Implementing Microsoft Windows Server 2003 on ProLiant servers

2nd Edition

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Abstract

This integration note describes the level of support available for Microsoft® Windows® Server 2003:

- Supported configurations of ProLiant servers
- Recommended system configuration and server platforms
- Supported software, storage options, and network adapters
- Procedures for new installations
- Known issues with workarounds

This paper describes the level of support available for Microsoft Windows Web Server, Standard Server, and Enterprise Server editions of the Windows Server 2003 family. It does not describe support for Itanium® 2-based systems.

Additionally, the focus of this document does not include performing upgrades to Windows Server 2003. For information of this nature, refer to the integration note titled *upgrading to Microsoft Windows Server 2003 on ProLiant servers*. This document and others pertaining to Windows Server 2003 can be found on the HP Windows Server 2003 website at http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html.

Symbols in text

The following symbols can be found in the text of this document:

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

Note: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Introduction to Windows Server 2003

Windows Server 2003 is an extension of the Windows 2000 operating system (OS) environment developed to enhance the customer experience and to improve the overall usability and deployment. With few exceptions, application code developed for use under Windows 2000 will work with Windows Server 2003 family of operating systems.

Microsoft provides Windows Server 2003 in both 32-bit and 64-bit editions. The 64-bit edition supports the Intel® Itanium® and Intel ® Itanium® 2 processors.

This paper covers the 32-bit editions of Windows Server 2003 running on ProLiant servers based on the IA-32 architecture.

Supported configurations

Windows Server 2003 should load and run on any ProLiant server that meets the recommended hardware configuration established by Microsoft.

Carefully review this document for the recommended system configuration and possible issues you might encounter. Performing due diligence optimizes your resources and testing scenarios. Do not use this paper as your sole source of information. In addition to the websites mentioned throughout this paper, you might also want to visit the Windows Server 2003 support page at http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html and the Microsoft website at www.microsoft.com/.

Recommended system configuration

Table 1 lists the recommended minimum system configuration established by Microsoft for Windows Server 2003. The recommendations listed here pertain to the Windows Server 2003 operating system only and do not include the requirements for software applications that run on your system. Please check your application requirements to make certain your system can run both the operating system and your software. Most software vendors have this information posted to their website.

Table 1. Recommended Minimum System Configuration for Windows Server 2003

Parameter	Web Edition	Standard Edition	Enterprise Edition
processor	550 MHz	550 MHz	733 MHz
RAM	256 MB	256 MB	256 MB
monitor	VGA or higher resolution	VGA or higher resolution	VGA or higher resolution
available disk space[1]	1.5 GB	1.5 GB	1.5 GB for x86-based computers
Note 1: Available disk space refers to free disk space on the partition to contain the system files. Additional space is required if you copy the Windows Server 2003 CD contents to the hard disk during installation.			
Note 2: For the latest system requirements for each of the four editions of the Windows Server 2003 family, visit www.microsoft.com/windowsserver2003/evaluation/sysreqs/default.mspx.			

Server platforms

Table 2 lists the ProLiant servers, ROM version, and ROM date that support Windows Server 2003. Refer to the following resources on the Web to assist in determining the ROM version and family of your ProLiant server.

- System ROM family code and version:
  http://h18007.www1.hp.com/support/files/server/us/romhowto.html

- Latest ROMPaq downloads:
  http://h18023.www1.hp.com/support/files/server/us/romtabl.html

- Software and drivers: http://h18007.www1.hp.com/support/files/server/us/index.html

- ProLiant OS support matrix: ftp://ftp.compaq.com/pub/products/servers/os-support-matrix-310.pdf

Table 2. Supported System Platforms for Windows Server 2003

Server platform	ROM family	Minimum ROMPaq version	Minimum ROM date
ProLiant BL10e[3]	I03	4.05	02/17/03
ProLiant BL20p[3]	I01	4.01	01/31/03
ProLiant BL20p G2[3]	I04	shipping with server	
ProLiant BL40p[3]	I02	shipping with server	
ProLiant CL380	P17	4.10	12/18/02
ProLiant DL320	D05	4.06	11/15/02
ProLiant DL320 G2[3]	D13	4.01	03/05/03
ProLiant DL360	P21	4.11	11/15/02
ProLiant DL360 G2	P26	4.06	02/07/03
ProLiant DL360 G3[3]	P31	4.03	03/01/03
ProLiant DL380 (667-1000 MHz)	P17	4.11	12/18/02
ProLiant DL380 G2 (1133 MHz and greater)	P24	4.04	11/15/02
ProLiant DL380 G3[3]	P29	4.02	01/31/03
ProLiant DL560[3]	P30	shipping with server	
ProLiant DL580	P20	4.11	12/17/02
ProLiant DL580 G2[3]	P27	4.03	02/04/03
ProLiant DL740[3]	P47	shipping with server	
ProLiant DL760[3]	P46	4.03	12/15/02
ProLiant DL760 G2[3]	P44	shipping with server	
ProLiant ML310[3]	D12	4.02	02/17/03
ProLiant ML330	D03	4.07	11/15/02
ProLiant ML330 G2[3]	D10	4.03	02/17/03
ProLiant ML330e	D06	4.04	11/15/02
ProLiant ML350 (1 GHz)	D04	4.12	11/15/02
ProLiant ML350 (600, 733, 800, 866, 933 MHz)	D02	4.12	11/15/02
ProLiant ML350 G2[3] (1133 MHz and greater)	D11	4.03	02/17/03
ProLiant ML350 G3[3]	D14	4.01	01/08/03

Server platform	ROM family	Minimum ROMPaq version	Minimum ROM date
ProLiant ML370 (667-1000 MHz)	P17	4.12	12/18/02
ProLiant ML370 G2 (1133 MHz and greater)	P25	4.05	11/15/02
ProLiant ML370 G3[3]	P28	4.02	01/31/03
ProLiant ML530	P19	4.10	12/18/02
ProLiant ML530 G2[3]	P22	4.03	01/28/03
ProLiant ML570	P20	4.11	12/17/02
ProLiant ML570 G2[3]	P32	4.02	02/04/03
ProLiant ML750	P45	4.02	12/15/02
ProLiant 3000 (Pentium III Processor)	P09	4.13A	11/08/00
ProLiant 5500 (Pentium III Xeon Processor)	P12	4.08A	11/08/00
ProLiant 6000 (Pentium III Xeon Processor)	P40	4.08A	12/27/99
ProLiant 6400R (Pentium III Xeon Processor)	P11	4.14A	11/08/00
ProLiant 6500 (Pentium III Xeon Processor)	P11	4.14A	11/08/00
ProLiant 7000 (Pentium III Xeon Processor)	P40	4.08A	12/27/99
ProLiant 8000	P41	4.06	12/15/02
ProLiant 8500	P42	4.06	12/15/02
Note 3: The ROM for this ProLiant server supports the Microsoft® Emergency Management Service console feature in Windows Server 2003.			

Supported software

Table 3 lists supported ProLiant utilities, drivers, and other value-add software and their corresponding version needed for Windows Server 2003.

Table 3. Supported ProLiant Value-add Software for Windows Server 2003

Utility	Minimum version	Location
Array Configuration Utility for Windows 2000	2.90.65.0	http://h18023.www1.hp.com/support/files/server/us/locate/2012.html
PCI Hot Plug Filter Driver	6.1.2.5	http://h18023.www1.hp.com/support/files/server/us/locate/2001.html
ProLiant Support Pack for Microsoft Windows Server 2003[4]	6.30A	http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html
System Configuration Utility	2.58	http://h18023.www1.hp.com/support/files/server/us/locate/1950.html
Note 4: Some elements of the ProLiant Support Pack for Microsoft Windows Server 2003 are superseded by the components residing on the Windows Server 2003 media or are otherwise supported for use with Windows Server 2003. For more information, refer to the "Known issues and workarounds" section of this paper.		

Supported storage options

Table 4 lists supported ProLiant storage options and recommended driver revisions needed to interface with Windows Server 2003.

Table 4. Supported ProLiant Storage Options for Windows Server 2003

Option	Driver	Location	Digital signature
HP 4 GB Hard Disk Drives	DISK.SYS	Windows Server 2003 CD	Yes
HP 9 GB Hard Disk Drives	DISK.SYS	Windows Server 2003 CD	Yes
HP 18 GB Hard Disk Drives	DISK.SYS	Windows Server 2003 CD	Yes
HP 36 GB Hard Disk Drives	DISK.SYS	Windows Server 2003 CD	Yes
HP 72 GB Hard Disk Drives	DISK.SYS	Windows Server 2003 CD	Yes
HP 144 GB Hard Disk Drives	DISK.SYS	Windows Server 2003 CD	Yes
Compaq 4/8-GB SLR Tape Drive	TANDQIC.SYS	Windows Server 2003 CD	Yes
Compaq 4x-32x CD-ROM Drives	CDROM.SYS	Windows Server 2003 CD	Yes
Compaq AIT 100/50/35 Tape Drives	SONYAIT.SYS	Windows Server 2003 CD	Yes
Compaq DDS2/3/4 Tape Drives	4MMDAT.SYS	Windows Server 2003 CD	Yes
HP DDS2/3/4 Tape Drives	4MMDAT.SYS	Windows Server 2003 CD	Yes
HP DAT72 Tape Drive	HPDAT.SYS	**For 32-bit:** SP21969 **For 64-bit:** SP21970	Yes
LTO 215/230 Ultrium-1 Tape Drives	LTOTAPE.SYS	Windows Server 2003 CD	Yes
LTO Ultrium-2 460 Tape Drive	HPLTO.SYS	**For 32-bit:** SP21966 **For 64-bit:** SP21967	Yes
Compaq VS80	DLTTAPE.SYS	Windows Server 2003 CD	Yes
HP SureStore VS80	DLTTAPE.SYS	Windows Server 2003 CD	Yes
Compaq 4/8 GB Autoloader	DDSMC.SYS	Windows Server 2003 CD	Yes
Compaq DDS2 4/16 GB Autoloader	DDSMC.SYS	Windows Server 2003 CD	Yes
Compaq DDS3 12/24 GB DAT Autoloader	DDSMC.SYS	Windows Server 2003 CD	Yes
Compaq DDS4 8 Cassette Autoloader	DDSMC.SYS	Windows Server 2003 CD	Yes
HP DDS4 6 Cassette Autoloader	DDSMC.SYS	Windows Server 2003 CD	Yes
StorageWorks 35GB AIT Autoloader	POWERFIL.SYS	Windows Server 2003 CD	Yes
StorageWorks 8/16 Cartridge DLT Autoloader	ADICSC.SYS	Windows Server 2003 CD	Yes
StorageWorks SSL1016 Autoloader	HP116N32.SYS	**For 32-bit:** SP21971	Yes
Compaq DLT 15 Cartridge Library Model 15/30	HPMC.SYS	Windows Server 2003 CD	Yes
Compaq DLT 15 Cartridge Library Model 20/40	HPMC.SYS	Windows Server 2003 CD	Yes
Compaq DLT 15 Cartridge Library Model 35/70	HPMC.SYS	Windows Server 2003 CD	Yes
Compaq DLT Tape Drives	DLTTAPE.SYS	Windows Server 2003 CD	Yes
StorageWorks MSL5000 Series Mini-Libraries	LIBXPRMC.SYS	Windows Server 2003 CD	Yes

Option	Driver	Location	Digital signature
StorageWorks SSL2020 AIT Mini-Library	LIBXPRMC.SYS	Windows Server 2003 CD	Yes
StorageWorks TL881 DLT Mini-Library	LIBXPRMC.SYS	Windows Server 2003 CD	Yes
StorageWorks TL891 DLT Mini-Library	LIBXPRMC.SYS	Windows Server 2003 CD	Yes
Drive Array Notification [5]	CPQDAEN.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes
Smart Array 5xxx Notification Driver [5]	CPQCISSE.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes
Smart Array 5i Controller [5, 6]	CPQCISSM.SYS	Windows Server 2003 CD	Yes
Smart Array 5300 Controller [5, 6]	CPQCISSM.SYS	Windows Server 2003 CD	Yes
Smart Array 5312 Controller [5, 6]	CPQCISSM.SYS	Windows Server 2003 CD	Yes
Smart Array 532 Controller [5, 6]	CPQCISSM.SYS	Windows Server 2003 CD	Yes
Smart Array 641 Controller [6]	CPQCISSM.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes
Smart Array 642 Controller [6]	CPQCISSM.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes
Fibre Channel Host Controller /P [5] (32-bit/33-MHz Fibre Channel Host Adapter)	CPQFCALM.SYS	Windows Server 2003 CD	Yes
Fibre Channel Host Controller /P [5] (64-bit/66-MHz Fibre Channel Host Adapter)	CPQFCALM.SYS	Windows Server 2003 CD	Yes
Fibre Channel Filter Driver [5]	CPQFCFTR.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes
Fibre Channel Array [5, 6]	CPQFCAC.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes
Smart Array 431, 4200, Smart Array 4250ES, and Integrated Smart Array Controllers [5, 6]	CPQARRY2.SYS	Windows Server 2003 CD	No
Integrated Dual Channel Wide Ultra2 SCSI Adapter [5]	SYM_HI.SYS	Windows Server 2003 CD	Yes
Integrated Wide Ultra2 SCSI Adapter [5]	SYM_HI.SYS	Windows Server 2003 CD	Yes
Integrated Ultra2 SCSI Adapter [5]	SYMC8XX.SYS	Windows Server 2003 CD	Yes
64-Bit Dual Channel Wide Ultra2 SCSI Adapter [5]	SYM_HI.SYS	Windows Server 2003 CD	Yes

Option	Driver	Location	Digital signature
64-bit/66MHz Dual Channel Wide Ultra 3 SCSI Adapter [5]	ADPU160M.SYS	Windows Server 2003 CD	Yes
64-bit/66MHz Single Channel Wide Ultra 3 SCSI Adapter [5]	ADPU160M.SYS	Windows Server 2003 CD	Yes
ProLiant Storage System [5]	PRLNTSS.SYS	ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A	Yes

Note 5: Driver upgrades for many of the listed devices are included in Version 6.30A of the ProLiant Support Pack for Microsoft Windows Server 2003. After installing Windows Server 2003, update those drivers to enhance their reliability and functionality.

Note 6: Many of these devices have firmware upgrades available through variations of the Options ROMPaq. The latest version of each Options ROMPaq is available on the software and drivers website at http://h18007.www1.hp.com/support/files/server/us/index.html.

Supported network interface controllers

Table 5 lists supported ProLiant network interface controllers (NICs) and driver revisions supported by Windows Server 2003.

Table 5. Supported ProLiant Network Interface Controllers for Windows Server 2003

NIC	Driver	Location	Digital signature
NC3120 Fast Ethernet	N100325.SYS	Windows Server 2003 CD	Yes
NC3121 Fast Ethernet	N100325.SYS	Windows Server 2003 CD	Yes
NC3122 Fast Ethernet	N100325.SYS	Windows Server 2003 CD	Yes
NC3123 Fast Ethernet	N100325.SYS	Windows Server 2003 CD	Yes
NC3131 Fast Ethernet	N100325.SYS	Windows Server 2003 CD	Yes
NC3132 Fast Ethernet Upgrade Module	N100325.SYS	Windows Server 2003 CD	Yes
NC3133 Fast Ethernet Upgrade Module	N100325.SYS	Windows Server 2003 CD	Yes
NC3134 Fast Ethernet	N100325.SYS	Windows Server 2003 CD	Yes
NC3135 Fast Ethernet Upgrade Module	N100325.SYS	Windows Server 2003 CD	Yes
NC3162 Fast Ethernet (Embedded)	N100325.SYS	Windows Server 2003 CD	Yes
NC3163 Fast Ethernet (Embedded)	N100325.SYS	Windows Server 2003 CD	Yes
NC4621 Token Ring NIC	CPQTRND5.SYS	Windows Server 2003 CD	Yes
NC6132 Gigabit Module	N1000NT5.SYS	Windows Server 2003 CD	Yes
NC6133 Gigabit Module	N1000NT5.SYS	Windows Server 2003 CD	Yes
NC6134 Gigabit	N1000NT5.SYS	Windows Server 2003 CD	Yes
NC6136 Gigabit	N1000NT5.SYS	Windows Server 2003 CD	Yes
NC7131 Gigabit	N1000NT5.SYS	Windows Server 2003 CD	Yes
NC7132 Gigabit Module	N1000NT5.SYS	Windows Server 2003 CD	Yes

NIC	Driver	Location	Digital signature
NC7760 PCI-X Gigabit Server LAN on the Motherboard (LOM)	Q57XP32.SYS	Windows Server 2003 CD	Yes
NC7770 Gigabit	Q57XP32.SYS	Windows Server 2003 CD	Yes
NC7780 PCI Gigabit Server LOM	Q57XP32.SYS	Windows Server 2003 CD	Yes
NC7781 PCI-X Gigabit Server LOM	Q57XP32.SYS	Windows Server 2003 CD	Yes
IBM 16/4 TOKEN RING PCI SPECIAL	IBMTRP.SYS	Windows Server 2003 CD	Yes
Netelligent 16/4 PCI IBM UTP/STP Controller	IBMTRP.SYS	Windows Server 2003 CD	Yes
IMPORTANT: The drivers for the network interface controllers reside on the Windows Server 2003 CD and have undergone testing by Microsoft and HP.			

ProLiant cluster support

A critical goal of HP's Adaptive Enterprise is to offer customers the ability to reduce exposure to unplanned downtime through automated software and hardware tools that predict, diagnose, and respond immediately to potential fault conditions. HP delivers intelligent fault resilience with its High Availability Clustering product solutions and kits built on Windows Server 2003, Enterprise Edition, industry standard ProLiant servers, Smart Array Cluster Storage, or StorageWorks platforms integrated with HP management tools.

The ProLiant DL380 G3 Packaged Cluster, ProLiant DL380 G2 Packaged Cluster, and ProLiant CL380 Packaged cluster now support Windows Server 2003, Enterprise Edition.

The ProLiant Cluster Kits HA/F500 for Enterprise Virtual Array, HA/F500 for MA8000, and HA/F100 & F200 for MSA1000 will be available shortly after launch.

PCI Hot Plug support

PCI Hot Plug is the ability to physically insert, remove, or replace PCI adapters while a ProLiant server is powered on. PCI Hot Plug operations may be performed under Windows Server 2003 on supported ProLiant servers with the PCI Hot Plug Filter Driver installed. ProLiant storage options and network interface controllers are supported for PCI Hot Plug operations.

ProLiant servers that are capable of PCI Hot Plug include:

ProLiant DL servers	ProLiant ML servers	Retired ProLiant servers
ProLiant DL380 G2	ProLiant ML370 G2	ProLiant 6400R
ProLiant DL380 G3	ProLiant ML530 G2	ProLiant 6500 Xeon
ProLiant DL580	ProLiant ML570	ProLiant 7000 Xeon
ProLiant DL580 G2	ProLiant ML570 G2	ProLiant 8000
ProLiant DL740	ProLiant ML750	ProLiant 8500
ProLiant DL760		
ProLiant DL 760 G2		

Higher availability on HP and Microsoft solutions is achieved through the deployment of Hot Plug RAID Memory, the most robust memory-protection solution in the HP Advanced Memory Protection strategy. With the introduction of the next generation of industry-leading ProLiant 8-way platforms, the ProLiant DL760 G2 and ProLiant DL740, HP is the first and only vendor to offer Hot Plug RAID Memory in an industry-standard platform. With the introduction of these two new platforms based on the HP F8 chipset, customers will be able to, for the first time, deploy mainframe levels of availability

in their industry-standard IT environments, without the high cost of mainframe technology. With the HP/Microsoft solution, customers can dynamically hot-add memory capacity without powering down the server which delivers true resource scalability and maximum uptime for enterprise customers. The Hot Add Memory feature in the specified 4-way and 8-way ProLiant servers is only supported in Windows Server 2003.

The following Hot Plug RAID Memory driver and utility are included in Version 6.30A of the ProLiant Support Pack for Microsoft Windows Server 2003:

- HP ProLiant Hot-Plug Memory Configuration Utility for Windows Server 2003

- HP ProLiant Hot Plug Memory Driver for Windows Server 2003

Remote management support

Remote management products, such as Integrated Lights-Out, Remote Insight Lights-Out Edition, and Remote Insight Lights-Out Edition II, remain an important part of the ProLiant solution adding new support for the Windows Server 2003 operating system. Drivers for these products are included in the ProLiant Support Pack for Microsoft Windows Server 2003. Refer to Table 6 for supported remote management features and functionality on Windows Server 2003.

Table 6. Supported Features and Functionality for Lights-Out Products

	Integrated Lights-Out	Remote Insight Lights-Out Edition	Remote Insight Lights-Out Edition II
128-bit Encrypted Remote Console			✓
Advanced Server Management (ASM)	✓		
Alert Administration	✓	✓	✓
Auto-Configuration of IP Address via DNS/DHCP	✓	✓	✓
Auxiliary Power	✓	✓	✓
Customizable Accounts	✓	✓	✓
Dedicated LAN Network Connectivity	✓	✓	✓
Dial-up Support [7]	✓	✓	✓
Microsoft Emergency Management Service (EMS) Console [8]	✓		✓
External Power Backup		✓	✓
Fast Graphical Remote Console			✓
Graphical Remote Console	✓	✓	✓
Group Administration	✓	✓	✓
Headless Server Deployment	✓	✓	✓
Integrated Lights-Out Log	✓		
Insight Manager and Web-Enabled Agent Integration	✓	✓	✓
Integrated Management Log	✓	✓	✓
Remote Insight Event Log	✓	✓	✓
Reset and Failure Sequence Replay		✓	✓
ROM-Based Configuration Utility	✓	✓	✓
Server Diagnostics	✓		

	Integrated Lights-Out	Remote Insight Lights-Out Edition	Remote Insight Lights-Out Edition II
SSL Security	✓	✓	✓
User Administration and Security	✓	✓	✓
Virtual Floppy Drive		✓	✓
Virtual Indicators	✓		
Virtual Media (CD)		✓	✓
Virtual Media (Floppy Drive)	✓	✓	✓
Virtual Power Button	✓	✓	✓
Virtual Private Network (VPN) Support [9]	✓	✓	✓
Virtual Text Remote Console	✓	✓	✓

Note 7: These management products support dial-up access when using a modem router or external Remote Access Service (RAS) connection to log on to the network.

Note 8: The Microsoft Emergency Management Service (EMS) console provides a text-based screen to access the host server. The Emergency Management Service console option is available on ProLiant servers using the Windows Server 2003 operating system only. Refer to Table 2 for the list of ProLiant servers supporting the EMS feature.

Note 9: Product functionality is available around the world when used in conjunction with VPN technology.

For detailed QuickSpecs and other information about remote management products, visit: www.hp.com/servers/manage.

SmartStart installation paths

Beginning with SmartStart 6.30, server deployment of Microsoft Windows Server 2003 is now consistent and easy every time with ROM-based utilities, whether you choose a SmartStart assisted installation or a manual operating system installation.

To fully optimize the performance of your hardware platform, a SmartStart assisted installation walks you through the entire operating system installation process. Using an assisted installation, SmartStart prepares the server for installation, allows you to install the operating system using the vendor-supplied CDs, and provides automated installation of server support software using ProLiant Support Packs (PSPs).

For a manual installation of the operating system, you can take advantage of the ROM-based utilities and vendor-supplied operating system media before manually installing server support software from the SmartStart CD.

For more information on SmartStart, go to the SmartStart website at www.hp.com/servers/smartstart. The installation guide, available on this website, walks you through both SmartStart installation paths.

Pre-installation tasks

To prepare for installation, gather the supported software detailed below.

1. Obtain ProLiant Support Pack (PSP) for Microsoft Windows Server 2003 Version 6.30A (or later) at http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html or from the SmartStart 6.30 CD. This PSP contains device drivers, management agents, and utilities supported under Windows Server 2003.

Note: Once the ProLiant Support Pack for Microsoft Windows Server 2003 Version 6.30A (or later) is installed, you can use Insight Manager 7 SP2 available at http://h18000.www1.hp.com/products/servers/management/cim7-intermediate.html to manage your Windows Server 2003 servers. Insight Manager 7 SP2 requires installing Microsoft SQL Server or Microsoft Database Engine (MSDE) before installing Insight Manager 7 SP2. MSDE is delivered in the Insight Manager 7 SP2 SoftPaq. Insight Manager 7 SP2 currently runs under Microsoft Windows NT® 4.0, Microsoft Windows 2000, and Microsoft Windows Server 2003.

2. Obtain System Configuration Utility Version 2.58 (or later) at http://h18023.www1.hp.com/support/files/server/us/locate/1950.html and create the associated bootable diskette set. Invoke the utility and verify that all system configuration options conform to those listed for the platform you have chosen.

IMPORTANT: Create the bootable diskette set if you plan to use the SmartStart Assisted Installation Path.

The ProLiant servers listed below are pre-configured with the ROM-Based Setup Utility (RBSU). This utility can be used in place of the System Configuration Utility and must be used to specify the operating system on the server if you are using the SmartStart Assisted Installation Path.

ProLiant BL servers	ProLiant DL servers	ProLiant ML servers
ProLiant BL10e	ProLiant DL320	ProLiant ML310
ProLiant BL20p	ProLiant DL360 G2	ProLiant ML330 G2
ProLiant BL20p G2	ProLiant DL380 G2	ProLiant ML350 G2
ProLiant BL40p	ProLiant DL560	ProLiant ML350 G3
	ProLiant DL580 G2	ProLiant ML370 G2
	ProLiant DL740	ProLiant ML370 G3
	ProLiant DL760	ProLiant ML530 G2
	ProLiant DL760 G2	ProLiant ML750

Procedures for performing a clean installation

This section outlines the proper procedures to follow when performing a clean (new) installation of the Windows Server 2003 operating system on ProLiant servers.

To complete a Windows Server 2003 installation fully supported by HP, follow these steps when setting up the system. Read the following sequence completely before you begin.

Blade installation

The ProLiant Essentials Rapid Deployment Pack is a server deployment product that facilitates the installation, configuration, and deployment of high-volumes of servers via a GUI-based console using either scripting or imaging technology.

Especially designed for the ProLiant BL servers, but supporting all ProLiant servers, the Rapid Deployment Pack has advanced features that can detect and display server blades based on their physical rack, enclosure, and bay location. You can set the deployment console to automatically install or redeploy a previous computer's configuration to a new blade when replaced.

To install Windows Server 2003 on ProLiant BL servers, HP recommends using Rapid Deployment Pack Version 1.40 (or later).

All blade enclosures ship with a BL Foundation Pack which includes the Rapid Deployment Pack CD. The Rapid Deployment Pack CD contains all of the drivers, agents, and support software that the blade needs. Use the Rapid Deployment Pack CD with any deployment method chosen to install software on ProLiant BL servers.

For additional product information and usage instructions for Rapid Deployment Pack, visit http://h18013.www1.hp.com/products/servers/management/rdp/index.html.

Details about other deployment options can be found at the following locations:

- **For ProLiant BL e-Class:**
  http://h18004.www1.hp.com/products/servers/proliant-bl/e-class/deployment.html

- **For ProLiant BL p-Class**:
  ftp://ftp.compaq.com/pub/supportinformation/techpubs/installation_guides/307153-001_rev1_us.pdf

Manual install

To perform a manual installation:

1. Select a supported system platform from the server platforms listed in Table 2.

2. Inspect the system to confirm that it conforms to the platform-specific configuration listed in Table 2. If necessary, update the system ROMs as specified in this table.

3. Use the System Configuration Utility to configure the hardware for your server. See the list of RBSU-capable ProLiant servers on page 12 to determine if this step is necessary for your server.

4. If the server has a Smart Array 642, Smart Array 641, Smart Array 5300, Smart Array 531, Smart Array 5i, Smart Array 431, or Integrated Smart Array Controller installed as the boot controller, configure these arrays by accessing the Option ROM Configuration for Arrays utility via the F8 key during boot. Once the configuration is complete, exit the utility to continue the boot process.

> **Note:** Alternatively, you may set your array controller as the secondary controller and install the OS to a SCSI controller. Once the OS is installed, configure the array through the Array Configuration Utility (ACU) using the PSP for Microsoft Windows Server 2003 Version 6.30A.

5. Insert the Windows Server 2003 CD into CD-ROM drive to begin installation.

6. After Windows Server 2003 has been installed, install the Simple Network Management Protocol (SNMP), if you want to use the functionality of the ProLiant Management Agents.

    - Select the **Control Panel** from the Start menu.

    - Select **Add/Remove Programs**.

    - Click the **Add/Remove Windows Components** button.

    - Select **Management and Monitoring Tools** from the list of components.

    - Click the **Details** button.

    - Select **Simple Network Management Protocol** so that a checkmark is displayed in the checkbox.

    - Click the **OK** button and then the **Next** button.

    - Click the **Finish** button.

7. Install Version 6.30A (or later) of the ProLiant Support Pack (PSP) for Microsoft Windows Server 2003, which is available at http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html. The PSP contains numerous files. For the PSP to be installed properly, all files must be present in the same directory as the SETUP.EXE program.

    Primary installation method

    - Run the *SETUP.EXE* program included with the PSP. By default, all software components are selected for installation. In most circumstances, this default selection should not be altered.

    - Click the **Install** button to proceed with the installation. Although all software components are selected for installation by default, only those required by the server will install. After the installation is complete, the utility will display successfully installed components, non-applicable components, and any component installation failures.

    Command prompt installation

    - Use the *SETUPC.EXE* to install the PSP from a command line prompt without user interaction. This utility is designed as a tool that can be scripted. As with the SETUP.EXE program, all components appropriate for the target server will be installed.

    - For additional usage information, refer to the *BP000150.TXT* file included with the downloaded files and the *ProLiant Support Pack and Deployment Utilities User Guide* posted on the download Web page for the PSP.

Unattended install

For detailed procedures on unattended installs, refer to Microsoft documentation. When using an *UNATTEND.TXT* file, follow these additional procedures.

1. Add the following line in the unattend section if the *UNATTEND.TXT* file has the OEMPreinstall flag set.

```
[UNATTEND]

DisableVirtualOemDevices=Yes
```

2. Ensure that any special hardware-specific drivers appropriate for your ProLiant server are available in the specified OEMFilesPath. The drivers for the supported devices may not be included on the base media.

Note: These changes are only necessary when using an *UNATTEND.TXT* file with the OEMPreinstall flag set. Failure to set this flag could cause installs to abort with the following message: "File [filename] could not be loaded. Error code is 18. Setup cannot continue."

Known issues and workarounds

This section details the known issues with installing Windows Server 2003 on ProLiant servers and provides information about resolving them.

Table 7. Known Issues

Management product issues

Issue 1	Yellow exclamation mark gets displayed in ATI Device Manager with Remote Insight Lights-Out Edition installed.
Description	When using Remote Insight Lights-Out Edition, the Windows Server 2003 Device Manager displays a yellow exclamation mark beside the ATI device. However, when this happens, there is no loss of functionality or other reported symptoms.
Workaround	No workaround is available at this time.
Solution	HP engineers are working with Microsoft to resolve this issue.

Memory issues

Issue 2	Hibernation issue exists with 4 GB or more system memory.
Description	The Hibernation tab does not install on servers with 4 GB or more system memory.
Workaround	See solution.
Solution	Hibernation with 4 GB or more system memory is not supported in Windows Server 2003.

Networking issues

Issue 3	Embedded network interface controllers are not enumerated consistently.
Description	After installing and configuring embedded network interface controllers (NICs) post Windows Server 2003 installation, the port configurations may not operate as expected.

Storage issues	Workaround	Switch cables if you are experiencing this situation.
	Solution	HP engineers are working with Microsoft to resolve this issue.
	Issue 4	**Dynamic disk drives attached to Compaq Fibre Channel HBAs disappear after "hot-swap."**
	Description	After hot removal and subsequent hot addition of the Compaq Fibre Channel Array or the Compaq Fibre Channel Host Controller /P (64-bit/66-MHz Fibre Channel Host Adapter) from one slot to another, the dynamic disk drive letters associated with the drives attached to the Compaq Fibre Channel Array or the Compaq Fibre Channel Host Controller /P are no longer listed in the Device Manager.
	Workaround	Reboot the server for the correct dynamic disk drive letters to return.
	Solution	Scheduled to be fixed in a later Microsoft operating system release.
	Issue 5	**The Smart Array 4200 Controller Driver does not install during Setup.**
	Description	During the install of Windows Server 2003, a popup box reports the following: `Setup had problems installing the following device: Compaq Smart Array 4200 Controller. Do you want to delay installing this device until after setup is complete?` The Smart Array 4200 Controller will not be installed during Windows Server 2003 Setup if this controller is set as the boot controller.
	Workaround	Manually install the CPQARRY2.SYS driver by pressing **F6** during Setup.
	Solution	HP engineers are working with Microsoft to resolve this issue.
	Issue 6	**Software fault tolerant volumes (dynamic disks) fail during driver upgrade or rollback.**
	Description	When a device driver is updated for a device containing dynamic disks, the software fault tolerant volumes located on these dynamic disks will fail and will require regeneration.
	Workaround	No workaround is available at this time.
	Solution	Scheduled to be fixed in a later Microsoft operating system release.
	Issue 7	**Upgrading miniport driver for secondary device requires reboot.**
	Description	When a device driver for a secondary device is updated, the Windows Server 2003 operating system may request a reboot.
	Workaround	Reboot the server as prompted.
	Solution	Scheduled to be fixed in a later Microsoft operating system release.

Issue 8	Incorrect port number and port ID returned in insertion and removal events.
Description	When using Smart Array 5xxx Notification Driver, CPQCISSE.SYS, Version 5.42.0.32 with Smart Array Cluster Storage, the port number and port ID in removal and insertion events are reported incorrectly.
Workaround	No workaround is available at this time.
Solution	HP engineers are working to resolve this issue.
Issue 9	The native OS backup utility may prohibit appending data to the tape drive.
Description	When performing a backup using the native OS backup utility, you might receive a message describing a hardware error. In this case, the following message will be displayed at the end of the backup job: `Drive Error: The device reported an error on a request to write data to media.  Error Reported: Invalid command.  There may be a hardware or media problem. Please check the system event log for relevant failures.` The backup log will suggest that drive C is not a valid drive or that you do not have access to the drive. After you receive this error, you can no longer append data to that tape drive.
Workaround	See solution.
Solution	Download the Microsoft HotFix **WindowServer2003-KB817688-I386-ENU.EXE** from this website: http://h18001.www1.hp.com/partners/microsoft/ windowsserver2003/support.html. Then, run this executable in the Windows Server 2003 environment.

System health issues

Issue 10	ProLiant Advanced System Management Controller Driver for Microsoft Windows Server 2003 (CPQASM.SYS) will not load on the ProLiant 3000, 5500, or 6500.

Description	The ProLiant Advanced System Management Controller Driver for Microsoft Windows Server 2003 (CPQASM.SYS) will not load on the ProLiant 3000, 5500, or 6500. The Windows Server 2003 version of this driver depends on ACPI support, and these ProLiant models do not support ACPI. Other components that depend on this driver may fail to load or may not provide full functionality.
	
	The following message will be displayed in CPQSETUP.LOG after the driver is installed:
	
	`Name:  hp ProLiant Advanced System Management Controller Driver for Windows Server 2003`
	
	`New Version:     5.30.3718.0`
	
	`Beginning Silent Session…`
	
	`The software is not installed on this system, but is supported for installation.`
	
	`  - the component will be installed`
	
	`Installation failed on at least one device. One of the devices may have been deleted through Device Manager and a reboot may be necessary to complete the driver installation for this device.`
	
	`The operation was not successful.`

Workaround	Install version 5.30.2195.1 (or later) of the ProLiant Advanced System Management Controller Driver for Microsoft Windows 2000. The Windows 2000 version of this driver does not have a dependency on ACPI support and provides the same functionality on the affected systems as the Windows Server 2003 version of the driver.
Solution	A Windows Server 2003 driver will be available shortly at the following location: http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html.

Unattended installation issues

Issue 11	Unattended installs abort when using UNATTEND.TXT file with the OEMPreinstall flag set.
Description	Unattended installs abort with the following message: `File [filename] could not be loaded. Error code is 18. Setup cannot continue.` When installing any edition of Microsoft Windows Server 2003 on a ProLiant server that has an embedded virtual install disk, the error message listed above may be generated when using an *UNATTEND.TXT* file that includes the OEMPreinstall flag.

	The problem occurs because the Windows Server 2003 Installer interacts with the embedded virtual install disk when the OEMPreinstall flag is set in the *UNATTEND.TXT* file, but no files are specified to be preinstalled.
	In order for this error condition to be triggered, all of the following conditions must be met:
	• Installation of Windows Server 2003 (or later) on a server.
	• Installation must be performed using an *UNATTEND.TXT* script.
	• Installation must be CD-ROM or Floppy Disk-based.
	• The OEMPreinstall flag must be set in the UNATTEND.TXT file.
	• The *UNATTEND.TXT* file must not specify any files to be preinstalled.
	• The server must have an active virtual install disk.
	Note: Installations performed using SmartStart, Rapid Deployment Pack, PXE/Network, or Disk Image (for example, the operating system image is copied to the hard drive) are not affected.
Workaround	To work around this problem, use one of the following methods:
	Preferred method:
	If the OEMPreinstall flag is set to Yes in the *UNATTEND.TXT* file, set the "DisableVirtualOemDevices" flag to **Yes** in the [UNATTENDED] section of the *UNATTEND.TXT* file, as shown in the following example:

	`[UNATTENDED]`
	
	`DisableVirtualOemDevices=Yes`

	Other methods:
	Avoid setting the OEMPreinstall flag to Yes in the *UNATTEND.TXT* file if files are not specified to be preinstalled.
	OR
	Disable the virtual install disk in the advanced options of the ROM-Based Setup Utility (RBSU) for the affected server.
Solution	HP engineers are working with Microsoft to resolve this issue.

For more information

For more information about the Windows Server 2003 program, visit the Windows Server 2003 support page at http://h18001.www1.hp.com/partners/microsoft/windowsserver2003/support.html and the Microsoft website (www.microsoft.com/).

Feedback

Help us improve our technical communication. Let us know what you think about the technical information in this document. Your feedback is valuable and will help us structure future communications. Please send your comments to: OSIntegrationFeedback@hp.com.

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