

SnapDrive® 5.0 for Windows®

Release Notes

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Contents of the release notes

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Features of this release

About this release

The major new and enhanced features of SnapDrive® 5.0 for Windows® include support for the following:

- ◆ Space reclamation in the active file system
- ◆ Initiator group (igroup) management
- ◆ Support for GUID partition table (GPT) partitions
- ◆ Volume-based restore of disconnected LUNs
- ◆ Integration with SnapVault® to provide updates on a SnapVault secondary system
- ◆ Support for VMware® in a Guest OS using the Microsoft iSCSI Software Initiator
- ◆ Important bug fixes

For the most up-to-date information about HBAs qualified for use with SnapDrive, see the *Compatibility and Configuration Guide for NetApp FCP and iSCSI Products* on the NOW NetApp on the Web™ (NOW™) site at the following URL:

http://now.netapp.com/NOW/knowledge/docs/san/fcp_iscsi_config/index.shtml/

Limitations

Features not supported in SnapDrive 5.0

The SnapDrive 5.0 software does not support the following:

- ◆ Windows 2000 Server operating systems is not supported.
- ◆ Use of SnapDrive to manage dynamic disks (a storage device that is divided into volumes rather than partitions) is not supported.
- ◆ A LUN cannot be configured as an extended partition. SnapDrive supports only a single, primary partition on a LUN.
- ◆ Any LUN created in FilerView® or at the storage system command line cannot be managed unless certain steps are taken to prepare these disks for SnapDrive.
- ◆ Conversion of a LUN with an MBR partition to a GPT partition is not supported.
- ◆ Use of SnapMirror to replicate individual qtrees is not supported (QSM).
- ◆ Use of LUN cloning is not supported.
- ◆ Snapshot™ copies that are created from the storage system console are not supported, because this can lead to inconsistencies within the NTFS file system. Use only SnapDrive to create Snapshot copies of LUNs.
- ◆ Volume-level SnapVault configurations are not supported (however, qtree SnapVault configurations are supported).
- ◆ SnapVault is not supported on vFiler® units.
- ◆ Volume-based Snapshot Restore is also not supported on vFiler units.

Considerations when using Microsoft iSCSI Software Initiator

When using Microsoft iSCSI Software Initiator, consider the following:

- ◆ In a Microsoft Cluster Service configuration (MSCS) that uses volume mount points, install Microsoft hotfix 925677 on all cluster nodes if you encounter the issue described in Knowledge Base article KB925677.
- ◆ In a noncluster configuration, the Exchange service and the SQL service must be configured with a dependency on the iSCSI software initiator service.

Caution

Do not install the Microsoft iSCSI software initiator version 2.02 on a Windows system running the Data ONTAP DSM 3.0 for Windows MPIO. The iSCSI initiator installer overwrites the MPIO components used by the Data ONTAP DSM with an earlier, incompatible version. This can prevent your Windows system from booting. For more information, see bug ID [217388](#) at [Bugs Online](#).

Upgrade and revert information

Upgrading to SnapDrive 5.0

Use this section if a previous version of SnapDrive is installed on your system.

If you are using MPIO with a previous version of SnapDrive: MPIO is not part of the SnapDrive 5.0 installation package, and versions of MPIO that were installed with versions of SnapDrive prior to 4.2 are not recognized by SnapDrive 5.0. For continued path management support with SnapDrive 5.0, you must upgrade to Data ONTAP DSM for Windows MPIO before upgrading to SnapDrive 5.0. You can download Data ONTAP DSM for Windows MPIO from the NOW site.

Upgrading the iSCSI software initiator

To upgrade your Microsoft iSCSI software initiator for stand-alone and clustered configurations, see the *SnapDrive 5.0 Installation and Administration Guide*. The guide is available on the NOW site at <http://now.netapp.com/>. From the NOW site, navigate to the documentation section.

Note

Use of the MPIO MS iSCSIDS included with Microsoft iSCSI Software Initiator 2.03 is supported with SnapDrive 5.0 for Windows.

Upgrading from SnapDrive 4.1 and NTAPDSM using iSCSI to SnapDrive 5.0

If you are currently using SnapDrive 4.1 for Windows with iSCSI and NTAPDSM, and you want to upgrade to SnapDrive 5.0 and continue using iSCSI, complete the following steps.

Step	Action
1	Make sure all LUNs have a single path connected to the host.
2	Uninstall SnapDrive and MPIO by launching the SnapDrive 4.1 executable and choosing Remove.
3	Reboot.
4	Install Microsoft iSCSI Software Initiator 2.03, including Microsoft MPIO Multipathing Support for iSCSI, allowing Microsoft MPIO to claim LUNs.
5	Reboot.

Step	Action
6	Install SnapDrive 5.0. Note _____ MPIO path management is performed in the Microsoft iSCSI control panel. _____

Reinstalling or reverting to SnapDrive 4.1 and earlier after installing Data ONTAP DSM for Windows MPIO

Problem: The MPIO components installed by the Data ONTAP DSM 3.0 for Windows MPIO are not compatible with SnapDrive 4.1 and earlier. These MPIO components are not normally removed when you uninstall the DSM.

What to do: If you want to revert to or reinstall SnapDrive 4.1 or earlier, you must force the removal of all MPIO components installed by the Data ONTAP DSM. See “Uninstalling the Data ONTAP DSM” in the Data ONTAP DSM for Windows MPIO Installation and Administration Guide for complete instructions.

SnapDrive requirements

System requirements

The following table shows the system requirements for SnapDrive 5.0.

Component	Requirement
Operating system on the storage system	Data ONTAP 7.0.5 or later. SnapDrive provides Space Reclaimer support when your storage system is running Data ONTAP 7.2.1 or later. SnapDrive provides igroup mangement when your storage system is running Data ONTAP 7.2 and greater. SnapDrive provides volume-based SnapRestore support when your storage system is running Data ONTAP 7.0.5 or later. For use with Data ONTAP DSM for Windows MPIO, see the Data ONTAP DSM for Windows MPIO NOW Description page for any installation requirements. SnapDrive provides SnapVault backup support of existing SnapVault configurations when your storage system is running Data ONTAP 7.2.1 or later. SnapDrive supports the GUID partition table (GPT) partitioning style on new LUNs created by SnapDrive when you have Data ONTAP 7.2.1 or later installed on your storage system. Note _____ Note: For the most current list of supported Data ONTAP software versions, see the SnapManager and SnapDrive Compatibility Matrix. For the most current list of supported Data ONTAP software versions, see the SnapManager and SnapDrive Compatibility Matrix on the NOW site at http://now.netapp.com/.

Component	Requirement
Licenses enabled on the storage system	◆ iSCSI, if you plan to use iSCSI-accessed LUNs ◆ FCP, if you plan to use FCP-accessed LUNs ◆ SnapRestore® software, which is required only for restoring LUNs from Snapshot™ copies ◆ SnapMirror, if you plan to use the SnapMirror option ◆ FlexClone, which is required to enable volume clone functionality ◆ SnapVault, if you want to use SnapVault for archiving LUN backup sets Note _____ The iSCSI and FCP licenses supplied with SnapDrive enable all the CIFS functionality necessary for using SnapDrive. If you also want <i>full-featured, direct CIFS access</i> to a particular storage system, you must install a separate CIFS license on that storage system.
NetApp Host Agent	If you are currently running NetApp Host Agent (to manage SnapDrive host with DataFabric® Manager), you must upgrade to NetApp Host Agent 2.4.2 or later before upgrading to SnapDrive 5.0 on 32-bit systems. For more information, go to the “SnapDrive 5.0 for Windows Description Page” on the NOW site at http://now.netapp.com/NOW/cgi-bin/software/.

Component	Requirement
Hardware on the Windows host machine	◆ For 32-bit: 2.8 GHz Pentium® 4 or compatible ◆ For 64-bit: Intel® Xeon®, AMD Opteron™, or Intel Itanium ◆ 1 GB system RAM ◆ Emulex® LP9002L-F2 or LP10000 HBAs for FCP (on 32-bit systems), supplied by NetApp HBAs and NICs To determine the number and type of HBAs and NICs required by each host in your SnapDrive configuration, see the section on selecting a SnapDrive configuration in the <i>SnapDrive 5.0 Installation and Administration Guide</i>. The guide is available on the NOW site at http://now.netapp.com/. From this gateway, navigate to the documentation section. To ensure high network bandwidth and ease of configuration, obtain the latest firmware and drivers for the HBAs and network interface cards (NICs) you are using, by following these guidelines: ❖ The NIC you use to facilitate data transfer for the Microsoft iSCSI initiator can come from any vendor, but it must have the appropriate LOGO certification: “Designed for Windows Server 2003.” ❖ See the FCP Host Utilities (Attach Kits) for Windows on the NOW site at http://now.netapp.com/NOW/cgi-bin/software/ for the latest supported Emulex FCP HBAs and drivers. From this gateway, navigate to the FCP Host Utilities (Attach Kits) for Windows download page. ❖ The Microsoft iSCSI initiator must be downloaded from the Microsoft site. For directions and links, go to the NOW site at http://now.netapp.com/NOW/cgi-bin/software/, scroll to the iSCSI Host Support Kit item, select the appropriate platform, and then click Go. ❖ If you are using HBAs, see the NetApp iSCSI Host Compatibility Matrix for information about the correct version to run. You can access the support matrix on the NetApp on the Web (NOW) site at http://now.netapp.com/.
Operating system on the Windows host machine	For Windows Server 2003, one of the following operating systems: ◆ Windows Server 2003 Standard or Enterprise Edition with SP1 or SP2 ◆ Windows Server 2003 R2 ◆ Windows Server 2003 R2 with SP2 ◆ Platforms: x86, x64, and IA64

Component	Requirement
Microsoft Windows hotfixes	Before you can install SnapDrive, your host machine must have the appropriate Microsoft hotfixes installed. Note _____ The Microsoft hotfixes 898790, 902837, 908249, 912063, 913648, 922772, 923424, 923801, and 931300 must be requested directly from Microsoft Product Support Services at http://support.microsoft.com/. _____
Microsoft Windows hotfixes	For Windows Server 2003 If your host is running Windows Server 2003 with SP1 or Windows 2003 R2, you must install the following hotfixes: ◆ 898790 ◆ 902837 ◆ 908249 ◆ 912063 ◆ 913648 ◆ 922772 ◆ 923424 ◆ 923801 ◆ 931300 Note _____ At this time, SnapDrive 5.0 requires hotfix 908249 for both Standard and Enterprise Editions of Windows Server 2003. _____

Bug fixes

About this section

The following table lists bugs that were fixed in SnapDrive 5.0. For a complete list of bug fixes, launch your Web browser, navigate to the following URL, type the Bug ID into the “Enter Bug IDs” field, and then click Go:

<http://now.netapp.com/NOW/cgi-bin/bol/>

Bug ID	Description
221269	SME restore fails with SnapDrive LUN mounting error: Error code: The system cannot find the path specified.
222736	Specifying a path to a LUN in a qtree resulting in “No such LUN exists” has been fixed.
223992	Microsoft Hotfix 931300 for 'VDS volume object not found', 'TVdsVolumeMF::Dismount' error during SME backup verification is now available.
234374	Event 311: Space Reservation monitor event floods application event logs.
243209	Backup applications such as Netbackup can not always delete a snapshot LUN. The underlying cause is the VSS infrastructure being used.

Known issues

About this section The following table lists and describes issues known to exist in SnapDrive 5.0. For the latest information about workarounds, launch your Web browser, navigate to the following URL, type the bug ID into the “Enter Bug IDs” field, and then click Go:

<http://now.netapp.com/NOW/cgi-bin/bol/>

Bug ID	Description and workaround
188404	When rebooting a Windows 2003 MSCS node or bringing up a second node, SnapDrive comes up with application event ID 304, “The RPC server is unavailable.” The error occurs because the SnapDrive service starts before the cluster service is started. Workaround: SnapDrive successfully enumerates disks after restarting Cluster Service; however, disks on some configurations might take longer to enumerate.
210457	The MMC GUI may crash on some x64 systems after doing some LUN operations. When you continuously perform LUN operations like create and connect, MMC GUI may crash on some x64 based systems. This does not affect any of the SnapDrive operations: MMC can be reopened and operations can be continued. Pageheap settings should never be turned on for MMC.exe. This causes MMC to crash on x64 systems. Workaround: There is currently no workaround.

Bug ID	Description and workaround
185003	SnapDrive reports “Event ID: 307, LUN is not recognized by Windows.” There are three possible reasons; this disk is not formatted, or this disk is engaged in a delete, disconnect, or restore operation; or if this disk is a Microsoft cluster system, cluster service might not be started. During disk enumeration, SnapDrive tries to obtain volume information on Windows. If the disk is not formatted, this volume will not exist and SnapDrive will no be able to find the disk’s corresponding Windows volume. If case of delete or disconnect disk operation, SnapDrive dismounts the Windows volume before removing the disk object. If SnapDrive tries to enumerate disks during this time, the Windows volume is not found for a disk that is still connected. If SnapDrive restores disks, it also dismounts the Windows volume and the same problem with disk enumeration occurs. In the case of Microsoft Cluster configurations, on the passive nodes, SnapDrive tries to get Windows volume information from both the active node and from the cluster API. If cluster service on a passive node is not started, SnapDrive cannot initiate cluster API calls; therefore, it cannot get volume information on Window. This also creates a disk enumeration problem. Workaround: Verify system configuration and reinitiate disk enumeration.
222232	When creating or connecting a LUN on Windows 2003 hosts, you might encounter a “failed to mount volume, directory not empty” error. The error happens under the following conditions: 1. Operating system automount feature is enabled (Windows 2003 is disabled by default) 2. Volume arrival Windows event does not occur 3. Volume is actually detected by SWSvc (Snapdrive for Windows Service) In the case of a LUN connection, if the drive letter automatically assigned by the operating system is the desired drive letter, the error can be ignored and no recovery action is needed; otherwise, manually edit the drive letter to the desired drive letter or mount point to recover. In the case of a LUN creation, the volume is automatically mounted, but not formatted with NTFS. To recover, disconnect or delete the virtual disk and retry virtual disk creation. Workaround: Do not enable the automount feature.

Bug ID	Description and workaround
223146	There are two issues associated with unattended installation when HBAs are installed. The first issue occurs when HBAAPI.dll is not part of your SnapDrive installation directory. Workaround: Add the INSTALL_HBAAPI_LIB=1 switch with your silent installation. This switch solves the problem of HBAAPI.dll not being in your SnapDrive installation directory. The second issue is the ql2xhai2.dll is not being extracted after SD silent installation fresh/upgrade. This problem occurs due to StreamFileFromBinary Installshield API failure, which does not work as documented when used in unattended install mode. Workaround: Do not use unattended installation when installing SnapDrive on systems with HBAs.
235339	When creating a Snapshot copy of a Vfiler unit, SnapDrive displays the following error: Unable to create a snapshot of a virtual disk. Error : Please verify the existence of CIFS share on the volume 'vfiler1_vol4' on filer 'vfiler1' SnapDrive expects the assigned share name of the vFiler unit root volume to be returned, but gets c\$, which is the vFiler root volume share and is mapped to “/”, the vFiler pseudo-root volume share. Workaround: Delete the c\$ CIFS share within the vFiler unit.
237931	Installshield error: 1603: Error installing Windows Installer engine during SnapDrive installation. This is due to an issue with Windows Server 2003 SP1 containing an older version of the MSI binaries. Workaround: Install hotfix 898715 to resolve this problem. http://support.microsoft.com/kb/898715

Bug ID	Description and workaround
242742	If a user is running the sdcli SnapVault archive command against multiple LUNs AND the LUNs exist in multiple qtrees and multiple volumes on the primary storage system, only one LUN will be seen on the secondary storage, even though all LUNs have been transferred in the archival snapshot. The archival snapshot will not be seen in SnapDrive; moreover, only one LUN will be visible in the active file system on the secondary storage system after the first SnapVault update of these LUNs. Workaround: 1. Delete archival snapshot on secondary system (if need to use same name for archival snapshot) or use different archival snapshot name. 2. Some data change must happen on all the LUNs. 3. Create new SnapShots on primary with this data change. 4. Run SnapVault archive command again with the new primary snapshots.
243242	Multistore features not yet supported by Data ONTAP or SnapDrive. When using MultiStore with SnapDrive 5.0, please note that SnapVault and Volume Based Snap Restore are not yet supported in this environment. Workaround: Will be addressed in later versions of Data ONTAP.