

SnapDrive® 6.0.2 for Windows®

Release Notes

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Release notes

Topics covered

All the information in this document applies to SnapDrive 6.0.2 for Windows.

The following topics are covered in these release notes:

- ◆ [“Features of this release”](#) on page 2
- ◆ [“Limitations”](#) on page 3
- ◆ [“Upgrade and revert information”](#) on page 5
- ◆ [“SnapDrive requirements”](#) on page 6
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Features of this release

About this release

SnapDrive 6.0.2 is an upgrade to SnapDrive 6.0 and 6.0.1 for Windows. SnapDrive 6.0.2 for Windows contains general feature enhancements and important bug fixes.

SnapDrive 6.0.2 for Windows adds support for LUN connectivity with FlexClone® volumes, including the following:

- ◆ Preventing deletion of manually created FlexClone volumes.
- ◆ Enabling SnapDrive to connect to LUNs located on manually created FlexClone volumes.
- ◆ Preventing LUNs on manually created FlexClone volumes from being connected as shared disks.

SnapDrive 6.0.2 continues to support the following major new and enhanced features introduced in SnapDrive 6.0 and 6.0.1:

- ◆ Support for Windows Server 2008 stand-alone and failover clustering
- ◆ Removal of requirement for a CIFS share
- ◆ Option to use HTTP or HTTPS as a transport protocol
- ◆ Implementation of snap-in for Microsoft Management Console (MMC) 3.0, which replaces UNC browsing with storage system path browsing
- ◆ VMware ESX server support for RDM LUNs over FC HBAs in a guest OS, including the following capabilities:
 - ❖ Support for ESX 3.0.2 Update 1 and ESX 3.5 Update 1
 - ❖ Support for x86 and x64 Windows Server 2003 guest OS (MSCS within a guest OS is not supported)
 - ❖ Vmotion support
- ◆ Storage system Filerview access from within MMC
- ◆ Integration with Protection Manager to enable SnapManager for Exchange to use datasets with SnapVault backup and restore
- ◆ Support for shared LUNs with GPT partitions on Windows Server 2003
- ◆ Support for .NET framework 3.5 SP1 (Microsoft does not support .NET Framework 3.x on Windows Server 2003 IA64 platforms.)
- ◆ Important bug fixes

Limitations

Features not supported in SnapDrive 6.0.2

The SnapDrive 6.0.2 software does not support the following features:

- ◆ Microsoft does not support .NET Framework 3.x on Windows Server 2003 IA64 platforms, so customers using SnapDrive 5.0 and earlier on Windows Server 2003 IA64 systems must upgrade to Windows Server 2008 on IA64 systems before they can use SnapDrive 6.0.2.
- ◆ A LUN managed by SnapDrive cannot be configured as a “dynamic” disk (a storage device that is divided into volumes rather than partitions); it can serve only as a “basic” disk (a storage device for host-side application data).
- ◆ A LUN cannot be configured as an extended partition; SnapDrive supports only a single, primary partition on a LUN.
- ◆ A LUN created in FilerView or at the storage system command line cannot be managed unless certain steps (documented in the *Installation and Administration Guide*) are taken to prepare these disks for SnapDrive
- ◆ Although SnapDrive supports LUNs on qtrees, you cannot manage quotas from SnapDrive.
- ◆ A LUN can be created within a qtree and quota limits for that qtree will be enforced; therefore, you will not be able to create a LUN or expand an existing LUN beyond the quota limit set for that qtree.
- ◆ SnapDrive supports the use of SnapMirror to replicate volumes but not individual qtrees.
- ◆ Conversion of a LUN with an MBR partition to a GPT partition is not supported.
- ◆ 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, only SnapDrive should be used to create Snapshot copies of LUNs.
- ◆ Volume-level SnapVault® configurations are not supported (however, qtree SnapVault configurations are supported).
- ◆ Volume-based Snapshot Restore is 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.

Considerations when using Windows Server 2008 Failover Clustering

For implementing a Windows Server 2008 Failover Clustering solution, Microsoft recommends only hardware that has been validated as part of the Windows Server 2008 Failover Cluster Configuration Program be used. See <http://www.microsoft.com/windowsserver2008/en/us/clustering-program.aspx> for details.

Upgrade and revert information

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

Upgrading to SnapDrive 6.0.2 with MPIO

If you are using MPIO with a version of SnapDrive prior to 6.0.2, for continued path management support with SnapDrive 6.0.2, you must upgrade to the appropriate Data ONTAP DSM for Windows MPIO version before upgrading to SnapDrive 6.0.2. You can download Data ONTAP DSM for Windows MPIO from the NOW site at <http://now.netapp.com>. See “[System requirements](#)” on page 6 for the version of Data ONTAP DSM for Windows currently supported with SnapDrive 6.0.2, or go to the NOW site for the most recent updates.

Upgrading the iSCSI software initiator

To upgrade Microsoft iSCSI Software Initiator for stand-alone and clustered configurations, see the *SnapDrive 6.0 Installation and Administration Guide*, available on the NOW site.

SnapDrive requirements

System requirements

The following table shows the minimum system requirements for SnapDrive 6.0.2.

Component	Requirement
Operating system on the storage system	Data ONTAP 7.1 or later. Integration with Protection Manager to enable SnapManager for Exchange to use data sets with SnapVault backup and restore requires Data ONTAP 7.3 or later. Support for SnapVault backup of existing SnapVault configurations requires Data ONTAP 7.2.1 or later. Support for GPT partitioning style on new LUNs created by SnapDrive requires Data ONTAP 7.2.1 or later. Note For the most current list of supported Data ONTAP software versions, see the NetApp Interoperability page at http://now.corp.netapp.com/NOW/products/interoperability/.
Licenses enabled on the storage system	◆ iSCSI, if you want to use iSCSI-accessed LUNs ◆ FC, if you want to use FC-accessed LUNs ◆ SnapRestore, if you want to restore LUNs from Snapshot copies ◆ SnapMirror, if you want to use the SnapMirror option ◆ FlexClone, if you want to enable volume clone functionality ◆ SnapVault, if you want to use SnapVault for archiving LUN backup sets Note The iSCSI and FC licenses supplied with SnapDrive enable all the CIFS functionality necessary for using SnapDrive. If you also want full-featured, direct CIFS access to a particular storage system, you must install a separate CIFS license on that storage system.

Component	Requirement
NetApp Host Agent	If you are using NetApp Host Agent, you must upgrade to NetApp Host Agent 2.6 or later before upgrading to SnapDrive 6.0.2 on 32-bit systems. For more information, see the SnapDrive 6.0.2 for Windows Description Page on the NOW site at http://now.netapp.com/NOW/cgi-bin/software/ .
Hardware on the Windows host machine	CPU: ◆ For 32-bit: 2.8 GHz Pentium® 4 or compatible ◆ For 64-bit: Intel® Xeon®, AMD Opteron™, or Intel Itanium Memory: ◆ 1 GB RAM HBAs and NICs: To determine the number and types of HBAs and NICs required by each system in your SnapDrive configuration, see the section on selecting a SnapDrive configuration in the <i>SnapDrive 6.0 Installation and Administration Guide</i>, available on the NOW site. The NIC you use to facilitate data transfer for Microsoft iSCSI Software Initiator can come from any vendor, but it must be approved by Microsoft for use with Windows Server. Host Utilities and Software Initiator: To ensure high network bandwidth and ease of configuration, obtain the latest firmware and drivers for the HBAs and NICs you are using. You can accomplish this by installing the appropriate Host Utilities or iSCSI Software Initiator, and by following these guidelines: ❖ See the FC Host Utilities (Attach Kits) for Windows on the NOW site at http://now.netapp.com/NOW/cgi-bin/software/ for the latest supported FC HBAs and drivers. From this gateway, navigate to the FC Host Utilities (Attach Kits) for Windows download page. ❖ Microsoft iSCSI Software 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. ❖ See the iSCSI Host Attach Kit for Windows on the Download Software page for the latest supported iSCSI HBA and drivers.

Component	Requirement
MPIO	Data ONTAP DSM 3.2R1 for Windows MPIO See the Data ONTAP DSM for Windows MPIO description page on the Download Software page for any installation requirements.
Operating system on the Windows host machine	Windows Server 2003 SP2: ◆ Standard or Enterprise Edition ◆ Platforms: x86, x64 Note .NET framework 3.0 SP1 or later is required for Windows Server 2003 before installing SnapDrive. Note Microsoft does not support .NET Framework 3.x on Windows Server 2003 IA64 platforms. Customers using SnapDrive 5.0 and earlier on Windows Server 2003 IA64 systems must upgrade to Windows Server 2008 on IA64 systems before they can use SnapDrive 6.0.2. Windows Server 2008: ◆ Standard or Enterprise Edition ◆ Platforms: x86, x64, IA64

Component	Requirement
Microsoft Windows hotfixes	Before you can install SnapDrive, your host system must have the appropriate Microsoft hotfixes installed. Note The following Microsoft hotfixes must be requested directly from Microsoft Product Support Services at http://support.microsoft.com. Windows Server 2003 SP2 If your system is running Windows Server 2003 with Service Pack 2, you must install the following hotfixes: ◆ 919117 ◆ 931300 ◆ 932755 ◆ 937382 Windows Server 2008 If your system is running Windows Server 2008, you must install the following hotfixes: ◆ 950927 ◆ 955656

VMware ESX guest OS requirements

The following table shows the minimum requirements for running SnapDrive 6.0.2 in the VMware ESX guest OS.

Component	Requirement
Operating system on the ESX server	◆ ESX 3.0.2 Update 1 or later ◆ ESX 3.5 Update 1 or later ◆ ESXi 3.5 Update 2 or later

Component	Requirement
Windows guest OS	◆ Windows Server 2003 SP2 (x86 or x64) with the hotfixes specified in the SnapDrive host requirements ◆ .NET Framework 3.0 SP1 or later Note _____ MSCS within a guest OS is not supported.
FC HBA	See the FC ESX Host Utilities Download page for the latest supported HBAs: ◆ FC ESX Host Utilities 3.0 is required for ESX 3.0.2. ◆ FC ESX Host Utilities 3.1 is required for ESX 3.5.
iSCSI Initiator	See the iSCSI Host Support Kit for Windows on the Download Software page for the latest supported version of Microsoft iSCSI Software Initiator.
NIC	For ESX server 3.0.2, the guest OS must be configured with Intel E1000 NIC (the VMware NIC Driver installed with VMware Tools is not supported.) You can download the driver from http://www.intel.com. The steps to manually configure the Virtual Machine can be found in VMware knowledgebase article 1003020 at http://kb.vmware.com.

Component	Requirement
Storport Miniport driver LSI Logic SCSI Controller	SCSIport Miniport driver is the default LSI Logic SCSI Controller included when Windows Server 2003 SP2 is installed as the guest OS in VMware ESX server. If you are using RDM LUNs, the LSI Logic SCSI Controller must be updated with the Storport Miniport driver for proper SnapDrive operations. The minimum required driver version for x86 is 1.21.15.00 (03/20/2206), and the minimum required driver version for x64 is 1.20.17.00 (06/07/2005). You can download the x86 or x64 version of this driver from http://www.lsi.com by searching for "LSI Logic Fusion-MPT SCSI Driver (Storport)" or by clicking the following links: ◆ For the x86 driver, go to http://www.lsi.com/files/support/ssp/whql%20drivers/22320/win2003/LSI22320-R_w2000_w2003_IM_WHQL_MID1129844.ZIP ◆ For the x64 driver, go to http://www.lsi.com/files/support/ssp/whql/LSI22320-R_wXPx64_IT_WHQL_MID1056284.ZIP Windows Server 2008 includes the Storport Miniport driver and does not need to be updated. Note _____ Links to the LSI Logic drivers are not maintained by NetApp. Contact LSI Logic if you are unable to use these links.
VMware Tools	VMware Tools must be installed before beginning the SnapDrive installation in the guest OS.
SCSI controllers	To support more than fourteen LUNs, the Virtual Machine must be preconfigured with four SCSI controllers. An RDM LUN or a VMDK is required to hold on to these SCSI controllers.

Fixed issues

For a complete list of known issues fixed in SnapDrive 6.0.2, see the Bugs Online & Release Tools page on the NOW site.

To access this page, follow these steps:

1. From a Web browser, go to the NOW site at <http://now.netapp.com>.
2. Under the Technical Assistance & Documentation section, click Bugs Online & Release Tools.

Known issues

This section describes issues known to exist in SnapDrive 6.0.2. For the latest information about workarounds, see the Bugs Online & Release Tools page on the NOW site.

To access this page, follow these steps:

1. From a Web browser, go to the NOW site at <http://now.netapp.com>.
2. Under the Technical Assistance & Documentation section, click Bugs Online & Release Tools.

Requesting 16 TB as the size for a non-space-reserved LUN causes an error

Using Data ONTAP 7.3.1, the `lun create -o nonreserve -s 16t` command fails with the error “Requested LUN size is too large.” In earlier versions of Data ONTAP, this command succeeded and automatically created the largest possible non-space-reserved LUN (17,555,552,340,480 bytes or 16349 GB).

This problem also exists for the `lun-create-by-size` ZAPI that is used by SnapDrive for Windows. When you use SnapDrive for LUN management, creating a LUN by entering the LUN size as 16 TB fails.

Workaround: Creating a non-space reserved LUN with a size of 16349 GB succeeds and creates the same maximum LUN size that you created using Data ONTAP 7.3.

Changing Regional and Language option can result in error message

If the Regional and Language options are changed from the default of English (US), the thousands separator might change to a character other than a period (.). This change can result in SnapDrive 6.x displaying the message “Input string was not in a correct format” during LUN enumeration.

Workaround: To avoid this issue, in Regional and Language options, change the value in the Decimal symbol field to a period (.) instead of a comma (,) or any other symbol.

Slow RDM LUN I/O in VMware

Because the VMware multipathing layer cannot differentiate between a local and a proxy path, RDM LUNs connected using SnapDrive might have I/O sent to the proxy path. In this case SnapDrive logs a warning in the application event log, alerting you that the RDM LUN I/O is going through the non-optimized path.

Workaround: NetApp provides a script in the ESX Host Utilities (EHU) which corrects this behavior. The VMware administrator must run the "config_mpath" script after each provisioning activity or every LUN connect operation to optimize the active path configuration.

HTTP and HTTPS slow when using domain account

If you set up SnapDrive to use HTTP or HTTPS to communicate with storage systems, using the domain Administrator account for authentication results in significantly reduced performance.

Workaround: Use a storage system account for authentication instead of the domain account.

Data ONTAP panic during space reclamation

In versions of Data ONTAP earlier than 7.2.4, a panic might occur on the storage system when the SnapDrive Space Reclaimer attempts to free unused blocks on a LUN.

Workaround: Disable space reclamation in SnapDrive or upgrade the storage system to Data ONTAP 7.2.4 or later.

Documentation corrections

Addition to the *Installation and Administration Guide*

Using the command-line interface from a remote host: Add the following information to the section about enabling SnapDrive to communicate through the Windows Firewall in the *Installation and Administration Guide*.

If Windows Firewall is enabled on your SnapDrive host and you want to use the `-m` option in the command-line interface to execute a command from a remote host, you must add `sdcli` to the allowed programs list for Windows Firewall. Follow the same procedure as for adding `SWSvc.exe`.