the *Open Systems SnapVault 3.0 Installation and Administration Guide*.

Reverting to earlier versions is not supported

Open Systems SnapVault 3.0 does not support reverting to earlier versions.

Checkpointed baseline transfers fail during the upgrade to Open Systems SnapVault 3.0

Checkpointed baseline transfers fail when any release before Open Systems SnapVault 2.3.1 is upgraded to Open Systems SnapVault 3.0.

Checkpointed baseline transfers fail under the following conditions:

- ◆ A baseline transfer using an earlier version of Open Systems SnapVault aborts or fails midway.
- ◆ An upgrade to Open Systems SnapVault 3.0 is performed.
- ◆ The `snapvault status` command is run for this transfer on the storage system, and it displays “idle with restart checkpoint” or “pending with restart checkpoint.”
- ◆ Any attempt to restart this aborted transfer from the checkpoint fails.

Workaround: Release the existing baseline relationship and create a new relationship.

Restoring files to a directory that is part of a SnapVault relationship is not allowed

If you attempt to restore files to a directory involved in a SnapVault relationship by using the `snapvault restore` command, the attempt fails with the and the following message is displayed:

```
Invalid qtree/Snapshot requested
Directory in wrong phase
Error performing restore. Check snapvault log.
```

The SnapVault log files displays the following information:

```
Invalid Qtree/Snapshot requested
Directory in wrong phase
```

You can restore files to such a directory by first releasing the SnapVault relationship using the `snapvault release` the following command:

`snapvault release pathname secondary:secondary_qtree`

After releasing the SnapVault relationship and restoring the files, you must resynchronize the SnapVault relationship before subsequent updates can succeed.

This behavior was allowed in the releases before Open Systems SnapVault 2.1.

Extended attributes are not supported

Open Systems SnapVault does not support extended attributes on any of the supported UNIX file systems.

Crossing mountpoints is not supported

Open Systems SnapVault does not cross mountpoints when backing up or restoring data.

Cannot resynchronize restored subdirectories and single files

Open Systems SnapVault does not support resynchronizing restored subdirectories and single files.

Resynchronizing an Open Systems SnapVault relationship

Currently, Data ONTAP 7.2 and later releases in the 7.2.x release family supports resynchronization. For more details on the availability of this feature, see the Knowledgebase article kb12138 at <http://now.netapp.com/Knowledgebase/>.

Checkpoint restart results in failure of the restore operation

A restore operation on a relationship fails when the baseline transfer involving checkpoint restarts. This problem occurs when the data set contains access control lists (ACLs) and you are using Data ONTAP 6.5.x and 7.0.x.

**ACL modifications
are not updated
correctly**

On Linux (only ReiserFS) and Solaris™ platforms, Open Systems SnapVault does not mark the files as changed if the ACLs associated with the files are deleted. This results in Open Systems SnapVault not updating the files during update transfers. The problem occurs only on Linux ReiserFS and Solaris platforms, where “mtime” and “ctime” of the files remain unchanged after ACL deletion.

**Support for
Windows Storage
Server 2003**

Open Systems SnapVault does not support Windows Storage Server 2003 with SIS enabled.

**Reparse data of a
mountpoint is not
restored**

Reparse data is not restored during the single file restore of a mountpoint.

Known issues

Known issues in Open Systems SnapVault 3.0

The following are the known issues in Open System SnapVault 3.0 release:

- ◆ If an SQL database name has a space at the end, then backup or restore of that particular database fails. For more information, see the Microsoft knowledge base article <http://support.microsoft.com/kb/2014054>.
- ◆ Restoring of an SQL database to an alternate location is not supported for databases with FILESTREAM data in SQL Server 2008.
- ◆ SQL Server database backup causes the following VSS error in Windows Event Log:

Note

You can ignore these messages as they do not impact the backup and restore processes.

Volume Shadow Copy Service error: Unexpected error querying for the IVssWriterCallback interface. hr = 0x80070005, Access is denied.

This is often caused by incorrect security settings in either the writer or requestor process.

Operation:

Gathering Writer Data

Context:

Writer Class Id: {e8132975-6f93-4464-a53e-1050253ae220}

Writer Name: System Writer

Writer Instance ID: {5db7cd0a-2dd0-4e17-899f-5ce665ff2ce7}

For more information, see the Microsoft knowledge base article <http://support.microsoft.com/kb/951036>.

- ◆ In an MSCS environment, you must use the physical IP address to restore the System State data.
- ◆ If you try to back up or restore an SQL server database while running an SQL Server query for that database, then the tail-log backup or restore of the database fails.
- ◆ In an MSCS environment, all on-going backup transfers (local or shared resources) aborts after the failover of a cluster node.

If you need to modify the disk type or the underlying volume of Changelog minifilter driver data: If you need to change the disk type of the volume where the Changelog minifilter driver files are located or need to change the underlying volume keeping the disk drive letter same, complete the following steps:

Note

You must complete the following steps to avoid system panic.

Step	Action						
1	Unload the Changelog minifilter driver. For the Changelog minifilter unloading instructions, see the <i>Changelog Minifilter Driver</i> Chapter of the <i>Open Systems SnapVault 3.0 Installation and Administration Guide</i> .						
2	Depending on your action, complete this step.						
	<table> <tr> <th>If..</th><th>Then..</th></tr> <tr> <td>You changed the disk type of the volume where the Changelog minifilter driver files reside</td><td>Reboot the primary storage system.</td></tr> <tr> <td>You changed the underlying volume keeping the disk driver letter same</td><td>Go to Step 3</td></tr> </table>	If..	Then..	You changed the disk type of the volume where the Changelog minifilter driver files reside	Reboot the primary storage system.	You changed the underlying volume keeping the disk driver letter same	Go to Step 3
If..	Then..						
You changed the disk type of the volume where the Changelog minifilter driver files reside	Reboot the primary storage system.						
You changed the underlying volume keeping the disk driver letter same	Go to Step 3						
3	Set a new log path using the Changelog minifilter driver command-line interface. For setting a new log path, see the <i>Open Systems SnapVault 3.0 Installation and Administration Guide</i> .						

Formatting disk drives during first data backup after configuration changes to the Changelog minifilter driver in the *snapvault.cfg* file might result in system panic: If the *OSSV:UseChangelogsForFileSystem* and *OSSV:UseChangelogsForApps* configuration flags in the *snapvault.cfg* file are set to FALSE, Open Systems SnapVault unloads the Changelog minifilter driver during the next data backup. The primary system might panic if any disk drive in the system is formatted while Changelog minifilter driver unload is in progress. To avoid probable panic in the primary system, do not format the disk drives while the first data backup is in progress after the Changelog minifilter driver configuration changes.

When restoring the complete C:\ drive using Protection Manager, Open Systems SnapVault fails to restore the Documents and Setting folder in Windows 2008 and Windows 2008 R2: The issue happens because Open Systems SnapVault cannot restore the junction point between C:\Documents and Settings and C:\Users when restoring data using Protection Manager in Windows 2008 and Windows 2008 R2. The following error message is displayed while restoring: *C:\Documents and Settings' is an unsupported reparse point.*

Workarounds:

The following are the different workarounds to complete data restore successfully:

- ◆ Ignore the error message if the junction point between C:\Documents and Settings and C:\Users exists after the restore. If the junction point does not exist, you must create a junction point manually to complete the restore.
- ◆ Release the existing backup relationship before the C:\ drive restore. However, if you release the existing backup relationship, you must resync the restored relationship to continue the further updates.

Operating systems

Support for operating system versions

Open Systems SnapVault 3.0 provides additional support for the following operating systems versions:

Operating system	Version supported
Windows	◆ Windows Server® 2003 R2 ◆ Windows Server 2003 Storage Server ◆ Windows Server 2008 R2 ◆ Windows Server 2008 (Japanese and German versions)
Solaris on X86	◆ Solaris 10
Linux®	◆ Red Hat Enterprise Linux 5.4 ◆ SUSE Linux Enterprise Server 11
IBM AIX®	◆ AIX 6.1

Operating system versions no longer supported

The following operating system is no longer supported with Open Systems SnapVault 3.0:

Operating system	Version no longer supported
Windows	◆ Windows 2000 Server

Changes to published documentation

Some information about the Open Systems SnapVault has become available after the *Open Systems SnapVault 3.0 Installation and Administration Guide* is published. The information should be used in conjunction with the guide provided with this release of Open Systems SnapVault.

Correction in the *Modifying the log files path* topic of the *Changelog minifilter driver* chapter: Step 1 in the *Modifying the log files path* topic should be unloading the Changelog minifilter driver. For instructions, see the *Unloading the Changelog minifilter driver* topic.

