

Data ONTAP® DSM 3.3 for Windows® MPIO

Release Notes

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Data ONTAP DSM 3.3 for Windows MPIO Release Notes

These release notes describe new features, enhancements, and known issues for Data ONTAP DSM 3.3 for Windows MPIO.

These release notes apply to the DSM version 3.3. Release Notes might be updated between product releases. You should periodically check online for updated Release Notes.

Release notes are available in .html and .pdf formats. They are optimized for .html viewing and linking.

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DSM 3.3 Overview

The Data ONTAP DSM 3.3 for Windows MPIO enables you to manage multiple Fibre Channel (FC) and iSCSI paths between a NetApp or IBM N series storage system and a Windows host computer.

You can have one or more active paths and any number of passive paths, up to a total of 32 paths to a virtual disk (LUN). If all active paths fail, the DSM automatically switches to the passive paths, maintaining the host's access to its storage.

The DSM has both graphical and command line management interfaces. You can install the DSM interactively or from a Windows command prompt.

Information on finding system requirements

NetApp qualifies additional components between releases of the Host Utilities software.

For the most up-to-date information on the system requirements, see the NetApp Interoperability Matrix.

Related information

[NetApp Interoperability Matrix - http://now.netapp.com/NOW/products/interoperability/](http://now.netapp.com/NOW/products/interoperability/)

New features in this DSM release

The Data ONTAP DSM 3.3 for Windows MPIO includes several new features and support for additional configurations.

DSM 3.3 includes the following changes from DSM 3.2:

- IPv6 is now supported for iSCSI paths to Data ONTAP 7.3.1 software and later.
- New Windows registry settings are included for fabric-attached MetroCluster storage system configurations.
- The LUN type choice was removed. The DSM now always claims both FC and iSCSI LUNs.
- You can change the number of events that are logged by the DSM in the Windows event log. By default, path state changes between active and passive are no longer logged. The logging is controlled by a new Windows registry key.
- Additional FC HBA drivers are now listed as supported in the Interoperability Matrix.

Updates to the release notes

The release notes might be updated between product releases. This section lists any updates since the original release.

No updates

There are currently no updates for this section.

Important Cautions

Before deploying this release of Data ONTAP DSM for Windows MPIO, make sure that you read the following items to identify and resolve issues that might affect the operation of your systems.

To request more information about an individual bug and to explore other bug-related tools, see Bugs Online on the NOW site.

No cautions

There are currently no important cautions for this release.

Known problems and limitations

Some unexpected and potentially undesired behaviors, as well as, in some cases, workarounds to avoid these behaviors, have been identified in this release.

To request more information about an individual bug and to explore other bug-related tools, see Bugs Online on the NOW site.

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Error messages when adding account during installation

When you try to add the service account during DSM installation, you see one or both of the following messages: error in object picker Dialog: Description Invalid access to memory location and The exception unknown software exception (0x00000005) occurred in the application at location *address*.

This problem has been observed on Windows Server 2003 x64 processor systems.

The first message (error in object picker Dialog: Description Invalid access to memory location) is displayed when you click **Add** to add a new account for the DSM service. The installation does not continue. The second message is displayed when you cancel the installation program.

The workaround is to restart the DSM installation program.

DSM does not display virtual disks

A Windows Server 2003 or Windows Server 2008 host running DSM 3.3 fails to display virtual disks (LUNs) that are created.

The virtual disks work correctly, but cannot be viewed or managed using the DSM GUI or CLI.

Contact Customer Support for assistance with bug 300167.

Related information

[Bugs Online - now.netapp.com/NOW/cgi-bin/bol/](http://now.netapp.com/NOW/cgi-bin/bol/)

Uninstalling from FC SAN-booted host

Uninstalling the Data ONTAP DSM can cause the Windows host to crash on reboot. This is because the connection to the boot LUN is not correctly handled by the MPIO layer after removing the Data ONTAP DSM. The Windows host is unable to reconnect to its boot LUN.

About this task

This problem applies only to FC SAN-booted Windows Server 2003 hosts with both the Data ONTAP DSM and the Microsoft iSCSI DSM (or another MPIO DSM) installed.

Steps

1. Uninstall the Microsoft iSCSI Initiator and reboot the Windows host.
2. Check the value of the HKLM\SYSTEM\CurrentControlSet\Control\MPDEV registry key. Make sure that only the value "NETAPP LUN" is listed.
3. If any other values are listed, that means another DSM is still installed on the host. Remove the multipathing software package to which that DSM belongs.
4. Uninstall the Data ONTAP DSM and reboot the Windows host.
5. Reinstall the Microsoft iSCSI Initiator. Be sure to select the Microsoft MPIO Multipathing Support for iSCSI check box. If you removed another multipathing software package, reinstall it.

DSM GUI and CLI display 0.0.0.0 for initiator address

When viewing the paths for a virtual disk in the DSM GUI, or when running the `dsmcli path list -v` CLI command, the iSCSI initiator address is displayed as 0.0.0.0.

This problem occurs only when the iSCSI session is created and the initiator address is allowed to default in the Microsoft iSCSI initiator.

When creating an iSCSI session, manually select the initiator address.

Full DSM feature set not available using Microsoft user interfaces

All management functions of the Data ONTAP DSM are not available through the native Microsoft user interfaces, such as the Microsoft iSCSI GUI.

Use the GUI or CLI supplied with the Data ONTAP DSM for management. The DSM GUI is available from Windows Computer Management.

See the *Data ONTAP DSM for Windows MPIO Installation and Administration Guide* for instructions.

Maximum 32 paths to a virtual disk

The DSM supports a maximum of 32 paths to a virtual disk (LUN), in any combination of FC and iSCSI paths. This is a limitation of the Windows MPIO layer.

Do not create more than 32 paths to a virtual disk.

Attention: Additional paths can be created, but are not claimed by the DSM. Exceeding 32 paths leads to unpredictable behavior of the Windows MPIO layer and possible data loss.

For the latest information, see bug 279429 at Bugs Online.

Related information

[Bugs Online - now.netapp.com/NOW/cgi-bin/bol/](http://now.netapp.com/NOW/cgi-bin/bol/)

New LUNs do not appear in DSM GUI or CLI

When you add new LUNs to your storage system, the new virtual disks are not automatically discovered by the Windows host. You must manually rescan disks.

Steps

1. On the Windows host, select **Start ► Administrative Tools ► Computer Management**.
2. Select **Storage ► Disk Management** in the navigation pane.

The Initialize and Convert Disk wizard starts.

3. If the wizard does not start, select **Action ► Rescan Disks**.
4. Follow the prompts to initialize the disks, but do not convert them to dynamic disks.
5. Partition and format the disks if desired.

After you finish

Refresh the DSM GUI display.

DSM GUI does not display drive letters for dynamic disks

The Virtual Disks page of the DSM GUI does not display Windows drive letters for LUNs used as dynamic disks.

Drive letters are displayed correctly for LUNs that are not used as dynamic disks.

To see the drive letters for dynamic disks, use the `dsmcli lun attributes` command.

Raw passthru SCSI disks on a guest OS are not available when running MPIO on the guest

If you run MPIO software on a guest OS (for iSCSI directly from the guest), and you also configure raw passthru disks as SCSI physical disks from the parent, the guest is unable to use the raw disks.

This issue occurs with the Data ONTAP DSM for Windows MPIO and the Veritas DMP DSM.

When you are running MPIO on the guest, map raw drives as IDE physical disks.

Internal Error: Access is Denied during installation

On Windows Server 2008, you might receive an `Internal Error: Access is Denied` message if User Access Control is enabled and installation is attempted from a user account other than Administrator.

There are two workarounds for this problem.

For the latest information, see bug 312358 at Bugs Online.

For more information about User Access Control, see the Microsoft Technet article *User Account Control Step-by-Step Guide*.

Next topics

[Installing from an elevated command prompt](#) on page 17

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Related information

[Bugs Online - now.netapp.com/NOW/cgi-bin/bol/](#)

[Microsoft Technet User Account Control Step-by-Step Guide - technet.microsoft.com/en-us/library/cc709691.aspx](#)

Installing from an elevated command prompt

Run the installation from an elevated command prompt to avoid the Internal Error: Access is Denied error.

Before you begin

An elevated command prompt is required to install the DSM when User Access Control (UAC) is enabled. The elevated command prompt overrides the UAC restrictions.

Steps

1. Click **Start**.
2. Right-click **Command Prompt** and then click **Run as Administrator**.
3. Run the installation program by navigating to the directory containing the installation package and entering the package name at the command prompt.

Related information

[Microsoft Technet User Account Control Step-by-Step Guide - technet.microsoft.com/en-us/library/cc709691.aspx](#)

Disabling user access control

Disable user access control to avoid the Internal Error: Access is Denied error.

Steps

1. Log in as an administrator.
2. Select **Control Panel** ► **User Accounts** ► **Turn User Account Control on or off**.
3. Clear the **Use User Access Control (UAC) to help protect your computer** check box and then click **OK**.
4. Run the installation program again.

Related information

[Microsoft Technet User Account Control Step-by-Step Guide - technet.microsoft.com/en-us/library/cc709691.aspx](#)

Bugs Online search tool

NetApp provides a online tool that lets you search for the most current information about a known bug.

You can use the Bugs Online tool to determine if new information has been uncovered about a bug or if the bug has been fixed.

Bugs Online provides several search methods. You can enter the bug number or keywords related to the bug. Keyword combinations that you might want to use include:

- ONTAP DSM

You can also set Bugs Online to automatically display all bugs of interest to you. Use the New Bug Alerts Profiler at the bottom of the Bugs Online page to set bug searching criteria that match your requirements

Related information

[Bugs Online & Release Tools - now.netapp.com/NOW/cgi-bin/bol](http://now.netapp.com/NOW/cgi-bin/bol)

NetApp product documentation

You can access documentation for all NetApp products on the NOW site at now.netapp.com.

In addition to product documentation, NetApp provides other product information, such as technical reports and white papers.

Next topics

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How to search for documentation on the NOW site

NetApp provides a variety of documentation on the NOW site that can be helpful in working with the Host Utilities.

You can use the NOW Natural Language PowerSearch tool, located on the Search and Support page on the NOW site, to search through the following information sources:

- Product documents
- Knowledgebase solutions
- Bugs Online
- NOW forums
- Tools and other documentation
- Partner knowledgebases

Related information

[Search and Support -- now.netapp.com/eservice/SupportHome.jsp](http://now.netapp.com/eservice/SupportHome.jsp)

Links to NetApp product documentation

The Access and Order Product Documentation page contains pointers to the most current NetApp documentation for Host Utilities and storage systems.

Links to specific Host Utilities documentation are in the SAN/IPSAN Information Library and available from the NetApp NOW Description Pages for each Host Utilities product.

The following table describes some of the documents on the NetApp NOW Web site that contain current information about host and storage system requirements, supported configurations, and best practices, as well as procedures for installing and managing your storage environment.

If you need more information about...	Go to...
The latest supported configurations	• <i>NetApp Interoperability Matrix</i> • <i>System Configuration Guide</i>
Configuring and managing the storage system	• <i>SAN/IP SAN Best Practices Index</i> • The following documents for your Data ONTAP release in the Data ONTAP Information Library • <i>The Data ONTAP Software Setup Guide</i> • <i>The Data ONTAP Block Access Management Guide for iSCSI and FC</i> • <i>Data ONTAP Release Notes</i> • <i>The Data ONTAP Commands: Manual Page Reference, Volume 1</i> • <i>Data ONTAP Commands: Manual Page Reference, Volume 2</i> • <i>The Data ONTAP Upgrade Guide</i>
Supported Fibre Channel SAN topologies	<i>The FC and iSCSI Configuration Guide</i>
Verifying storage systems and environments	<i>Site Requirements Guide</i>
Configuring your host for the Host Utilities	The Host Utilities documents are in the SAN/IPSAN Information Library

Related information

Access and Order Product Documentation page -

<http://now.netapp.com/NOW/knowledge/docs/docs.cgi>

SAN/IPSAN Library Information Library - <http://now.netapp.com/NOW/knowledge/docs/san/>

NetApp Interoperability Matrix - <http://now.netapp.com/NOW/products/interoperability/>

System Configuration Guide -

<http://now.netapp.com/NOW/knowledge/docs/hardware/NetApp/syscfg/>

SAN/IP SAN Best Practices Index - http://now.netapp.com/NOW/knowledge/docs/bpg/san_ipsan/

Data ONTAP Information Library -

http://now.netapp.com/NOW/knowledge/docs/ontap/ontap_index.shtml

FC and iSCSI Configuration Guide -

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

Site Requirements Guide - <http://now.netapp.com/NOW/knowledge/docs/hardware/NetApp/site.pdf>

How to send your comments

Your feedback is important in helping NetApp provide the most accurate and high quality documentation possible.

If you have comments or suggestions for improving the Host Utilities documents, you can send them to NetApp electronically by emailing them to:

doccomments@netapp.com

To help direct the comments to the correct division, please put **Host Utilities** and the host operating system in the subject line. For example, if you're using Solaris, put **Host Utilities-Solaris** in the subject line.

Contact Technical Support

If you have a question that has not been resolved by these Release Notes, contact NetApp Technical Support.

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Things to check before you call Technical Support

Before you call Technical Support, there are several things you can try in effort to solve the problem yourself.

They include:

- Go through these *Release Notes* to see if they contain information on your problem.
- Check all cables to make sure that they are connected properly.
- If you are using switches, check the power switches to make sure that the system is turned on. You should also make sure the system components were turned on in the correct order.
- Review the troubleshooting information in your Host Utilities installation guide.

Information you need to provide to Technical Support

Before you contact Technical Support, you need to gather information about your system and your problem.

You should have the following information available when you contact Technical Support:

- Your contact information.
- A list of all the NetApp products you are using.
- All the error messages from the system.
- Information on your system setup.
- Your licensing information.

How to contact NetApp Technical Support

You can contact NetApp Technical Support by telephone or from the NetApp NOW site.

To contact Technical Support by telephone, use the following numbers:

- 888 4-NETAPP (US and Canada)
- 00.800.44.NETAPP (EMEA/Europe)
- +800.800.80.800 (Asia/Pacific)

To contact Technical Support from the Web, use the following address:

- <http://now.netapp.com>

For a detailed listing of Technical Support phone numbers, go to the NetApp Support page at <http://www.netapp.com/us/support/ngs-contacts.html>

Related information

Technical Support - <http://www.netapp.com/us/support/ngs-contacts.html>