

Release Notes

HP Integrity Mid-range Servers for Microsoft Windows Server 2003



Manufacturing Part Number: 5990-8259

April 2005

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Release Notes

Using the Intel® Itanium® 2 processor or the HP mx2 dual-processor modules and the HP Super-Scalable Processor Chipset sx1000, **HP Integrity mid-range servers** running Microsoft® Windows® Server 2003 deliver high performance, great flexibility, and simplified management at an exceptional value. The HP Integrity mid-range servers include the following server models:

rx8620	<ul style="list-style-type: none">• 2-32 Itanium 2 processors with the HP mx2 dual-processor module or 2-16 Intel Itanium 2 processors• 1 TB memory capacity• Up to 4 hardware partitions (nPartitions) with a Server Expansion Unit• 16 hot-plug PCI-X slots (up to 32 with optional Server Expansion Unit)
rx7620	<ul style="list-style-type: none">• 2-16 Itanium 2 processors with the HP mx2 dual processor module or 2-8 Itanium 2 processors• 1 TB memory capacity• Up to 2 hardware partitions (nPartitions)• 16 Hot-plug PCI-X slots

What's New in Smart Setup 3.30

This release supports **Service Pack 1 (SP1)** for Microsoft Windows Server 2003, 64-bit, and provides critical updates to the following components:

System Management Homepage (SMH) version 2.0.0.104

Includes a bug fix that corrects the display of the Complex Event Viewer page.

Pay per use (PPU) version 7.1

Includes changes to the packaging and installation of PPU in addition to updates that enable compatibility with SP1. Previously, PPU was included with the WMI nPar Provider component, and visible only as a subcomponent of the nPar Provider. With this release, PPU is a separate component with its own installation process. After a successful installation, PPU is listed separately among currently installed programs under **Add or Remove Programs**. This version of PPU is compatible with SP1.

U320 SCSI driver version 1.10.5.1

Updates the driver for the U320 SCSI Host Bus Adapter.

NOTE

The Smart Setup CD does not contain SP1. HP provides a separate Datacenter Update DVD to existing customers running Microsoft Windows Server 2003, Datacenter Edition, on HP Integrity servers. Microsoft provides SP1 at the Microsoft download web site and on the Windows Server 2003 OS with SP1 retail media.

Software Requirements

In addition to the software included from HP, the following software is required.

Java

- Partition Manager requires JDK (32-bit) 1.4.1 or 1.4.2 available from the Sun Microsystems download site: <http://java.sun.com>
- Integrity Management Agents require JRE 1.4.1 or 1.4.2 available from the Sun Microsystems download site: <http://java.com>

Web Browser

RMU, the browser-based interface to the Smart Setup CD, requires Internet Explorer version 5.0 or higher. The latest version of Internet Explorer is available from the Microsoft download site: <http://www.microsoft.com/windows/ie/default.msp>

TCP/IP and SNMP

HP Insight Management Agents require installation and configuration of TCP/IP and SNMP. SNMP installation must be done manually.

Utility Meter

Pay Per Use (PPU) 7.1 software requires Utility Meter software version 7.3 or higher.

Supported components

The following tables list the supported components of each server:

rx8620

Operating System	<ul style="list-style-type: none"> Windows Server 2003, Enterprise Edition, and Datacenter Edition with SP1 for Itanium-based Systems
LAN Adapter	<ul style="list-style-type: none"> HP PCI 1000Base-T Gigabit Ethernet Adapter for Windows V. 7.86 (A7061A) HP PCI 1000Base-SX Gigabit Ethernet Adapter V. 7.86 (A7073A) HP PCI-X Dual Port Gigabit Ethernet SX adapter card V. 7.2.17.8 (A9899A) HP PCI-X Dual Port Gigabit Ethernet TX adapter card V. 7.2.17.8 (A9900A)
SCSI Adapter	<ul style="list-style-type: none"> HP PCI Ultra160 SCSI Adapter for Windows (A7059A) HP PCI Dual Channel Ultra160 SCSI Adapter for Windows (A7060A) HP PCI-X Dual Channel Ultra320 SCSI Host Bus Adapter (A7173A)
Fibre Channel Adapter	<ul style="list-style-type: none"> HP StorageWorks 2 Gb Fibre Channel HBA (AB232A) HP StorageWorks 2Gb, 64-Bit/133 MHz PCI-X-to-Fibre Dual Channel HBA (AB466A) HP StorageWorks 2Gb, 64-Bit/133 MHz PCI-X-to-Fibre Single Channel HBA (AB467A)
RAID Controller	<ul style="list-style-type: none"> HP 2-channel Smart Array 5302, Ultra160 SCSI (A9825A) HP 4-channel Smart Array 5304, Ultra160 SCSI (A9826A) HP PCI-X 2-channel Smart Array 6402, Ultra320 SCSI (A9890A) HP PCI-X 4-channel Smart Array 6404, Ultra320 SCSI (A9891A)
VGA Graphics	<ul style="list-style-type: none"> HP Graphics/USB card (A6869A in the I/O chassis attached to the root cell only)

NOTE

The rx8620 server supports multiple SA53xx cards connected to internal drives for either boot or for data. For example, one slot may hold a SA53xx card connected to two internal drives for boot and another may hold a SA53xx card connected to two internal drives for data. Or, each card may be connected to two internal drives for data.

rx7620

Operating System	<ul style="list-style-type: none"> Windows Server 2003, Enterprise Edition and Datacenter Edition with SP1 for Itanium-based Systems
LAN Adapter	<ul style="list-style-type: none"> HP PCI 1000Base-T Gigabit Ethernet Adapter for Windows V. 7.86 (A7061A) HP PCI 1000Base-SX Gigabit Ethernet Adapter V. 7.86 (A7073A) HP PCI-X Dual Port Gigabit Ethernet SX adapter card V. 7.2.17.8 (A9899A) HP PCI-X Dual Port Gigabit Ethernet TX adapter card V. 7.2.17.8 (A9900A)
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RAID Controller	<ul style="list-style-type: none"> HP PCI-X 2-channel Smart Array 6402, Ultra320 SCSI (A9890A) HP PCI-X 4-channel Smart Array 6404, Ultra320 SCSI (A9891A)
VGA Graphics	<ul style="list-style-type: none"> HP Graphics/USB card (A6869A in the I/O chassis attached to the root cell only)

NOTE

The rx7620 server running Windows Server 2003 supports the use of multiple SA64xx cards connected to internal drives for either boot or for data. For example, one slot may hold a SA64xx card connected to two internal drives for boot and another slot may hold a SA64xx card connected to two internal drives for data. Or, each card may be connected to two internal drives for data.

Troubleshooting common issues

Please read this section completely before installing or running Windows Server 2003 on HP Integrity servers. This section includes workarounds that may save you valuable time and effort.

Array Configuration Utility (ACU)

all Integrity servers

ACU cannot be used when Windows Driver Verifier (verifier.exe) is running in the background

Issue ACU reports incorrect results when the Windows Driver Verifier is enabled and running in the background.

Workaround There is no workaround at this time. If you want to run the ACU, you must first end the “verifier.exe” process using the Windows Task Manager, then launch ACU. Do not run both simultaneously.

rx8620, rx7620

Launching the ACU and HP Insight Storage Agents

Issue When viewing the driver properties in the device manager for the Smart Array 6400 Controller, an enhanced Tools menu bar displays. This bar provides a radio button to launch the ACU and HP Insight Storage Agents. Neither of these buttons work in this release of the driver.

Workaround Currently, the preferred methods for launching these tools are:

1. For the ACU: Use a Windows menu path of **Start > hp System Tools > hp Array Configuration Utility XE**.
2. For the Insight Storage Agents: Go to the **System Management** homepage, click **HP Management Insight Agents**, scroll to the **Mass Storage** section on the left panel, and click on the desired controller.

Device Drivers

all Integrity servers

Installing drivers not included with Microsoft RTM media

Issue If you installed the OS from Microsoft RTM media, you must also install device drivers for the HP Integrity server for all devices displaying a yellow “bang” icon in the system device manager. These drivers are available on the HP Smart Setup CD.

Workaround To install a device driver from the Smart Setup CD:

1. Insert the HP Smart Setup CD in the server CD/DVD drive. Accept the End User Licensing Agreement.
2. Run the Windows Device Manager and use a menu path of **View > Devices by Type** to list the system devices.
3. Expand the entry named Other devices.

This shows a list of all devices whose drivers were not found during installation of the operating system. Some of these devices may have a specific name, while others are shown simply as “Unknown Device”. Each item is indicated by a yellow “bang” icon (a small yellow exclamation mark) next to its name.

4. Right-click on the first item and select **Update Driver** from the context menu.
5. In the Hardware Update Wizard screen, select **Install the software automatically** and click **Next**.
6. If you see a warning dialog stating the driver is not digitally signed, ignore it. This is not an issue. Click **Next** to continue.
7. When successful installation is indicated, click **Finish**.

Extensible Firmware Interface (EFI) and EFI-based Setup Utility (EBSU)

rx8620, rx7620

EFI > LANBOOT command does not appear to find the default LAN card

Issue During system boot, entering a LANBOOT command at the EFI prompt produces an error message stating that a default LAN card cannot be found. This error is incorrectly displayed because there is no default LAN in a cell-based system. Because each cell has its own core I/O LAN, the default path can change, depending on which cells boot and interact. It can also change in order for the system to boot successfully around failed hardware.

Workaround Use the LANBOOT SELECT command and choose the desired LAN card from the displayed list.

rx8620, rx7620

EBSU's Maintain Firmware feature displays some I/O card firmware values as “unknown” in the “Local version” column

Issue EBSU's Maintain Firmware feature displays some I/O card firmware values as “unknown” in the “Local version” column. This happens when the card firmware does not return a data structure that EBSU recognizes, either because the card firmware is configured for 32-bit systems, or it lacks an EFI driver, or has corrupted firmware.

Workaround Try flashing the card firmware to correct the problem. If the card still has “unknown” values after flashing it and resetting the system, contact your local support specialist or visit <http://www.hp.com/support/itaniumservers> for help.

Fibre Channel

all Integrity servers

LPutil64 DELETE button does not delete the selected EFI driver or firmware

Issue The LPutil64 **Delete** button does not work with the A7298A, AB232A, AB466A, or the AB467A adapters.

Workaround Disable the desired EFI driver using LPutil64's **Enable/Disable** button instead. Another solution is to simply flash to a newer version of the EFI driver, which will overwrite the existing version.

Installation

all Integrity servers

Blank screen during system startup

Issue During system startup the screen may remain blank for 3 to 8 minutes (actual time depends on the quantity of the installed system memory).

Workaround This is normal. The system activity can be monitored within a few seconds of system power-on via a remote terminal.

all Integrity servers

Do not use the 16GB option when installing the OS from the re-install media

Issue If you use the 16 GB option during installation of the OS from re-install media, you cannot create a kernel memory dump (in the event of a system failure) unless the page file size is manually configured afterward. In addition, even with manual configuration the page file size will still be less than the recommended 20 GB.

Workaround The system partition must be created on a 33 GB or larger disk drive. When using re-install media, choose either the 33 GB or max drive size option when configuring the system volume.

rx8620, rx7620

Screen blanks temporarily when using the re-installation media and the IP Console Switch

Issue You may experience a variable delay where the monitor (or remote session) connected to the IP Console Switch goes blank. One step in the re-install process is plug-and-play device discovery. During this time, drivers are not connected to devices. Without drivers, USB ports disable their power output. The IP Console Switch relies on this power to transfer video to the local and remote sessions. After the device discovery is complete, a driver is connected, power is enabled, and video displays. The blanking time depends on system configuration, but could take as long as 30 minutes. The system will appear to hang, but is only going through device discovery.

Workaround Use the command line interface for the most complete view of system status. The command line is active and displays status at all times prior to video initialization at power on, and at all times during the system operation. The command line is accessible through the Management Processor interface. NOTE: If you have a monitor connected directly to the system, the video will not go blank.

all Integrity servers

Use Esc8 instead of F8 key on a headless server

Issue The Telnet and Hyperterminal applications on Windows NT4 and Windows 2000 do not correctly map the ASCII string for the function keys. For example, during Power On Self Test (POST) the Smart Array firmware will display a banner and configuration menu with instructions to press the **Esc** key to continue or the **F8** key to enter the configuration utility. When running the system in a headless configuration, pressing **F8** does not display the configuration menu.

Workaround To transmit the correct ASCII string using these applications from a remote terminal, press the **Esc** key immediately followed (within 1 second) by the numeric value of the desired function key. For example, to send the ASCII string for **F8**, press the **Esc** key immediately followed by pressing the **8** key (if the terminal emulator is set to UTF-8, then you can press the **F8** key instead). An easier solution to both problems is to simply use PuTTY instead of Telnet or Hyperterminal. PuTTY is a terminal emulator available on your Smart Setup media.

Management Agents

all Integrity servers

New Insight Agents smart component does not detect older versions

Issue Insight Management Agents for Integrity servers version 3.0 does not indicate that it is overwriting an older version (2.4, 2.3, and so on) of the Agents. The newer smart component does not detect the older component.

Workaround No work around is necessary because there is no impact on functionality. No user action is needed.

all Integrity servers

The smart component for management agents displays an “installation failed” message during an upgrade if the old version is identical to the new version.

Issue The Insight Management Agents smart component on Smart Setup 3.30 and Smart Setup 3.20 are identical. If you try to install the 3.30 version on a system where the 3.20 version is already installed, the smart component displays a generic “installation failed” message. This message should indicate that installation is not needed because the new version is identical to the old version.

Workaround This has no impact on functionality. No user action is needed.

Network Interface Cards (NICs)

all Integrity servers

Warning message about Fiber Gigabit Ethernet disconnect at system power-up (Event ID 4 or Event ID 27)

Issue At system power-up, you may see a Warning message (with a source of b57nd or e1000) indicating a disconnect. With the A7073A card, Event ID 4 is specified, and with the A9899A card, Event ID 27.

Workaround This is *not* an error, but rather a side-effect of the auto-negotiation process used by the A7073A and A9899A cards. The cards *do* connect at the end of that process. You can verify this by going into the Event Viewer, locating the Warning message, and seeing the Informational message that follows it, indicating a successful connection (Information Event ID 11 for the A7073A card; Information Event ID 32 for the A9899A card).

Partition Manager

Superdome, rx8620, rx7620

Microsoft Visual C++ Runtime Library error message dialog during system shutdown

Issue During shutdown, systems running Partition Manager may display a dialog on the local console indicating a Visual C++ Runtime error.

Workaround This is a program error in the System Management Homepage that has no operational impact. No user action is needed.

Pay Per Use (PPU)

Superdome, rx8620, rx7620

Troubleshooting instructions missing in Pay Per Use User Guide

Issue The PPU User Guide includes a section on Troubleshooting that should have included certain instructions about tracking down PPU-related problems on Windows Servers.

Workaround When troubleshooting PPU issues, you must check the Event Viewer for any error messages related to the Pay Per Use software. To open the Event Viewer, select **Programs > Administrative Tools > Event Viewer** from the Windows desktop. In the Event Viewer, select **Application** and then search the Source column for any PPU errors.

SCSI

all Integrity servers

Event ID 117 in Windows event log when using an embedded U320 SCSI controller as external disk drive controller

Issue When running Microsoft Windows Server 2003 on an HP Integrity server with an embedded U320 SCSI controller as the external disk drive controller, intermittent Event ID 117 entries may be generated in the Windows Event Log after rebooting.

Workaround Ignore these events. They represent a timeout condition that does not cause any system problems or data loss.

Service Pack 1 (SP1)

all Integrity servers

Windows Firewall blocks network access after SP1 installation

Issue As a part of the security enhancements introduced in SP1, Windows Firewall is turned on by default after SP1 completes installation. The firewall blocks all TCP and UDP communication by default. As a result, several services such as SNMP and Remote Desktop Protocol are unable to establish connections.

Workaround After SP1 installs, use the Security Configuration Wizard or configure the Windows Firewall in compliance with your site's security policy. You may need to specify certain services as exceptions in order to restore connections. For more information, refer to the Microsoft documentation and online help on Windows Firewall.

Smart Array

all Integrity servers

Smart Array 640x/530x generates errors in system event log (Event ID 9)

Issue Under extremely heavy I/O conditions the Smart Array driver (cpqcissm) may generate Event ID 9 errors in the system event log.

Workaround Ignore these events, as they do not cause any problems or loss of data. There is no fix at this time.

all Integrity servers

Smart Array 6402 as internal disk drive controller generates errors in system event log (Event ID 9 and Event ID 117)

Issue When running the Smart Array 6402 as the internal disk drive controller, intermittent Event ID 9 and Event ID 117 entries may be generated in the Windows Event Log after a reboot.

Workaround Ignore these events, as they do not cause any problems or loss of data. There is no fix at this time.

all Integrity servers

Storage Works 43xx enclosures in a split bus configuration with a single power supply may cause errors

Issue Storage Works 43xx enclosures in a dual bus configuration with an Ultra3 Dual Bus I/O Module and a single power supply may report errors and fail the logical volumes when attached to Smart Array Controllers. Port A of the Storage Works 44xx enclosure may intermittently report that all drives installed in the lower bays (Port A, bays 1-7) have been hot-plug replaced even though the drives have not been replaced. As a result, the array controller may fail the logical volumes, causing the data to become inaccessible.

If the operating system is running from those drives, the server may hang or display a blue screen. When the server is rebooted, the drives appear to be working properly; however, some data may be inaccessible. A Power-On Self-Test (POST) error message is not displayed. The problem occurs regardless of the position of the power supply or fans in the enclosure. This affects any StorageWorks Enclosure Model 4314R, Model 4314T, or Model 4354R in a dual bus configuration with an Ultra3 Dual Bus I/O Module and a single power supply, attached to either Smart Array 5302 or Smart Array 5304 Controller.

all Integrity servers	<p>Workaround Operate the StorageWorks enclosures with a minimum of two power supplies.</p>
	<p>Unable to access the “Smart Array Option ROM Configuration for Arrays Utility”</p>
	<p>Issue Inability to access the “Smart-Array Option ROM Configuration for Arrays Utility” menu of the Smart Array controller in the root cell I/O chassis (core I/O chassis) when the F8 key is pressed on the USB keyboard during system boot. NOTE: This problem only occurs if you are configuring the Smart Array using the USB keyboard connected to the HP Graphics and USB card. The serial console from the MP should work fine.</p>
	<p>Workaround Do the following:</p> <ol style="list-style-type: none"> 1. Boot the system to the EFI shell. 2. At the EFI prompt, enter the following: <code>search <core cell></code>. For example, enter <code>search 0</code> if the core cell is 0. 3. When you see the Smart-Array Option ROM Configuration for Arrays Utility menu, press the F8 key on the USB keyboard. 4. Now you should see the Smart-Array Option ROM Configuration for Arrays Utility menu.
Superdome, rx8620, rx7620	<p>Smart Array 640x/530x may not automatically load during system boot</p>
	<p>Issue During system boot, Smart Array 640x or 530x cards may not load for RAID configuration.</p>
	<p>Workaround The system scans only for embedded devices. The Smart Array Option ROM has to be loaded manually the first time. This can be done at the EFI shell by executing a <code>search all</code> command. The user needs to use <code>search x y</code> command (for example, <code>search 0 8</code>), where <code>x</code> is the cell number and <code>y</code> is the PCI slot number.</p>
rx8620, rx7620	<p>Smart Array 640x/530x controllers do not automatically rebuild the internal HDD array when a failed drive is replaced</p>
	<p>Issue Smart Array 530x/640x controllers do not automatically rebuild the internal disk array when failed drives are replaced. The server backplane does not provide the manageability features needed for Smart Array adapters to recognize when drives are hot inserted into the system.</p>
	<p>Workaround By installing the Smart Array Rescan Service, the rebuild is initiated automatically after drive replacement:</p> <ol style="list-style-type: none"> 1. Download and flash the latest Smart Array firmware available from www.hp.com/support/itaniumservers. NOTE: Minimum firmware revision for the SA640x controller is 2.28. Minimum firmware revision for the SA530x controller is 3.56. 2. Download and install the latest Array Configuration Utility (ACU-XE) from www.hp.com/support/itaniumservers. The minimum required revision for the ACU-XE is 7.15.18.0. 3. Download and install the Smart Array Rescan Service from www.hp.com/support/itaniumservers. The minimum required revision for the Rescan Service is 0.1.

4. If an internal HDD array fails, replace the failed physical drive. The Rescan Service will initiate the rebuild automatically (it may take up to 5 minutes before the rebuild starts). To start the rebuild immediately, open the Array Configuration Utility (ACU-XE) and select **Refresh** in the Controller State field, and the failed array will begin to rebuild.

rx8620, rx7620

Smart Array 640x hot add is not supported

Issue If a Smart Array 6402 or 6404 card is hot-added to a slot, the card will not function and a yellow exclamation mark displays next to the corresponding device in the Device Manager. Furthermore, any SA640x card added in this manner cannot be safely removed from the system without a reboot.

Workaround Hot adding is not currently supported for Smart Array 640x on HP Integrity servers. Normal hot add procedures can be used to insert the card, but it will not function until the next reboot. NOTE: Hot add is fully supported on SA530x.

rx8620, rx7620

Smart Array 6400 controller cannot be hot replaced during error message display

Issue The Smart Array 6400 controller cannot be hot replaced when the following error message displays: The device 'Smart Array 6400' cannot be stopped because a program is still accessing it.

Workaround Restart the Storage Agents service and try to hot replace the controller again.

System Management Homepage (SMH)

all Integrity servers

System Management Homepage fails to open

Issue If Internet Explorer is configured to browse through a proxy server and you forget to select the "Bypass proxy server for local addresses" checkbox, attempting to connect to the local SMH (<https://localhost:2381>) fails with a "page cannot be displayed" error.

Workaround Configure Internet Explorer to bypass the proxy server for local addresses:

1. In IE, click **Tools > Internet Options**.
2. Click the **Connections** tab.
3. Click the **LAN Settings** button.
4. Under "Proxy Server", select the **Bypass proxy server for local addresses** checkbox.

Another solution is to simply change the SMH shortcut (the icon on the desktop) so that it points to <https://127.0.0.1:2381> instead of <https://localhost:2381>.

all Integrity servers

System Management Homepage may log errors to the Windows application event log

Issue

If SMH is frequently installed and then uninstalled, or if the SMH service is frequently stopped and then started again, the following error can be logged to the Windows application event log:
Faulting application smhstart.exe, version 2.0.0.103, faulting module unknown, version 0.0.0.0, fault address 0x00000000.

Workaround

This message does not affect SMH operation. The application should still work normally. In the unlikely event of program termination, uninstall SMH, remove the C:\hp\hpasmh directory, and reinstall SMH.

Version Control

all Integrity servers

Version Control Repository Manager (VCRM) does not start after System Management Homepage (SMH) reinstallation

Issue

VCRM fails to start if SMH is uninstalled, the system rebooted, and then SMH is reinstalled. This problem occurs only when the system is rebooted between the SMH install and reinstall.

Workaround

Reinstall VCRM after reinstalling SMH.

all Integrity servers

Version Control Repository Manager (VCRM) does not upload the Japanese Support Pack from Japanese OS

Issue

VCRM uploads the English Support Pack instead of the Japanese Support Pack when used on a Japanese OS.

Workaround

Before uploading the Support Pack on a Japanese OS, change the browser's language setting to "en" or "en-us", upload the Japanese Support Pack, and then switch the browser's language setting back to Japanese.

Installing Windows Server 2003

When you purchase an HP Integrity server, you can select the option to have Windows Server 2003 installed at the factory, or you can install it yourself. The HP Smart Setup media provides tools for installing the OS and updating your server firmware at the same time. The following provides instructions on installing Windows Server 2003 on the HP Integrity server using the HP Smart Setup media and your license for Windows Server 2003.

The OS can be installed from either a local or remote console. Installing from either console involves preparing the server for the install, booting from the HP Smart Setup media, running EBSU, launching Windows Setup, loading OS files to the boot disk, and then booting the server from the boot disk.

Prepare the server for install

- Step 1.** Ensure that all server hardware is Windows compatible.
- Step 2.** If you are migrating from another OS, make sure your data is backed up and recoverable.
- Step 3.** Be sure to disconnect all unnecessary disk controllers, including SAN controllers.
- Step 4.** Set up a local console and install a VGA card if you are installing from a local console. This step is optional.
- Step 5.** Connect a PC running PuTTY Version 0.57 or greater or HyperTerminal to either the server MP serial port (null modem cable) or the MP LAN port (hub required).

Set cell local memory

- Step 1.** Set the memory to maximum Cell Local Memory (CLM) mode using the Par Commands Wizard or ParCLI.

For detailed instructions, see the nPartition Guide.

- Step 2.** If your partitions are already created, use `parstatus` to check how memory is set. For example:

```
parstatus -p2 -V -g passwd -h myserver
```

Set ACPI flag to Windows

If you purchased your server with a Windows operating system option (such as the Microsoft retail media or the HP Smart Setup media), this flag is set to **windows** in the factory. If you purchased the server with a different or no operating system, you must set this flag to **windows**.

CAUTION

If the server is booted to Windows Server 2003 without setting the ACPI flag to **windows**, the OS displays a blue screen error.

- Step 1.** Power on the server and boot to the EFI.

Step 2. From EFI shell, type `acpiconfig`.

EFI displays the current ACPI settings. If the flag is set to **windows**, EFI displays
`acpiconfig: windows`

Step 3. If the flag is not set to **windows**, type `acpiconfig windows`.

Step 4. Type `acpiconfig` to display the settings again and verify that the flag is set correctly.

NOTE

If you update the system firmware, this flag may be reset to **default**. Verify that the flag is set to **windows** after you flash the system firmware.

Run EBSU

EBSU provides an easy-to-use interface to flash the firmware, partition the hard disk, install diagnostic tools, configure storage controllers, and run other EFI utilities.

Step 1. Load the HP Smart Setup media into the server DVD drive.

Step 2. From the EFI Boot Menu, select **Internal Bootable DVD** and press **Enter**.

Step 3. EBSU starts and displays the Welcome screen. Select **OK** and press **Enter** to continue.

Step 4. From the main menu, select **Express Setup** and press **Enter**.

Step 5. EBSU displays the Express Setup introduction. Press **Enter** to continue.

Step 6. EBSU displays the firmware update screen, listing each device, its installed firmware version, and the firmware version on the Smart Setup media. Select the device(s) whose firmware you want to update. To continue, select **Next** and press **Enter**.

NOTE

You may not be able to use EBSU to flash the firmware of some devices. You cannot flash the firmware if the installed version is the same or higher than the version on the Smart Setup media. Also, you cannot use EBSU to flash the Management Processor (MP) firmware. You must download the latest MP firmware from the HP Integrity support site: <http://www.hp.com/support/itaniumservers/> and flash it separately.

Step 7. Specify the disk partitions you want to create (**ESP Only** or **ESP + HPSP + MSR**). We recommend the default—**ESP + HPSP + MSR**—as a means to simplify the maintenance of your server. Also, specify the option to install the Drive Explorer utility, which enables you to browse a drive in EFI. Select **Next** and press **Enter**.

Step 8. Specify the option to install offline diagnostic tools (from the *HP Itanium Processor Family offline diagnostics and utilities CD*). Also, specify the option to launch the Windows OS installer. Select **Setup** and press **Enter**.

Step 9. EBSU displays the partition confirmation window. Select **Continue** and press **Enter**.

Step 10. EBSU prompts you to insert the Microsoft Windows Server 2003 CD in the DVD drive. Insert the *Microsoft Windows Server 2003 CD* and press **Enter**.

Run Windows Setup

Windows Setup prompts you to create a system partition on the boot disk if needed, copies the operating system files on to that partition, and attempts to reboot from the boot disk.

- Step 1.** When you insert the Microsoft Windows Server 2003 CD in the DVD drive, it launches Windows Setup. Press **Enter** to start the installation.
- Step 2.** Windows Setup prompts you to select **Express Install** or **Custom Install** (only Express Install is available when installing from a remote console). Express Install minimizes user interaction, selecting various installation options on your behalf. Select **Express Install** by pressing **Enter**.
- Step 3.** If Windows Setup cannot find a system partition, it prompts you to create one. Press **Enter** to continue. Windows creates a partition and then prompts you to format it.
- Step 4.** Select the partition in which you want to install the OS and press **Enter**. Windows formats the partition if necessary, checks the partition for errors, and begins to copy the OS files.
- Step 5.** Monitor the copy process until it completes.

Upon completion, Windows Setup counts down to a reboot. Allow the system to reboot.

Specify server settings (local console)

To set up Windows Server 2003 after initial boot from the local console:

- Step 1.** When the system boots, Windows displays a screen indicating that an EMS channel (MP remote port) is present. It may take 2 to 15 minutes for the mouse and keyboard to start operating in this mode.
- Step 2.** When prompted to enter server settings, click **OK**.
- Step 3.** From the *Windows Setup Wizard*, enter the following setup information:
 1. In the *License Agreement* window, click **Accept** and then **Next**.
 2. In the *Regional and Language Options* window, click **Next**.
 3. In the *Your Product Key* window, enter the product key.
The product key is located on the label attached to the server.
 4. In the *Licensing Modes* window, select the license you purchased.
 5. In the *Administrator Password* window, enter the server name and a password.
 6. In the *Date and Time* window, select the appropriate timezone, and click **Next**.

The server reboots to the EFI Boot Manager.

- Step 4.** From the EFI Boot Menu, select Windows Server 2003. The server boots to Windows.
- Step 5.** Log in to the system with the administrator password you specified earlier.

Specify system settings (remote console)

To set up Windows Server 2003 after initial boot from a remote console:

- Step 1.** At the SAC> prompt, switch to channel one by pressing **Esc+Tab**.

The system displays the following screen:

```
*****  
Name:                               Unattended Setup Channel  
Description:                         Provide parameters to automate Setup  
Type:                                 VT-UTF8  
Channel GUID:                        0cfc0ee2-3a27-11d7-8484-806e6f6e6963  
Application Type GUID: 00000000-0000-0000-0000-000000000000  
  
Press <esc><tab> for next channel.  
Press <esc><tab>0 to return to the SAC channel.  
Use any other key to view this channel.  
*****
```

- Step 2.** Press any key and then press **Page Down**.

- Step 3.** Accept the license agreement by pressing **F8**.

On the Windows default terminal emulator, **F8** is **<Esc>8**. Press **8** within two seconds after pressing **Esc**. Otherwise, the system will register only **Esc** and reboot.

- Step 4.** Enter the product key.

The product key is located on the label attached to the server.

- Step 5.** Enter the administrator password and re-enter to confirm.

The mini-setup process continues automatically and after completion, reboots the system. Wait for the SAC> prompt to reappear.

- Step 6.** Open a terminal server client and connect to your server's IP address.

Change the computer name and IP address, if needed.

- Step 7.** On the desktop, open the Online Reference page, scroll to the bottom, and click on the link to **c:\hputils\usercompanyname.com**.

- Step 8.** When prompted, enter company and user name, and click **OK** to complete setup.

Re-installing Windows Server 2003

When you purchase an HP Integrity server, you can select the option to have Windows Server 2003 installed at the factory. Servers with the factory-installed Windows operating system are shipped with the HP Re-installation media, which allows you to restore your server to the factory configuration if needed. The following sections provide instructions on installing Windows Server 2003 on the HP Integrity server using the HP Re-installation media.

From a local console

Re-installing Microsoft Windows Server 2003 from a local console involves copying the operating system image from the Re-Installation media to the disk and setting up the system. The following sections provide brief instructions, aimed at expert system administrators, on getting the server up and running quickly. For detailed instructions, refer to the *Smart Setup Guide*.

Load the operating system

To re-install Windows Server 2003 on the server from a local console:

- Step 1.** Disconnect all mass storage devices from all controllers except the boot controller. Make a note of where the other devices were connected so you can reconnect them after installation completes.

WARNING

The system installs to the boot controller detected as adapter zero drive zero. If you do not disconnect all other drives, the system may install to an unintended drive.

- Step 2.** Configure the boot controller and drive.
If you are using a RAID controller, prepare the controller and select the RAID type according to instructions in the RAID controller documentation.
- Step 3.** Because Windows Server 2003 with SP1 cannot create a boot entry if one already exists you must delete the existing boot entry. To delete the boot entry:
1. Select **EFI Boot Manager Menu > Boot Option Maintenance Menu > Delete Boot Option(s)**
 2. Select a Windows Server 2003 boot entry to delete and press **Enter**.
- Step 4.** Insert the *HP Re-Installation media* in the DVD drive.
- Step 5.** From the EFI boot manager, select **Internal Bootable DVD**, if present.
If this entry is absent:
1. Select **EFI Shell**.
 2. In the EFI Shell, select the DVD file system.
For example, if the DVD file system is fs1, type **fs1**:
 3. Start the boot loader by typing **setupldr**
- Step 6.** Click **Re-Install**.

Step 7. Select the partition size and click **OK** to continue.

NOTE

The installation process copies files to the hard disk. It may display 99% complete for a long time. Do not power off the server.

Step 8. When the installation process displays a dialog box, click **OK** to continue.

Step 9. Click **Exit**.

The server reboots to the Windows Server 2003 operating system. Set up the system according to the instructions in the following section.

Specify system settings

To set up Windows Server 2003 after initial boot from the local console:

Step 1. Verify that the ACPI configuration is set to Windows.

1. From the EFI Shell, type `ACPICONFIG`.

If the ACPI configuration is set correctly, this command displays `acpiconfig` settings: `windows`.

2. If the ACPI configuration setting is incorrect, type the following command:

```
ACPICONFIG WINDOWS
```

3. Reset the server.

Step 2. Power on the server.

Windows displays a pop-up screen indicating that an EMS channel (headless server MP port) is present. It may take 2 to 15 minutes for the mouse and keyboard to start operating in this mode.

Step 3. When prompted to enter setup information at the local console, click **OK**.

Step 4. Enter the following setup information using the *Windows Setup Wizard*.

1. In the *License Agreement* window, click **Accept** and then **Next**.

2. In the *Regional and Language Options* window, click **Next**.

3. In the *Your Product Key* window, enter the product key.

The product key is located on the label attached to the server.

4. In the *Licensing Modes* window, select the license you purchased.

5. In the *Administrator Password* window, enter the server name and a password.

6. In the *Date and Time* window, select the appropriate timezone, and click **Next**.

The server reboots to the EFI Boot Manager and then boots up Windows Server 2003. You can now log in to the server using the administrator password you selected.

From a remote console

Re-installing Microsoft Windows Server 2003 from a remote console involves copying the operating system image from the Re-Installation media to the disk and setting up the system. The following sections provide brief instructions, aimed at expert system administrators, on getting the server up and running quickly. For detailed instructions, refer to the *Smart Setup Guide*.

Load the operating system

To install the Windows Server 2003 operating system on the server from a remote console:

Step 1. Connect to the target system partition with the terminal emulator.

NOTE

On Windows XP, the Terminal Services client is available under **Accessories > Communications**. On Windows 2000, you must install the Terminal Services client before you can use it.

Step 2. Because Windows Server 2003 with SP1 cannot create a boot entry if one already exists you must delete the existing boot entry. To delete the boot entry:

1. Select **EFI Boot Manager Menu > Boot Option Maintenance Menu > Delete Boot Option(s)**
2. Select a Windows Server 2003 boot entry to delete and press **Enter**.

Step 3. From the EFI boot manager, select **Internal Bootable DVD**, if present.

If this entry is absent:

1. Select **EFI Shell**.
2. In the EFI Shell, select the DVD file system.
For example, if the DVD file system is fs1, type **fs1**:
3. Start the boot loader by typing **setupldr**

Step 4. At the **SAC>** prompt, type **cmd**.

Step 5. Switch to the new command prompt channel by pressing **Esc+Tab**.

Step 6. Invoke the installation menu by typing **txtrestore**.

Step 7. Select the partition size and click **OK** to continue.

NOTE

The installation process copies files to the hard disk. It may display 99% complete for a long time. Do not power off the server.

Step 8. When the installation process completes, the main console or VGA display shows a screen indicating that the EMS was detected. When prompted to use the local console, do *NOT* click OK.

Step 9. Return to the remote console and perform system setup as indicated in the following section.

Specify system settings

To set up Windows Server 2003 after initial boot from a remote console:

- Step 1.** At the SAC> prompt, switch to channel one by pressing **Esc+Tab**.

The system displays the following screen:

```
*****  
Name: Unattended Setup Channel  
Description: Provide parameters to automate Setup  
Type: VT-UTF8  
Channel GUID: 0cfc0ee2-3a27-11d7-8484-806e6f6e6963  
Application Type GUID: 00000000-0000-0000-0000-000000000000  
  
Press <esc><tab> for next channel.  
Press <esc><tab>0 to return to the SAC channel.  
Use any other key to view this channel.  
*****
```

- Step 2.** Press any key and then press **Page Down**.
- Step 3.** Accept the license agreement by pressing **F8**.
On the Windows default terminal emulator, **F8** is **<Esc>8**. Press **8** within two seconds after pressing **Esc**. Otherwise, the system will register only **Esc** and reboot.
- Step 4.** Enter the product key.
The product key is located on the label attached to the server.
- Step 5.** Enter the administrator password and re-enter to confirm.
The mini-setup process continues automatically and after completion, reboots the system. Wait for the SAC> prompt to reappear.
- Step 6.** Enter **i** to get the IP address of your server.
- Step 7.** Open a terminal server client and connect to your server's IP address.
Change the computer name and IP address, if needed.
- Step 8.** On the desktop, open the Online Reference page, scroll to the bottom, and click on the link to **c:\hputils\usercompanyname.com**. This link is available when using HP Reinstallation media only.
- Step 9.** When prompted, enter company and user name, and click **OK** to complete setup.

Technical documentation

Technical documentation for HP Integrity servers running Windows Server 2003 includes the following manuals in English and Japanese. These manuals are available on the HP Smart Setup media and from the HP Integrity support Web site:

<http://www.hp.com/support/itaniumservers/>.

Smart Setup Guide

provides instructions for installing, re-installing, or migrating to Windows Server 2003 on HP Integrity servers.

nPartition Guide

provides instructions for creating, configuring, and managing nPartitions on cell-based HP Integrity servers running Windows Server 2003.

Kernel Debug Guide

provides instructions for setting up and running the Windows operating system kernel debugging environment, and provides tips and tricks for troubleshooting the OS.

Support Pack and Deployment Utilities User Guide

provides instructions for using the deployment utility and setup tools to perform routine software maintenance tasks in Windows Server 2003 64-bit server environments.

Management Events Reference

contains a list of the Microsoft Windows Server 2003 and Microsoft Windows Server 2000 Event Log messages associated with SNMP traps, which are generated by the HP Management Agents for Servers for Windows.

Management Agents Guide

provides instructions for installing, configuring, and using HP Insight Management Agents on HP Integrity servers running Windows Server 2003.

Pay Per Use User Guide

provides instructions for installing, configuring, and using HP Pay Per Use (PPU) software on HP Integrity servers running Windows Server 2003.

Technical support

To keep your server up to date with the latest firmware, drivers, and utilities, visit the HP technical support web site periodically.

Get Windows-specific firmware, drivers, and utilities

To obtain the rx7620 and rx8620 firmware, drivers, and utilities applicable to Windows Server 2003:

- Step 1.** Go to <http://www.hp.com/>
- Step 2.** Click **Driver Downloads**.
- Step 3.** On the Software & Driver Downloads page, select **Download drivers and software** and type rx7620 or rx8620 in the product search field.
- Step 4.** On the **specify operating system** page, select **Microsoft Windows Server 2003 64-bit**.
- Step 5.** On the **download drivers and software for HP Integrity rx7620 or 8620 server-Microsoft Windows Server 2003 64-Bit** web page, download firmware and drivers as required.

NOTE

Only HP CEs are authorized to update the system firmware on HP Integrity rx7620 and 8620 servers. Please contact HP Support for updates to the firmware.

Register for HP support notifications

HP recommends that you register for alerts and notifications to stay informed of updates to the drivers, patches, and other components specific to your server.

Go to <http://www.hp.com/united-states/subscribe/gateway/>