

NetApp® VDS Hardware Provider 1.1 Installation Guide

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What Virtual Disk Service is

Microsoft® Virtual Disk Service (VDS) is a feature of Microsoft Windows® Server 2003 that provides a single interface for managing disks. VDS uses two provider types to manage storage devices: the *VDS software provider* and the *VDS hardware provider*.

The VDS software provider is built in to the Windows Server 2003 operating system and enables you to manage disks and volumes at the operating system level.

The VDS hardware provider is supplied by your storage hardware vendor and enables you to manage RAID storage arrays.

For more information about Virtual Disk Service, see the [Microsoft](#) web site.

About the Data ONTAP VDS Hardware Provider

The Data ONTAP VDS Hardware Provider enables you to map, monitor, and provision (create, expand, and delete) LUNs on a Data ONTAP storage system from a Windows Server 2003 system.

The Data ONTAP Hardware Provider provides support for LUNs on both the iSCSI and FCP protocols.

About LUN creation: Keep the following points in mind when you use the Data ONTAP VDS Hardware Provider to create LUNs:

- ◆ You can create LUNs only on storage systems running a version of Data ONTAP that supports flexible volumes. LUNs cannot be created on storage systems configured with traditional volumes only.
- ◆ The VDS Hardware Provider creates a new flexible volume for each LUN it creates.
- ◆ Flexible volumes created by the VDS Hardware Provider will only be placed into existing aggregates; the VDS Hardware Provider does not create new aggregates.
- ◆ If the aggregate selected to contain the flexible volume does not have enough free space available, the VDS Hardware Provider will attempt to extend the aggregate to a size sufficient for the flexible volume. If the aggregate cannot be extended, LUN creation will fail.

For information about requirements for installing and running the Data ONTAP VDS Hardware Provider, see “[Verifying minimum requirements](#)” on page 3.

Verifying minimum requirements

Before you install the Data ONTAP VDS Hardware Provider, verify that you have met the following minimum requirements.

Host requirements:

Component	Requirement
Operating system	Windows Server 2003 R2
Additional Windows component	Storage Manager for SANs

Storage system requirements:

Component	Requirement
Operating system	For FCP, Data ONTAP 7.0.3 For iSCSI, Data ONTAP 7.1
Licenses	◆ iSCSI, if you plan to use iSCSI-accessed LUNs ◆ FCP, if you plan to use FCP-accessed LUNs
Storage space	◆ Aggregate space must exist on the storage system and must have space available for LUN creation. Note _____ Storage systems that are configured with traditional volumes only are not supported with the Data ONTAP VDS Hardware Provider. _____

For the most current list of system requirements, see the Data ONTAP VDS Hardware Provider Description Page on the NetApp on the Web (NOW) site at <http://now.netapp.com/NOW/cgi-bin/software/>.

Installing Storage Manager for SANs

Storage Manager for SANs is a component of Windows Server 2003 R2. You must have Storage Manager for SANs installed on your system before you can install the Data ONTAP VDS Hardware Provider. To install Storage Manager for SANs complete the following steps.

Step	Action
1	From the Windows Start menu, click Control Panel > Add or Remove Programs
2	Click Add/Remove Windows Components.
3	From the list of components, select Management and Monitoring Tools, then click Details.
4	In the Subcomponents of Management and Monitoring Tools list, select the checkbox next to Storage Manager for SANs and click OK.

Installing the Data ONTAP VDS Hardware Provider

To install the Data ONTAP VDS Hardware Provider, complete the following steps.

Step	Action
1	Browse to the location of the Data ONTAP VDS Hardware Provider installation package and double-click the installer (ONTAPVDS1.1.exe).
2	Click Next on the “Welcome to the InstallShield Wizard for Data ONTAP VDS Provider” screen.
3	If this is a new installation, accept the license agreement and click Next.
4	In the Customer Information Window, enter the user name and organization in the fields provided, then select either “Install this application for anyone who uses this computer” or “Only for me.” Click Next.
5	In the Destination Folder window, click Change to browse and select a different destination folder than the one displayed; otherwise, click Next to accept the default.

Step	Action
6	The Data ONTAP Support Information window displays the minimum supported versions of Data ONTAP for an FCP or an iSCSI configuration. Click Next.
7	In the Ready to Install window, click Install, then click Finish when the installation is complete.
8	Reboot.

Adding Data ONTAP storage systems to the VDS Hardware Provider

In order for the Data ONTAP Hardware Provider to be aware of available storage systems, the storage systems must be added to the VDS Storage Provider. To add storage systems to the Data ONTAP VDS Hardware Provider, complete the following steps.

Step	Action
1	From the Windows Start menu, click Control Panel > Data ONTAP VDS Hardware Provider.
2	In the VDS Hardware Provider for Data ONTAP window, click Add.
3	In the Filer Details window, enter the following storage system information: ◆ DNS name or IP address ◆ Login name ◆ Password Then click the radio button next to Fibre Channel or iSCSI to select the disk protocol type you will use.
4	Click Verify to check that the storage system information you entered is correct, then click OK.
5	To add additional storage systems, repeat Step 2 through Step 4 .

Managing LUNs

Once you have installed the Data ONTAP VDS Hardware Provider and you have added your storage systems, use Microsoft's Storage Manager for SANs to manage your LUNs. To launch Storage Manager for SANs, select Start > Administrative Tools > Storage Manager for SANs.

For details about managing LUNs with Storage Manager for SANs, see the application's online Help.

Uninstalling Data ONTAP VDS Hardware Provider

To uninstall Data ONTAP VDS Hardware Provider, you can either use the NetApp VDS Hardware Provider installation program or the Add/Remove Programs functionality of the Control Panel.

To use Add/Remove Programs to uninstall NetApp VDS Hardware Provider, complete the following steps.

Step	Action
1	Select Start > Control Panel > Add or Remove Programs to display the Add or Remove Programs window.
2	Select Data ONTAP VDS Hardware Provider and click Remove.