HP ProLiant Windows Storage Server 2003 R2 upgrade guide

This guide provides information to upgrade HP ProLiant storage servers from Microsoft® Windows® Storage Server 2003 Service Pack 1 to Microsoft Windows Storage Server 2003 R2.



Part number: 5697-5667 First edition: March 2006



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Printed in Taiwan.

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About this guide

This guide contains procedures to upgrade HP ProLiant Storage Servers from the Microsoft Windows Storage Server Service Pack 1 (SP1) operating system to the Microsoft Windows Storage Server 2003 R2 operating system. For a list of models eligible for upgrade, see "Servers eligible for upgrade" on page 12.

In addition to being printed and included in your product upgrade kit, this guide is also provided as a PDF printable document on the HP ProLiant Storage Server Documentation CD and on the HP Web site (http://www.hp.com/support/).

Intended audience

This guide is intended for use by technical professionals who are experienced with the following:

- Microsoft[®] administrative procedures
- System and storage configurations

Getting help

If you still have a question after reading this guide, contact an HP-authorized service provider or access our web site: http://www.hp.com/support/.

Known issues and work arounds for the storage server products and the service release are addressed in release notes. To view the latest version, visit <u>http://www.hp.com/go/support</u>. Select **See support and troubleshooting** information and enter a product name/number. Under self-help resources, select **manuals (guides, supplements, addendums, etc.)**.

Related documentation

In addition to this guide, refer to the following documents for more information about using your storage server with the Windows Storage Server 2003 R2 operating system:

NOTE:

- HP ProLiant DL100 G2 Storage Server administration guide
- HP ProLiant DL380 G4 Storage Server administration guide
- HP ProLiant DL585 Storage Server administration guide
- HP ProLiant ML310 G3 Storage Server administration guide

These documents are available on the Documentation CD or they can be obtained at http://www.hp.com/go/support. Select your product, then click **Technical documentation** under the Support section.

Conventions

This document contains the following conventions and symbols:

- Document conventions
- Text symbols

Document conventions and symbols

Convention	Element
Blue text	Cross-reference links and e-mail addresses
Medium blue, underlined text (<u>http://</u> <u>www.hp.com</u>)	Web site addresses
Bold font	 Key names Text typed into a GUI element, such as into a box GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes
Italic font	Text emphasis
Monospace font	 File and directory names System output Code Text typed at the command line
<i>Monospace,</i> <i>italic font</i>	Code variablesCommand-line variables
Monospace, bold font	Emphasis of file and directory names, system output, code, and text typed at the command line

Table 1 Document conventions

Text symbols

Indicates that failure to follow directions could result in bodily harm or death.

\triangle CAUTION:

Indicates that failure to follow directions could result in damage to equipment or data.

MPORTANT:

Provides clarifying information or specific instructions.

🖹 NOTE:

Provides additional information.

₩ TIP:

Provides helpful hints and shortcuts.

HP technical support

Telephone numbers for worldwide technical support are listed on the HP support web site: <u>http://www.hp.com/support/</u>.

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

For continuous quality improvement, calls may be recorded or monitored.

HP subscriber's choice

HP strongly recommends that customers sign up online using the Subscriber's choice web site: <u>http://www.hp.com/go/e-updates</u>.

• Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest versions of drivers, and

firmware documentation updates, as well as instant access to numerous other product resources.

• After signing up, you can quickly locate your products by selecting **Business support**, and then **Storage** under Product Category.

HP-authorized reseller

For the name of your nearest HP-authorized reseller:

- In the United States, call 1-800-282-6672.
- Elsewhere, visit the HP web site: <u>http://www.hp.com</u>. Then, click **Contact HP** to find locations and telephone numbers.

Other helpful web sites

For other product information, see the following HP web sites:

- <u>http://www.hp.com/go/storage</u>
- http://www.hp.com/support/
- http://www.docs.hp.com
- <u>http://www.microsoft.com</u>

10 About this guide

1 Overview

Upgrade process

This guide contains step-by-step instructions to help you upgrade your HP ProLiant Storage Server to the Windows Storage Server (WSS) 2003 R2 operating system. Windows Storage Server 2003 R2 extends the Windows Storage Server 2003 operating system (OS), providing a more efficient way to manage and control access to local and remote resources. In addition, Windows Storage Server 2003 R2 provides a scalable, security-enhanced Web platform for simplified branch server management, improved identity and access management, and more efficient storage management.

Follow the procedures in this guide to upgrade the Windows Storage Server operating systems as follows:

Table 2 WSS 2003 R2 > R2 upgrade

From	То
WSS 2003 R2 Workgroup OS	WSS 2003 R2 Standard OS

Table 3 Windows Storage Server 2003 SP1 > R2 upgrade

From	То
WSS 2003 SP1 Standard OS	WSS 2003 R2 Standard OS
WSS 2003 SP1 Workgroup OS	WSS 2003 R2 Workgroup OS
WSS 2003 SP1 Enterprise OS	WSS 2003 R2 Enterprise OS
WSS 2003 SP1 Express OS	WSS 2003 R2 Express OS

List of servers eligible for upgrade

The table below correlates operating systems with servers eligible for upgrade:

Upgrade OS	HP ProLiant storage server
WSS 2003 R2 Express OS	 ML110 G2 (320GB only)
WSS 2003 R2 Workgroup OS	 DL100 G2 ML110 G2 ML310 G3
WSS 2003 R2 Standard OS	 ML110 DL100 DL100 G2 File-Print Appliance (640GB only) ML350 G4 ML350 G4p ML370 G4 DL380 G4
WSS 2003 R2 Enterprise OS	 DL380 G4 (SAN Gateway only) StorageWorks NAS 9000s DL580 G2 DL585

Table 4 Servers eligible for upgrade

Requirements for upgrade process

Before you begin the upgrade process, carefully review the requirements listed below. In some instances, the upgrade process will not be complete if these requirements are not met.

Product Key

You will be asked to enter a Product Key during the upgrade process. The Product Key is on the Certificate of Authenticity (COA) label shipped with your upgrade kit. Be sure to apply this label to your storage server, covering the original COA label with the new one. After you complete the R2 upgrade process, the old COA will no longer be valid.

Before you begin

\triangle CAUTION:

Once you begin the upgrade process, you cannot undo this process or uninstall the upgrade. **Complete a full-system backup including system state information and all user data before you begin the upgrade process.** Store this backup in a remote location, so it will be available if you need to restore the system to the point before the upgrade begins.

You should complete the following tasks before upgrading to Windows Storage Server 2003 R2:

- Install Service Pack 1 (SP1) from Service Release 5.5 or Service Release 5.6.
- If applicable, make a note of your Microsoft Services for Network File System (NFS) settings (see below).
- If applicable, uninstall HP ProLiant Storage Server iSCSI Feature Pack software. This software will not run under Windows Storage Server 2003 R2.

Important information about upgrade requirements

 You can only perform the upgrade process between different versions of the same Windows Storage Server edition. For example, you can upgrade from Windows Storage Server 2003, Workgroup Edition, to Windows Storage Server 2003 R2, Workgroup Edition. You cannot upgrade from Windows Storage Server 2003 R2, Express Edition, or to Windows Storage Server 2003 R2, Standard Edition.

🖹 NOTE:

The only exception to upgrading to the same edition is from Windows Storage Server 2003, Workgroup Edition to Windows Storage Server 2003 R2, Standard Edition.

- You cannot uninstall Windows Storage Server 2003 R2 once it is installed.
- Help files and other obsolete documents that are no longer valid will be removed by the upgrade process.
- The upgrade process provides a new network-attached interface for storage sever management called the HP Storage Server Management console. The upgrade process removes the existing Windows Storage Server 2003 Web UI, which is now obsolete.

- The upgrade process installs a new File Server Resource Manager (FSRM), which replaces the existing Storage Manager software. The new Quota settings are not migrated during the upgrade process; however, existing settings are listed in the SM_SaveConfig.txt file, which is placed on your desktop.
- The upgrade process uninstalls Windows Storage Server Feature Pack. The upgrade process removes only the Web UI plug-in component.
- The shared resources that were created on the NAS server and the Exchange server configuration are preserved. For information about how to install the Exchange Feature Pack in Windows Storage Server 2003 R2, see Appendix B: Installing Exchange Feature Pack.
- The Single Instance Storage (SIS) feature is installed by default during an upgrade. You can install SIS using Add/Remove Windows Components after the upgrade is completed. Doing so requires files from the upgrade disk.
- Before you begin the upgrade process, you need to record the setting for Microsoft Services for NFS; see Appendix A: Recording settings for Microsoft Services for NFS.
- The following NFS features are not available in Windows Storage Server 2003 R2. If you require these features and cannot transfer them to another server, do not attempt the upgrade process.
 - Gateway for NFS
 - Server for PCNFS

What you get with an R2 upgrade

HP Storage Server Management console

The HP Storage Server Management console (see HP Storage Management Console) is a new user interface in Windows Storage Server 2003 R2 that provides one place to manage files or print serving components. The console is also accessible using Remote Desktop or a web browser.

The Storage Management page provides a portal to:

- File Server Resource Manager
- DFS Management
- Disk and Volume Management
- Indexing Service
- MSNFS (under Share Folder)
- Cluster Management (under Utilities)

The Share Folder Management feature provides a portal to Shared Folders, consisting of:

- Shares
- Sessions
- Open Files



Integrated Microsoft Services for NFS components

Windows Storage Server 2003 R2 contains integrated Microsoft Services for NFS components. For example:

- Server for NFS
- Client for NFS

Before you begin the upgrade process, record the setting for Microsoft Services for NFS; see Appendix A: Recording settings for Microsoft Services for NFS for more information.

Remote connectivity through Distributed File System (DFS)

Windows Server 2003 R2 provides Distributed File System (DFS) capabilities that are focused on the need to replicate data with remote branch offices over wide area networks (WANs). These include:

- New DFS UI console
- New DFS Replication that uses the Remote Differential Compression (RDC) algorithm
- New DFS Cross File RDC capability when Windows Storage Server 2003 R2 Enterprise Edition is at one end of the hub/branch link

Updated DFS namespace failover, failback, and prioritization controls

Single-Instance Storage (SIS) enhancements (Standard and Enterprise OS only)

With Windows Storage Server 2003 R2, SIS includes a *copy-on-write* link between identical files, reducing the amount of redundant data stored on a server. This feature is similar to the *symbolic link* feature implemented in UNIX and other operating systems. However, SIS differs from symbolic links in three ways:

- If two files share disk storage using SIS and someone modifies one of the files, users of the second files do not see the changes. The two files are linked if they are identical in content. In files using symbolic links, changes made through one of the links change the content of all links to a file.
- The shared disk storage that underlies SIS links is maintained by the system. This storage is deleted only if all the SIS links pointing to it are deleted. In files using symbolic links, the link can break if a user deletes the target file.
- 3. SIS works automatically without any user involvement. By contrast, symbolic links must be set up and maintained by the user. SIS automatically determines if two or more files have the same content and links them together.

NOTE:

SIS is only available on Windows Storage Server 2003 R2 Enterprise Edition and Windows Storage Server R2 Workgroup Edition.

IMPORTANT:

If a backup program is not aware of SIS files, the application makes duplicate copies of the SIS files in the backup data file. When restored, this creates normal files instead of reparse points. The SIS *groveler* eventually combines these files, but sometimes this activity does not happen in time to prevent the restore operation from running out of disk space.

Enhanced indexing

In Windows Storage Server 2003 R2, the indexing service is tuned for enhanced indexing and query performance. Before the R2 release, if the indexing service was not entirely up-to-date, the client search engine was required to check every file within the scope of the search on the server. With Windows Storage Server 2003 R2, performance tuning of the indexing service is included in the operating system. The indexing service no longer needs to be 100 percent up-to-date to be used.

The amount of disk space the indexing service requires depends on how much text is in the data files that are being indexed. Pure text files (.txt) usually require an additional 30 percent of disk space for the index, but these are the most data-intensive file types. Other file types that also include non-text data (for example, graphics, audio, and binary data) require less index space.

NOTE:

The SIS common store is automatically excluded from being indexed, so files will not be indexed twice.

2 How to upgrade the storage server

Running the HP ProLiant Storage Server R2 Update DVD

- 1. Power on the HP ProLiant Storage Server.
- Insert HP ProLiant Storage Server R2 Update DVD into the disk drive on the storage server.

NOTE:

If you have auto run enabled, the upgrade will automatically begin.

- 3. Open Windows Explorer, access the DVD disk drive, and double-click the storage server.
- On the Welcome to Hewlett-Packard ProLiant Windows Storage Server Upgrade to R2 screen, click Accept.

HF	P ProLiant Storage Server Upgrade to Windows Storage	
W	elcome to the Hewlett-Packard ProLiant Windows Storage Server Upgrade to R2.	
- sy:	The administrator should boot from the upgrade disk and capture an image of the stem prior to beginning the upgrade.	
- The upgrade disk should be used as the recovery disk after the upgrade.		
-	The update must be performed by a user with administrator privileges.	
-	If Services for Unix 3.5 is installed on the server, it will be uninstalled prior to continuing.	
 The product id that was supplied with the upgrade must be available. You will be prompted for the product Id during the upgrade. The OS must be activated when the upgrade is complete. 		

- 5. Read the End User License Agreement (EULA) and click Accept.
- 6. If the R2 Uninstall Warning prompt displays, click OK.



 Enter the user ID, password, and domain name for this storage server, and click Accept.

HP ProLiant Storage Server Upgrade to Windows Storage Server R2		
HP ProLiant Storage Server Upgrade to Windows Storage Server R2	invent.	
User with Administrator Privliges		
Administrator		
Password		

Verify Password		

Domain		
Gobbler		
<pre><< Back Accept>></pre>	Cancel	

MPORTANT:

You must have administrative rights to enter a user name and password for the storage server.

 Enter the Product Key that was provided on your Certificate of Authenticity (COA), and click Accept.

HP ProLiant Storage Server Upgrade to Windows Storage Server R2	
HP ProLiant Storage Server Upgrade to Windows Storage Server R2	
Please enter the 25 digit product id that was provided in your documentati	on.
<pre></pre>	Cancel

MPORTANT:

The COA is located on a card in the storage server shipping container. The Product Key is located between the two bar codes (1).



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9. If Microsoft Services for UNIX 3.5 (SFU 3.5) is found on the storage server, uninstall it by clicking **Accept**.



Interrupting the uninstall process will damage the upgrade process. This SFU 3.5 uninstall process starts a progress window and reboots the machine when uninstallation is complete.

P ProLiant Storage Server Upgrade to Windows Storage Server R2		
HP ProLiant Storage Server Upgrade to Windows Storage		
Microsoft Services for UNIX 3.5 (SFU 3.5) is being removed from this system.		
- Do not interupt this process. The system will reboot when removal is complete.		
- All NFS connections will be lost.		
The system will reheat automatically when complete		
- The system will boot automatically when complete.		
Cancel		

10. Once the storage server reboots, the update process begins. You see the screen below.



\triangle CAUTION:

Interrupting the update process will cause data loss.

The update process automatically cycles through the following steps.

Table 5 Automatic update process

Action	Automatic Update Process
Uninstalls these components (if they are present on operating system):	 Microsoft Services for Network File System (NFS) Exchange Feature Pack for Windows Storage Server 2003 Storage Manager
	 Server Appliance Kit
	 Cluster components
Installation of these components:	Microsoft .NET Framework 2.0

11. If prompted to insert Service Pack 1 CD-ROM, click **OK**.



NOTE:

Repeat this step as necessary to continue upgrade process.

12. If prompted for needed files, click Browse and Open, then click OK.

Files Need	×	
Q	Some files on Service Pack 1 CD-ROM are needed.	OK
		Cancel
	Insert Service Pack 1 CD-ROM into the drive selected below, and then click OK.	
	Copy files from:	
	D:Ni386	<u>B</u> rowse
	Insert Service Pack 1 CD-ROM into the drive selected below, and then click OK.	Lancel

If Confirm File Replace pop-up message appears, click YES.

After uninstalling components, the HP ProLiant Storage Server configures newly installed components. The screen below is displayed.

Windows Components Wizard				
Configuring Components Setup is making the configuration changes you requested.	R			
Please wait while Setup configures the components. This may take several minutes, depending on the components selected.				
Status: Installing Microsoft .NET Framework 2.0	_			
< <u>B</u> ack <u>N</u> ext >				

Next, HP ProLiant Storage Server Upgrade reboots the storage server again.

Next, HP ProLiant Storage Server Upgrade completes the system upgrade process. You see the screen below.



Next, HP ProLiant Storage Server Upgrade completes the cleanup process. You see the screen below.



13. The HP ProLiant Storage Server Upgrade prompts you to complete the system upgrade process. Click **Finish**.

HP ProLiant Storage Server Upgrade to Windows Storage Server R2					
HP ProLiant Storage Server Upgrade Server R2	to Window	s Storage			
The Upgrade appears to have completed succ continues.	essfully. Pleas	e wait while c	cleanup		
Cleanup has started. Removing backup files. Removing unecessary files. Finalizing R2 installation. Adding custom Hewlett-Packard additions. Adding HP security for ProLiant Storage Server.					
	<< Back	Finish	Cancel		

14. Click Finish to automatically log off the storage server.

MPORTANT:

Be sure to activate the operating system within 30 days of the upgrade, or the operating system will lock you out.

Additional update tasks

After the storage server is upgraded, you can perform the following tasks:

- Rebuild directory quotas
- Rebuild NFS shares

A Recording settings for Microsoft Services for NFS

Before you uninstall Microsoft Services for NFS, you need to record the NFS settings shown in "Microsoft Services for NFS settings" on page 30. Save this information, because you use it to restore Microsoft Services for NFS on the new operating system.

Settings	What to do:	Record NFS data here
Server for NFS shares	Discover the NFS share settings by running NFSSHARE. For each share listed by NFSSHARE, run NFSSHARE share_name.	Share name:
Server for NFS client groups	Discover the client group settings by running NFSADMIN SERVER LISTGROUPS. For each client group NFSADMIN lists, run NFSADMIN SERVER LISTMEMBERS group_name.	Group members:
Server for NFS settings	Discover the Server for NFS settings by running: NFSADMIN SERVER.	Server settings:
User name mapping data	Backup Windows- to-UNIX account mappings by running MAPADMIN BACKUP file_name.	File name:
User name mapping hosts	Backup the .maphosts file by copying the %sfudir%\map- per\.maphosts file to a safe loca- tion.	File location:

Table 6 Microsoft Services for NFS settings

After you uninstall Microsoft Services for NFS and complete the upgrade process, run Nasr2 setup and install NFS components. Then, follow the steps below to restore the Microsoft Services for NFS settings using the data from Microsoft Services for NFS settings:

- 1. Copy the .maphosts file to the %windir%\msnfs directory.
- To restore Windows-to-UNIX account mappings, enter the following at a DOS command prompt: MAPADMIN RESTORE file name
- 3. To setup the server for NFS settings, enter the following: NFSADMIN SERVER CONFIG all_config_options
- 4. To setup client groups, enter the following: NFSADMIN SERVER CREATEGROUP group_name NFSADMIN SERVER ADDMEMBERS group_name host1 host2
- To setup NFS shares, enter the following: NFSSHARE share_name=drive:path all_share_options
- 6. Stop/start all NFS services:
 - Run NET STOP "Client for NFS"
 - Run NET STOP "Server for NFS"
 - Run NET STOP "User Name Mapping"
 - Run NET START "User Name Mapping"
 - Run NET START "Server for NFS"
 - Run NET START "Client for NFS"

32 Recording settings for Microsoft Services for NFS

B Installing Exchange Feature Pack

To install the Exchange Feature Pack in Windows Storage Server 2003 R2:

- 1. Create a share for the folder that contains the Exchange Feature Pack for Windows Storage Server 2003 files.
- 2. From the Exchange Server, execute SETUP.EXE from the share created in step 1.
- On the computer running Windows Storage Server 2003 R2, create shares to contain the Exchange files. Each share must have at least the following permissions on both the share and the underlying folder on the computer running Windows Storage Server 2003 R2:
 - Domain Administrator Full Control
 - Exchange Server Computer Account Full Control

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