hp industry
standard servers

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integration note

implementing Microsoft Windows .NET Server Release Candidate 1 on ProLiant servers

table of contents

abstract

The purpose of this paper is to help customers who want to test pre-release versions of the new Microsoft® Windows® operating system (Microsoft® Windows® Codename "Whistler" or Microsoft® Windows® .NET Server) on ProLiant servers from the new HP. Compaq, now the new HP, began providing support for non-production deployments of the pre-release kits, beginning with the Beta 1 release.

This paper describes the level of support available for Microsoft® Windows® .NET Server Release Candidate 1 (RC1):

- Supported configurations of ProLiant servers
- Recommended minimum system configuration and server platforms
- Supported software, storage options, and network adapters
- Installation procedures and possible issues in moving to Windows .NET Server RC1
- Support limitations for Windows .NET Server RC1 and known issues with workarounds

This integration note describes the level of support available for Microsoft Windows .NET Web Server, Standard Server, and Enterprise Server editions of the Windows .NET Server Family. It does not describe support for Windows .NET Datacenter Server or Limited Edition for Intel Itanium™ 64-bit systems.

introduction to Windows .NET Server RC1

Windows .NET Server 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 .NET Server family of operating systems.

Microsoft is providing Windows .NET Server in both 32-bit and 64-bit editions. The 64-bit edition supports the Intel Itanium and Itanium-2 processors.

This paper covers the 32-bit editions of Windows .NET Server running on ProLiant servers from the new HP that are based on the IA-32 architecture.

supported configurations

Windows .NET Server RC1 should load and run on any ProLiant server that meets the recommended hardware configuration established by Microsoft. However, it is not possible for our engineers to test all hardware and software configurations during the early release phase. The listing of a particular system or option in the tables that follow does not mean that all of the subsystems embedded in that system are fully tested or that all systems and options have undergone extensive functional testing.

Carefully review this document for the recommended minimum 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 .NET Server RC1 support page at www.compaq.com/partners/microsoft/whistler/index.html and the Microsoft website at www.microsoft.com/.

recommended minimum system configuration

Table 1 lists the recommended minimum system configuration established by Microsoft for Windows .NET Server RC1. The recommended minimum system configuration may change, as the final release becomes imminent.

table 1. recommended minimum system configuration for Windows .NET Server RC1

parameter	Web Server	Standard Server	Enterprise Server
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 2.0 GB for Itanium-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 .NET RC1 CD contents to the hard disk during installation.

Note 2: For the latest system requirements for each of the four editions of the Windows .NET Server family, visit www.microsoft.com/windows.netserver/evaluation/sysreqs/systemrequirements.mspx.

server platforms

Table 2 lists the ProLiant servers, ROM version, and ROM date that support Windows .NET Server RC1. Refer to the following resources on the Web to assist in determining the ROM version and family of your ProLiant servers.

- Determining System ROM family code and version: www.compaq.com/support/files/server/us/romhowto.html
- Latest ROMPaq Downloads: www.compaq.com/support/files/server/us/romtabl.html
- Server Software Download Center: www.compaq.com/support/files/server/us/index.html

table 2. supported system platforms for Windows .NET Server RC1

server platform	ROM family	minimum ROMPaq version	minimum ROM date
ProLiant CL380[3]	P17	4.08A	02/14/02
ProLiant DL320[3]	D05	4.03A	03/12/02
ProLiant DL320[3] (with server feature board)	F05	4.03A	03/12/02
ProLiant DL360 G2[3]	P26	shipping with server	
ProLiant DL360[3]	P21	4.09A	08/03/01
ProLiant DL380 G2[3] (1133 MHz and greater)	P24	4.01A	12/11/01
ProLiant DL380[3] (667-1000 MHz)	P17	4.08A	02/14/02
ProLiant DL580[3]	P20	4.05A	02/14/02
ProLiant DL760	P46	4.00A	02/16/01
ProLiant ML330 G2[3]	D10	N/A	01/29/02
ProLiant ML330	D03	4.06A	05/21/01
ProLiant ML330 (with server feature board)	F03	4.06A	05/21/01
ProLiant ML330e[3]	D06	4.01A	08/03/01

server platform	ROM family	minimum ROMPaq version	minimum ROM date
ProLiant ML350 G2[3] (1133 MHz and greater)	D11	shipping with server	
ProLiant ML350[3] (1 GHz)	D04	4.09A	02/02/02
ProLiant ML350[3] (1 GHz with server feature board)	F04	4.09A	02/02/02
ProLiant ML350 (600, 733, 800, 866, 933 MHz)	D02	4.08A	05/21/01
ProLiant ML350 (600, 733, 800, 866, 933 MHz with server feature board)	F02	4.08A	05/21/01
ProLiant ML370 G2[3] (1133 MHz and greater)	P25	4.01A	12/11/01
ProLiant ML370[3] (667-1000 MHz)	P17	4.09A	08/04/01
ProLiant ML530 G2[3]	P22	shipping with server	
ProLiant ML530[3]	P19	4.08A	08/04/01
ProLiant ML570[3]	P20	4.05A	02/14/02
ProLiant ML750	P45	4.00A	10/23/01
ProLiant 800 (Pentium II Processor 550 and 600 MHz with 100 MHz bus)	P14	4.13A	11/08/00
ProLiant 1600[4] (Pentium II Processor 550 and 600 MHz)	P08	4.14A	11/08/00
ProLiant 1850R	P07	4.14A	07/20/01
ProLiant 3000[4] (Pentium II Processor 550 and 600 MHz)	P09	4.13A	11/08/00
ProLiant 5500[4] (Pentium II Xeon Processor 550 and 600 MHz)	P12	4.08A	11/08/00
ProLiant 6000[4] (Pentium II Xeon Processor 550 and 600 MHz with Cirrus Logic Video)	P40	4.08A	12/27/99
ProLiant 6000[4] (Pentium II Xeon Processor 550 and 600 MHz with ATI 3D RAGE IIC Video)	P43	4.08A	12/27/99
ProLiant 6400R (Pentium III Xeon Processor 550 MHz)	P11	4.14A	11/08/00
ProLiant 7000 (Pentium II Xeon Processor with Cirrus Logic Video)	P40	4.08A	12/27/99
ProLiant 7000 (Pentium II Xeon Processor with ATI 3D RAGE IIC Video)	P43	4.08A	12/27/99
ProLiant 8000	P41	4.04A	02/16/01
ProLiant 8500[4]	P42	4.04A	02/16/01

Note 3: A new ROM for this ProLiant server will be released to support the Microsoft® Emergency Management Service console feature in Windows .NET Server.

Note 4: Refer to the "installation of Windows .NET server fails to load drivers for Netelligent 10/100 TX PCI controller" issue on page 19 before installing Windows .NET Server on this ProLiant server.

supported software

Table 3 lists supported ProLiant utilities, drivers, and other value-add software and their corresponding version needed for Windows .NET Server RC1.

table 3. supported ProLiant value-add software for Windows .NET Server RC1

utility	minimum version	location
Array Configuration Utility for Windows 2000	2.70.66.0	www.compaq.com/support/files/server/us/download/10575.html
PCI Hot Plug Filter Driver[5]	6.1.1.5	www.compaq.com/support/files/server/us/locate/2001.html
Support Paq for Microsoft Windows .NET[6]	5.41A	www.compaq.com/partners/microsoft/whistler/index.html
System Configuration Utility	2.57	www.compaq.com/support/files/server/us/download/10786.html

Note 5: Windows .NET Server RC1 does not honor the Windows 2000 digital signatures for this driver. Refer to the issue titled "some Microsoft Windows 2000 digital signatures are not honored by Windows .NET Server RC1" for additional details.

Note 6: Some elements of the Support Paq for Microsoft Windows .NET are superceded by the components residing on the Windows .NET Server RC1 media, or are otherwise supported for use with Windows .NET Server RC1. For more information, refer to the "Support Limitations" section of this paper.

supported storage options

Table 4 lists supported ProLiant storage options and recommended driver revisions needed to interface with Windows .NET Server RC1.

table 4. supported ProLiant storage options for Windows .NET Server RC1

option	driver	location	digital signature
Compaq 4.3 – 36 GB Hard Disk Drives	*DISK.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 4/8-GB SLR Tape Drive	*TANDQIC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 4x-32x CD-ROM Drives	*CDROM.SYS*	Windows .NET Server RC1 CD	Yes
Compaq AIT Tape Drives	*SONYAIT.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 4/8 GB Autoloader	*DDSMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DDS2 4/16 GB Autoloader	*DDSMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DDS3 12/24 GB DAT Autoloader	*DDSMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DDS4 20/40 GB DAT Autoloader	*DDSMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DAT Tape Drives	*4MMDAT.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DLT 15 Cartridge Library Model 15/30	*HPMC.SYS*	Windows .NET Server RC1 CD	Yes

option	driver	location	digital signature
Compaq DLT 15 Cartridge Library Model 20/40	*HPMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DLT 15 Cartridge Library Model 35/70	*HPMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq DLT Tape Drives	*DLTTAPE.SYS*	Windows .NET Server RC1 CD	Yes
Compaq StorageWorks MSL5026DLX DLT Mini-Library	*LIBXPRMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq StorageWorks MSL5026SL SDLT Mini-Library	*LIBXPRMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq StorageWorks SSL2020 AIT Mini-Library	*LIBXPRMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq StorageWorks TL881 DLT Mini-Library	*LIBXPRMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq StorageWorks TL891 DLT Mini-Library	*LIBXPRMC.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Drive Array Notification[8]	*CPQDAEN.SYS*	Support Paq for Microsoft Windows .NET Version 5.50A	Yes
Compaq Smart Array 5xxx Notification Driver[8]	*CPQCISSE.SYS*	Support Paq for Microsoft Windows .NET Version 5.50A	Yes
Compaq Smart Array 5300 Controller[7, 8]	*CPQCISSM.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Smart Array 532 Controller[7, 8]	*CPQCISSM.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Smart Array 5i Controller[7, 8]	*CPQCISSM.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Smart Array 5312 Controller[7, 8]	*CPQCISSM.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Fibre Channel Host Controller /P [8] (64-bit/66-MHz Fibre Channel Host Adapter)	*CPQFCALM.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Fibre Channel Filter Driver[8]	*CPQFCFTR.SYS*	Support Paq for Microsoft Windows .NET Version 5.50A	Yes
Compaq Fibre Channel Array[8]	*CPQFCAC.SYS*	Support Paq for Microsoft Windows .NET Version 5.50A	Yes
Compaq Smart Array 431, 4200, Smart Array 4250ES, and Integrated Smart Array Controllers[7, 8]	*CPQARRY2.SYS*	Windows .NET Server RC1 CD	Yes
Compaq SMART, SMART-2 family, Smart Array 221, Smart Array 3100ES Smart Array 3200 Controllers[7, 8]	*CPQARRAY.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Integrated Dual Channel Wide Ultra2 SCSI Adapter [8]	*SYM_HI.SYS*	Windows .NET Server RC1 CD	Yes

option	driver	location	digital signature
Compaq Integrated Wide Ultra2 SCSI Adapter [8]	*SYM_HI.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Integrated Ultra2 SCSI Adapter [8]	*SYMC8XX.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 64-Bit Dual Channel Wide Ultra2 SCSI Adapter [8]	*SYM_HI.SYS*	Windows .NET Server RC1 CD	Yes
Compaq Dual Channel Wide-Ultra SCSI-3 Controller [8]	*SYMC8XX.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 32-bit Fast-Wide SCSI Controller /P [8]	*SYMC8XX.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 32-bit Ultra SCSI Controller /P [8]	*SYMC8XX.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 64-bit/66MHz Dual Channel Wide Ultra 3 SCSI Adapter [8]	*ADPU160M.SYS*	Windows .NET Server RC1 CD	Yes
Compaq 64-bit/66MHz Single Channel Wide Ultra 3 SCSI Adapter [8]	*ADPU160M.SYS*	Windows .NET Server RC1 CD	Yes
Compaq ProLiant Storage System	*PRLNTSS.SYS*	Support Paq for Microsoft Windows .NET Version 5.50A	Yes

Note 7: 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 Server Software Download Center website at www.compaq.com/support/files/server/us/index.html.

Note 8: Driver upgrades for many of the listed devices are available from Version 5.50A of the Support Paq for Microsoft Windows .NET. After installing Windows .NET Server RC1, you should update those drivers to enhance their reliability and functionality.

supported network interface controllers

Table 5 lists supported ProLiant network interface controllers and driver revisions supported by Windows .NET Server RC1.

table 5. supported ProLiant network interface controllers for Windows .NET Server RC1

NIC	driver	location	digital signature[9]
Compaq NC3120 Fast Ethernet	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3121 Fast Ethernet	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3122 Fast Ethernet	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3123 Fast Ethernet	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3131 Fast Ethernet	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3132 Fast Ethernet Upgrade Module	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3133 Fast Ethernet Upgrade Module	N100325.SYS	Windows .NET Server RC1 CD	Yes

NIC	driver	location	digital signature[9]
Compaq NC3134 Fast Ethernet	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3135 Fast Ethernet Upgrade Module	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3162 Fast Ethernet (Embedded)	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC3163 Fast Ethernet (Embedded)	N100325.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC4621 Token Ring NIC	CPQTRND5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC6132 Gigabit Module	N1000NT5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC6133 Gigabit Module	N1000NT5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC6134 Gigabit	N1000NT5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC6136 Gigabit	N1000NT5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC7131 Gigabit	N1000NT5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC7132 Gigabit Module	N1000NT5.SYS	Windows .NET Server RC1 CD	Yes
Compaq NC7770 Gigabit	Q57XP32.SYS	Support Paq for Microsoft Windows .NET Version 5.50A	No
IBM 16/4 TOKEN RING PCI SPECIAL	IBMTRP.SYS	Windows .NET Server RC1 CD	Yes

IMPORTANT: The drivers for the network interface controllers reside on the Windows .NET Server RC1 CD and have undergone testing by Microsoft and HP. The drivers are also on Version 5.50A of the Support Paq for Microsoft Windows .NET.

Note 9: The Windows .NET Server RC1 CD does not honor Windows 2000 digital signatures for the network interface controller drivers. Digital certification will be obtained and included on the final Windows .NET Server CD.

ProLiant cluster support

The supported ProLiant Cluster Solutions for Windows .NET Enterprise Server RC1 include:

- ProLiant DL380 G2 Packaged Cluster
- ProLiant CL380 Packaged Cluster

The ProLiant Cluster HA/F100, ProLiant Cluster HA/F200, ProLiant Cluster HA/F500 for MA8000, and ProLiant Cluster HA/F500 for Enterprise Virtual Array configurations are not supported for Windows .NET Enterprise Server RC1. These ProLiant Cluster Solutions will be supported at a later date.

For more information on ProLiant Cluster support for Windows .NET Server RC1, refer to the *Implementing Microsoft Windows .NET Enterprise Server Release Candidate 1 on ProLiant Packaged Clusters* white paper posted on the Windows .NET Server support page at www.compaq.com/partners/microsoft/whistler/index.html.

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 .NET Server RC1 on supported ProLiant servers with the Compaq PCI Hot Plug Filter Driver installed. Compaq 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 8500
ProLiant DL760	ProLiant ML570	ProLiant 8000
	ProLiant ML580	ProLiant 7000 Xeon
	ProLiant ML750	ProLiant 6400R

Note: Due to changes in the operating system, Windows .NET Server RC1 will not honor Windows 2000 driver signatures for the PCI Hot Plug Filter Driver. If you wish to use PCI Hot Plug functionality with Windows .NET Server RC1, you will need to install a driver that Windows .NET Server RC1 deems as unsigned. This driver has been thoroughly tested with Windows .NET and will be signed as soon as a program is available at Microsoft to provide the signature.

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 .NET Server operating system. Drivers for these products are included in the Support Paq for Microsoft Windows .NET. Refer to Table 6 for supported remote management features and functionality on Windows .NET Server.

table 6. supported features and functionality for remote management 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	✓		
Microsoft Emergency Management Service (EMS) Console[10]			✓
External Power Backup		✓	✓
Fast Graphical Remote Console			✓
Graphical Remote Console		✓	✓
Group Administration		✓	✓

	Integrated Lights-Out	Remote Insight Lights-Out Edition	Remote Insight Lights-Out Edition II
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		✓	✓
ROM-based Setup Utility	✓		
Server Diagnostics	✓		
SSL Security		✓	✓
User Administration and Security	✓		
Virtual Floppy Drive		✓	✓
Virtual Indicators	✓		
Virtual Media (Floppy Drive & CD)			✓
Virtual Power Button	✓	✓	✓
Virtual Private Network (VPN) Support	✓		
Virtual Text Remote Console	✓		

Note 10: 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 .NET Server operating system only. Refer to Table 2 for the list of ProLiant servers supporting the EMS feature.

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

limited smartstart support

The new HP supports Microsoft operating system (OS) releases throughout the development and release lifecycle of the OS product. As with all pre-released products, there is limited support and workarounds users must follow until the OS is a fully shipping product.

installation paths

Installing Windows .NET Server RC1 through the SmartStart Assisted Path is not supported for pre-release versions of Windows .NET Server family of operating systems. SmartStart Assisted Path does not provide an option to install Windows .NET Server.

SmartStart can be used to perform a simple system configuration by using the SmartStart Manual Installation Path and by selecting **Windows 2000** as the operating system.

CAUTION: Selecting **Other** as the operating system in the Compaq System Configuration Utility forces a default that causes the system to act in an unpredictable manner. Do not select **Other** as the operating system when loading Windows .NET Server RC1.

Once the system configuration completes, follow the instructions starting with step 5 on page 13 of this document.

support paq installations

The OS version reported by Windows .NET Server RC1 has been changed from "5.1" to "5.2".

Many components of the Support Paqs for Windows products use the version number to determine whether the software should be installed into a particular operating environment. Support Paq for Windows .NET Version 1.00A, released for Beta 3, and Support Paq for Windows .NET Version 5.40A are both keyed to install onto Version 5.1 operating environments. Therefore, Support Paq for Windows .NET Versions 1.00A and 5.40A will not install properly on Windows .NET Server RC1. They will, however, install and run properly on Beta 3.

Support Paq for Windows .NET Versions 5.41A and 5.50A address the installation issues with Windows .NET Server RC1.

pre-installation

To prepare for installation, obtain the supported software.

1. Obtain Support Paq for Microsoft Windows .NET Version 5.50A (or later) at www.compaq.com/partners/microsoft/whistler/index.html. This Support Paq contains the device drivers, management agents, and utilities, supported under Windows .NET Server RC1.

   Note: Once the Support Paq for Microsoft Windows .NET Version is installed, you can use Insight Manager 7 SP1 available at www.compaq.com/support/files/server/us/locate/6149.html to manage your Windows .NET Server RC1 servers. Insight Manager 7 SP1 requires installing Microsoft SQL Server or Microsoft Database Engine (MSDE) before installing Insight Manager 7 SP1. MSDE is delivered in the Insight Manager 7 SP1 SoftPaq. Insight Manager 7 SP1 currently runs under Microsoft Windows NT 4.0 and Microsoft Windows 2000 only.

2. Obtain System Configuration Utility Version 2.57 (or later) at www.compaq.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.

   Note: There is no need to create the bootable diskette set if you plan to use the SmartStart Manual Installation Path. SmartStart installs the system partition during the manual installation.

   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 not using the SmartStart Manual Installation Path.

ProLiant DL servers	ProLiant ML servers
ProLiant DL320	ProLiant ML350 G2
ProLiant DL360 G2	ProLiant ML370 G2
ProLiant DL380 G2	ProLiant ML530 G2
ProLiant DL580 G2	ProLiant ML750
ProLiant DL760	

installation procedures

The sections that follow contain procedures for installing Windows .NET Server RC1 as a new installation and for upgrading from Windows 2000 to Windows .NET Server RC1.

performing a new installation

This section outlines the proper procedures to follow when performing a new installation of the Windows .NET Server RC1 operating system on ProLiant servers.

IMPORTANT: Installing Windows .NET Server RC1 in a production environment is not recommended. Windows .NET Server RC1 tests should only be performed in isolated test environments.

To complete a Windows .NET Server RC1 installation fully supported by Compaq, follow these steps when setting up the system. Read the following sequence completely before you begin.

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.

   IMPORTANT: When configuring the system for Windows .NET, select Windows 2000 as the primary OS via the System Configuration Utility or the ROM-Based Setup Utility.

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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 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: If a Compaq array controller that does not use Option ROM Configuration for Arrays utility is installed as the boot controller, use the Manual Path option in SmartStart Release 5.30 to configure the array as a boot controller. Otherwise, set your array controller as the secondary controller and install the OS to a SCSI controller. Once the OS is installed, configure the array via the Compaq Array Configuration Utility using the Support Paq for Microsoft Windows .NET Version 5.50A.

   The *README.TXT* for this utility reads: The Compaq Array Configuration Utility (ACU) is online under Microsoft® Windows NT™ 4.0 or Windows 2000®. This version cannot be installed on the system partition nor can it be run directly from diskette.

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5. Insert the Windows .NET Server RC1 CD into CD-ROM drive to begin installation.

6. After Windows .NET Server RC1 has been installed, install the Simple Network Management Protocol (SNMP).

   - 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, then the **Next** button.
- Click the **Finish** button.

7. Install Version 5.50A (or later) of the Support Paq for Microsoft Windows .NET, which is available at www.compaq.com/partners/microsoft/whistler/index.html. The Support Paq contains numerous files. All files must be present in the same directory as the SETUP.EXE program for the Support Paq to be installed properly.

   primary installation method

   - Run the SETUP.EXE program included with the Support Paq. 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 Support Paq for Windows .NET 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 BP000095.TXT file included with the downloaded files and the *Compaq Support Paq and Deployment Utilities User Guide* posted on the download web page for the Support Paq.

upgrading from Windows 2000

The procedures detailed in this section support upgrading from Windows 2000 to Windows .NET Server RC1 on ProLiant servers.

IMPORTANT: Installing Windows .NET Server RC1 in a production environment is not recommended. Windows .NET Server RC1 tests should be performed in isolated test environments until such time as the operating system and support elements form a fully supported combination.

To upgrade a Windows 2000 server to Windows .NET Server RC1 in a manner supported by Compaq, follow these steps. Read the sequence completely before you begin.

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. Double-click on **My Computer**, then select **Help** from the menu bar and click on the **About Windows** option. Verify whether the system has the latest Microsoft Service Pack installed. If this is not the case, download the latest service pack from the Microsoft website (www.microsoft.com/windows2000/downloads/servicepacks/sp3/default.asp) and install it on your server. This action will ensure that the server has the latest software components Microsoft

supplied prior to the upgrade.

4. Install the Simple Network Management Protocol (SNMP).

   - 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, then the **Next** button.
   - Click the **Finish** button.

5. Download and install Support Paq for Microsoft Windows 2000 Version 5.50A from the Server Software Download Center website at www.compaq.com/support/files/server/us/locate/1989.html. This action will ensure that all drivers and utilities provided by Compaq are suitable for upgrade to Windows .NET Server RC1.

   IMPORTANT: Failure to update drivers provided by Compaq before beginning the upgrade process may result in unexpected failures during the upgrade to Windows .NET Server RC1.

6. Insert the Windows .NET Server RC1 CD into CD-ROM drive to begin installation. Follow all instructions for upgrading the server.

7. After Windows .NET Server RC1 has been installed, begin installation of the Support Paq for Microsoft Windows .NET, Version 5.50A (or later), which is available at www.compaq.com/partners/microsoft/whistler/index.html. The Support Paq contains numerous files. All files must be present in the same directory as the SETUP.EXE program for the Support Paq to be installed properly.

   primary installation method

   - Run the SETUP.EXE program included with the Support Paq. 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.

support limitations

This section details the known issues with running Microsoft Windows .NET Server RC1 on ProLiant servers and provides information about resolving them. All issues with a red asterisk (*) have permanent resolutions.

general installation issues

issue 1	after upgrading to Windows .NET Server, operating system no longer uses dual or multiprocessor support for a Pentium II processor based server with more than processor installed
description	Microsoft Windows .NET Server will block multi processor support if it detects that a x86 Family 6 Model 3 Stepping X Genuine Intel processor (where X = 3 or 4) is installed. Running MSInfo32 and checking the Processor value under System Summary can gather this information. To check your server before you upgrade: 1. Run Setup to start your Windows .NET Standard Server installation. 2. On the first Setup screen, click **Check system compatibility**, and then click **Check my system automatically** to start the compatibility check. If your server is affected, Setup will tell you that your dual or multi-processor server will run with only one processor if you proceed with the upgrade
workaround	No workaround is available at this time.
solution	Run the server with one processor or re-install the previous operating system.
issue 2	components appear to be installed after upgrade
description	When upgrading from Microsoft Windows 2000 Server to Microsoft Windows .NET Server RC1, components appear to be installed, even though they are not included in the Remote Deployment Utility used to perform the installation.
workaround	No workaround is available at this time.
solution	Our engineers are working to provide a solution in the next version of the Support Paq for Microsoft Windows .NET.

issue 3	some Microsoft Windows 2000 digital signatures are not honored by Windows .NET Server RC1
description	Devices in the Image, Miscellaneous, Net, or (Unknown) classes will only be acknowledged as "signed" if they contain the digital signatures specified by Microsoft as shown below. class — type of signature required Image — Microsoft Windows .NET Server Miscellaneous — Microsoft Windows .NET Server Net — Microsoft Windows XP (or better) (Unknown) — Microsoft Windows .NET Server This issue impacts drivers such as the PCI Hot Plug Filter Driver, the System Management Driver, and the various ProLiant Network Interface Controller drivers because their Windows 2000 digital signatures are not honored. Microsoft Windows .NET Server will not recognize digital signatures for the affected drivers until later in the OS development cycle.
workaround	No workaround is available at this time.
solution	Our engineers are working with Microsoft to obtain digital signatures at the earliest possible time.

management product issues

issue 4*	compaq version control agent and compaq version control repository manager version 1.0.2206.0 may contain bad link on the ProLiant home page when browsing from a machine running Microsoft Windows .NET
description	There is an incompatibility between the Microsoft Internet Explorer bundled with Microsoft Windows .NET RC1 and the way the ProLiant Common Home page links to Compaq Version Control Agent and Compaq Version Control Repository Manager Version 1.0.2206.0. When either of these products are not active as HTTP Server proxy (which is most of the time), the links to these products will not function when browsed to from a server running Microsoft Windows .NET RC1. When browsing to the Version Control Repository Manager when it is not setup as the proxy, the following Internet Explorer information message will be displayed: *The page cannot be displayed.* When browsing to the Version Control Agent when it is not the proxy, the following security dialog box will be displayed: *This page contains both secure and nonsecure items. Do you want to display nonsecure item?*

		If yes is selected, the Version Control Home page is displayed without the Navigation Frame, only the Software Inventory Information is displayed. If no is selected, an "Action cancelled" message appears in the browser page.
	workaround	See solution.
	solution	Browse to the desired Windows .NET server's agents using a different server that is not running Microsoft Windows .NET RC1.
	issue 5	yellow exclamation mark displayed in ATI Device Manager with remote insight lights-out edition
	description	When using Remote Insight Lights-Out Edition, the Windows .NET Server RC1 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	Our engineers are working with Microsoft to resolve this issue.
memory issues	**issue 6***	hibernation issue 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 .NET Server RC1.
	issue 7	memory leakage with CPQCISSE.SYS driver
	description	When a driver upgrade/downgrade is conducted during event generation, CPQCISSE.SYS driver Version 5.40.2.0 does not free all memory pools prior to being unloaded.
	workaround	No workaround is available at this time.
	solution	Our engineers are working to provide a solution in the next version of the Support Paq for Microsoft Windows .NET.
networking issues	**issue 8***	compaq network management protocol driver service fails to start error message in system log
	description	An error message occurs in the system log indicating that the Compaq Network Management Protocol Driver Service has failed to start. Test results indicate this error message really means that Token Ring Adapters are not viewable in Insight Manager XE.
	workaround	See solution.

solution	Apply Version 5.50A of the Support Paq for Microsoft Windows .NET for resolution. This Support Paq will be available for download at www.compaq.com/partners/microsoft/whistler/index.html.
issue 9	disabled NIC ports report as failed after applying support paq
description	After applying the Support Paq for Microsoft Windows .NET to the system, disabled NIC ports are reported as failed.
workaround	Reboot your system. Subsequent reboots resolve this issue.
solution	Our engineers are working to provide a solution in the next version of the Support Paq for Microsoft Windows .NET.
issue 10	embedded network interface controllers are not enumerated correctly
description	After installing and configuring embedded network interface controllers (NIC) post Windows .NET Server RC1 installation, the port configurations may not operate as expected.
workaround	No workaround is available at this time.
solution	Our engineers are working with Microsoft to resolve this issue.
issue 11	wake-on LAN feature for ProLiant DL360 G2 servers could cause OS generated system halt
description	ProLiant DL360 G2 servers using Wake-On LAN (WOL) while attached to the network may encounter an operating system generated system halt.
workaround	Disable WOL using the ROM-Based Setup Utility (RBSU), an updateable, "intelligent" configuration utility that is embedded in the server ROM. During initial installation when the server is not yet configured, RBSU starts automatically. 1. After the server has been configured, launch RBSU by pressing **F9** when prompted during the power up. 2. To disable WOL, go to the Advanced Options menu, and select the **Wake-On LAN** option. 3. Press **Enter** to modify the Wake-On LAN status. 4. Once you have completed configuration activities, exit RBSU by pressing the **Esc** key at the Main menu and confirming your intention by pressing **F10**.
solution	Our engineers plan to release a new ROM to resolve this limitation.

	issue 12	Windows 2000 upgrade to Windows .NET Server RC1 prompts message reporting the need for CPQTEAM.DLL
	description	While upgrading to Windows .NET Server RC1 from Windows 2000 Server, a message pops up informing the user that *CPQTEAM.DLL* is needed.
	workaround	To continue with the upgrade, select **Cancel** on the popup message. After Windows .NET Server RC1 has been installed, install the Support Paq for Microsoft Windows .NET.
	solution	Our engineers are working with Microsoft to resolve this issue.
storage issues	**issue 13**	dynamic disk drives attached to compaq fibre channel HBA's 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	Our engineers are working with Microsoft to resolve this issue.
	issue 14	removal of class and filter drivers needed before Windows NT 4.0 upgrade
	description	If Windows NT 4.0 class and filter drivers are installed on the system prior to and after upgrading to Windows .NET Server RC1, the following may result: • Blue screen during the shutdown of the Windows.NET Server RC1 operating system (caused by the *CPQFCFTR.SYS* driver) • Erroneous events posted in the OS event log (caused by the Windows NT 4.0 class drivers: *CPQCISSE.SYS*, *CPQDAEN.SYS*, *CPQFCAC.SYS*, and *PRLNTSS.SYS*)
	workaround	Before performing an upgrade from Windows NT 4.0 to Windows .NET Server RC1, manually remove all storage class and filter drivers (*CPQCISSE.SYS*, *CPQDAEN.SYS*, *CPQFCAC.SYS*, *CPQFCFTR.SYS*, and *PRLNTSS.SYS*.) Removal can be accomplished through the Windows NT 4.0 control panel or by deleting the annotated drivers in the \system32\drivers directory. After completing the Windows .NET upgrade, install the correct drivers (.NET ready) using Version 5.50A of the Support Paq for Microsoft Windows .NET posted at www.compaq.com/partners/microsoft/whistler/index.html.
	solution	Our engineers are working with Microsoft to resolve this issue.

issue 15	smart array 4200 controller driver does not install during setup
description	During the install of Windows .NET Server 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 .NET Setup if this controller is set as the boot controller.
workaround	Manually install the CPQARRY2.SYS driver by pressing **F6** during Setup.
solution	Our engineers are working with Microsoft to resolve this issue.
issue 16	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	Microsoft plans to resolve this issue in the Longhorn OS release.
issue 17	upgrading miniport driver for secondary device requires reboot
description	When a device driver for a secondary device is updated, the Windows .NET Server RC1 operating system may request a reboot.
workaround	Reboot the server as prompted.
solution	Microsoft is investigating a resolution for Windows .NET Server RC2 so that no reboots will be required for secondary devices as long as the page file is not located on any secondary device volumes.

system health issues

issue 18	ACPI BIOS error in event log after each reboot on ProLiant ML570
description	After installing Windows .NET Server RC1 on a ProLiant ML570 server, the Event Log receives the following ACPI BIOS error message after every subsequent reboot: *12: ACPI BIOS is trying to reference a GPE Index (%3) when there are no GPE blocks defined by the BIOS. Please contact your system vendor for technical*
workaround	No workaround is available at this time.
solution	Our engineers are working to provide a solution in the next version of the Support Paq for Microsoft Windows .NET and the Management CD.

<table>
<tr><td>issue 19</td><td>compaq advanced system management controller driver not updated after upgrade from Windows NT 4.0 Server to Windows .NET Server</td></tr>
<tr><td>description</td><td>After upgrading from Windows NT 4.0 Server to Windows .NET Server, the Compaq Advanced System Management Controller Driver (CPQASM.SYS) is not updated. Since some drivers, agents, and applications, such as the Compaq Management Agents, are dependent upon the CPQASM.SYS driver, they may not function properly after the upgrade.</td></tr>
<tr><td>workaround</td><td>Install the Compaq Advanced System Management Controller Driver Smart Component from Version 5.50A (or later) of the Support Paq for Microsoft Windows .NET.</td></tr>
<tr><td>solution</td><td>Our engineers are working with Microsoft to resolve this issue.</td></tr>
<tr><td>issue 20</td><td>startup and recover server options revert back to default settings after upgrade</td></tr>
<tr><td>description</td><td>Startup and Recover Server options modified from default settings will automatically revert back to the default settings after upgrading from Windows 2000 Advanced Server to Windows .NET Enterprise Server (see the sample setting modifications below).
<table>
<tr><th>options</th><th>default setting</th><th>modified setting before upgrade</th><th>setting after upgrade</th></tr>
<tr><td>automatically restart</td><td>enabled</td><td>disabled</td><td>enabled</td></tr>
<tr><td>writing debugging information</td><td>complete memory dump</td><td>small memory dump (64kb)</td><td>complete memory dump</td></tr>
</table></td></tr>
<tr><td>workaround</td><td>No workaround is available at this time.</td></tr>
<tr><td>solution</td><td>Our engineers are working with Microsoft to resolve this issue.</td></tr>
</table>

support delivery

For beta and release candidate operating systems, a Web Support Forum is provided for customers to post questions and issues for resolution. Replies will be provided on a best effort basis. There is no telephone support for beta or release candidate releases.

Users with access to interim Windows .NET builds beyond RC1, such as Windows .NET JDP participants, should monitor the Web forum for additional support information.

for more information

For more information about the Windows .NET Server RC1 program, visit the Windows .NET Server support page at www.compaq.com/partners/microsoft/whistler/index.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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