

Microsoft® Windows® Server 2003,
Enterprise Edition 64-Bit

Installation Instructions and Important Information



Notes and Notices



NOTE: A NOTE indicates important information that helps you make better use of your computer.



NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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This document provides setup and general information for installing the Microsoft® Windows® Server 2003, Enterprise Edition 64-Bit operating system (hereafter known as Windows Server 2003) on your 64-bit Intel® Itanium®-based Dell™ PowerEdge™ system.

 **NOTE:** The Windows Server 2003 operating system can only be installed on a PowerEdge system with one or more 64-bit Intel Itanium processors.

This document covers the following topics:

- 32-bit application compatibility
- Using the *Windows Server 2003* CD to perform a clean installation of the operating system
- Performing a clean installation of Windows Server 2003 with an existing Windows operating system
- Important information
- Getting help
- Using Dell Technical Support Services


 **NOTE:** Before you begin, review the documentation that came with your operating system for important product information.

32-Bit Application Compatibility

Windows Server 2003 is designed and optimized on the new 64-bit Explicitly Parallel Instruction Set Computing (EPIC) instruction set of the Intel 64-bit processors. Although Windows Server 2003 is backward-compatible with 32-bit Windows-based server applications, the 32-bit application performs much better on 32-bit versions of Windows Server 2003.

Microsoft strongly recommends that customers deploy 32-bit Windows-based server applications on 32-bit versions of Windows, such as Windows Server 2003, Enterprise Edition.


Using the Windows Server 2003 CD to Perform a Clean Installation of the Operating System

 **NOTICE:** See the first bulleted item under "SCSI and RAID Controllers" in "Important Information." You must install the PowerEdge Expandable RAID Controller (PERC) 3/QC with firmware version 1.61 or later before installing Windows Server 2003, or before adding a PERC 3/QC controller card to an existing Windows Server 2003 installation.

Review the documentation that came with your operating system for important product information. The documentation contains an overview of the operating system, explanations of features, installation instructions, descriptions of common tasks, and troubleshooting information.


Before you turn on your system for the first time, you must connect the keyboard, monitor, mouse, and network cable (if applicable) and attach any other devices that you intend to use with your system.

- 1 Ensure that all the cables are connected including power, mouse, keyboard, video, and network cables.
- 2 Turn on your system and any attached peripherals, and insert the *Windows Server 2003* CD into the CD drive.
- 3 Configure your system disks and the controller (using a QLogic SCSI controller, PERC 3/QC, or PERC 4/DC).

 **NOTE:** If your system is configured with a PERC 3/QC or PERC 4/DC controller, Dell recommends that you initialize the hard drives. If your system is configured with a QLogic SCSI controller, you may want to low-level format the hard drive containing the operating system.

- To configure the QLogic SCSI controller:
 - a When prompted during POST, press <Alt><q>.
 - b Select **SCSI Disk Utility**→ **SCSI Bus0**.
 - c Select the hard drive that you want to low-level format.
This operation takes from several minutes to several hours depending on the drive size.

- d Exit the **SCSI Disk Utility** and restart the system by pressing <Esc> several times.
The **EFI Boot Manager** appears.
- e Go to step 4.
- To configure the PERC 3/QC or PERC 4/DC controller:
 - a When prompted during POST, press <Ctrl><m>.
 - b Select **Configure**→**New Configuration**→**Yes**.
 - c Configure your RAID disks in the appropriate RAID array.
The configuration might vary depending on the installed physical disks, the required RAID level, and the number of desired virtual disks.

See the RAID documentation that came with your system for more information.
 - d Click **Accept** and then click **Save** to save the new configuration.
 - e Press <Esc>.
The main **Management Menu** appears.
 - f Initialize the virtual disks that you just configured in step c.
 - g Press <Esc> several times to return to the main **Management Menu**.
 - h Press <Ctrl><Alt><Delete> to restart your system.
The **EFI Boot Manager** appears.
 - i Go to step 4.
- 4 Select **CD-ROM**, and when prompted, press any key to boot your system from the *Windows Server 2003 CD*.
 -  **NOTE:** If you do not press a key on the keyboard, your system reverts back to the Extensible Firmware Interface (EFI) Boot Manager, which allows you to repeat this step.

The **Welcome to Setup** screen appears.

- 5 Press <Enter> to continue.

The **Setup Could Not Locate an Existing System Partition** screen appears.

- 6 Press <Enter>.

The setup program creates and automatically formats a system partition. The partition is an EFI system partition formatted with a file allocation table (FAT) file system. The operating system stores system files in this partition.

- 7 After the partition is formatted, read the license agreement and press <F8> to accept the agreement.

The **Disk-Partitioning** screen appears.

This screen displays the disks attached to the controller and their capacities. The operating system installation automatically creates an EFI system partition (minimum 100 MB; maximum 1 GB) and an unknown Partition 2 of approximately 126 MB.



NOTICE: Do not delete any partitions. The partitions are necessary to convert basic disks to dynamic disks in disk management. If the partitions are deleted, your system may fail after the operating system is installed.

- 8 Either create a third partition in the unpartitioned space or use all of the unpartitioned space to install your operating system.
 - a Highlight either all of the unpartitioned space or the partition you just created.
 - b Press <Enter>.

The system prompts you to format the partitions using the Windows NT[®] file system (NTFS) menu (the default option).

- 9 Press <Enter> to continue.

After the partitions are formatted, the operating system copies system files to your drive. This operation takes a few minutes.

When the system files are copied, your system automatically restarts and the GUI setup continues. Windows Server 2003 prompts you to

enter the regional settings, organization name, local time, date and zone, system name, and product key.

- 10 Enter the required information and click **Next** in each window to continue.

- 11 Select your licensing mode by selecting either **Per Server** (the default) or **Per Seat**, and click **Next**.

If you select **Per server**, you must enter the number of Windows Server 2003 licenses you have purchased for your systems.

If you select **Per seat**, the license manager verifies that each individual system has a valid license at log in.

- 12 In the **Computer Name** field and **Administrator Password** field, enter the requested information and click **Next**.

- 13 In the **Date** field and **Time** field, enter the required settings, and click **Next**.

- 14 Configure your system's network setting by selecting **Typical Settings** or **Custom Settings**, and then click **Next**.

The **Workgroup on Computer Domain** window appears.

This window allows you to specify making this system a part of a domain or leaving it as a workgroup.

- 15 Make your selection and click **Next**.

The operating system configures the networking and additional system components. This process can take several minutes.

When all of the files are copied, setup automatically restarts the system, registers components, and saves settings.

The **Welcome to Windows** window appears.


- 16 Press <Ctrl><Alt><Delete>.

The **Log On To Windows** window appears.

- 17 In the **User name** and **Password** fields, enter your administrator user name and password.
The **Configure Your Server Wizard** window appears and the Configuration Wizard starts.
- 18 Click **Next** if you want to continue configuring your system.
Specify as much additional configuration as required for this particular system.
- 19 Remove the *Windows Server 2003* CD from the CD drive.
You have successfully completed the installation of Windows Server 2003 operating system.

Performing a Clean Installation of Windows Server 2003 With an Existing Windows Operating System

If you are reinstalling Windows Server 2003 on your system, you must delete the Windows operating system that is listed as a boot option in the **EFI Boot Manager**.

 **NOTICE:** If you do not delete the previous Windows operating system in the **EFI Boot Manager**, your system may not function properly.

To delete the Windows operating system listed in the **EFI Boot Manager**, perform the following steps:

- 1 Restart your system.
The **EFI Boot Manager** appears.
- 2 Using the up-arrow and down-arrow, scroll to **Boot option maintenance menu**, and press <Enter>.
The **EFI Boot Maintenance Manager** screen appears.

- 3** In the **Main Menu**, scroll to **Delete Boot Option(s)**, and press <Enter>.

The **Delete Boot Option(s)** menu appears.

- 4** Scroll to the Windows operating system that is currently installed on your system, and press <Enter>.

The following message appears at the bottom of the screen:

```
Delete selected Boot Option [Y-Yes N-No]:
```

- 5** Press <y> to continue.

The Windows operating system is deleted from the **Delete Boot Option(s)** menu.

- 6** Scroll to **Save the change** and press <Enter>.

- 7** Press <Esc> twice.

The **Please select a boot option** menu appears.

- 8** Ensure that the *Windows Server 2003* CD is in the CD drive.

- 9** Scroll to **CD-ROM**, and press <Enter>.

The following message appears:

```
Press any key to boot from the CD-ROM...
```

- 10** Press any key to continue.

The text mode **Windows Setup** screen appears.

- 11** Complete step 3 through step 19 in "Using the Windows Server 2003 CD to Perform a Clean Installation of the Operating System" to complete the installation.

Important Information

Some sections below reference a yellow "bang" . This icon is displayed in Device Manager to indicate a specific problem with a system device.

Operating System

- **Unable to upgrade the operating system.**

Microsoft does not support upgrades from Windows Advanced Server Limited Edition version 1.0 or Limited Edition Refresh version 1.1 to Windows Server 2003. A clean installation is required to run Windows Server 2003.

Backup Procedures

- **Rescheduled backup procedure fails.**

This issue occurs when you reschedule backup procedures using the Native Backup wizard.

When you initially schedule a backup, the wizard prompts you twice for the user name and password to ensure that you are authorized to perform the backup procedure. If you attempt to modify the job properties while the original Native Backup window is still open, the backup application may not prompt you for a password, and the backup procedure may fail.

If you reconfigure an existing backup, always open another Native Backup wizard window. This procedure corrects this issue.

If you modified the job properties while the original Native Backup window was open, perform the following steps to resolve the issue:

- a** Navigate to **Scheduled Tasks**.
- b** Right-click the backup and select **Properties**.
- c** Click **Set Password** and enter the password.
This step ensures that the updated backup occurs.
- d** Click **OK**.

Networking

- **All network traffic occurs on one processor.**

When your system experiences heavy network utilization on Gigabit NICs, the user might also see all network traffic on one processor in the Task Manager.

This behavior is expected. The operating system is designed to perform in this manner.

- **The operating system does not autodetect other clients or systems in the workgroup or domain.**

The operating system is unable to autodetect other clients or systems within the same workgroup or domain as shown in **Windows Network Places**.

To resolve this issue, use a specific IP address or system name to connect to each client in the workgroup or domain.

- **Network data is inconsistent in Task Manager and Network Monitor.**

When monitoring network traffic on your system, the network utilization percentage value in Network Monitor may conflict with the same value in Task Manager.

To monitor network traffic, use the following guidelines:

- Use Network Monitor to view all network traffic *outside your local system*.
 - Use Task Manager to monitor all network traffic *on your local system* and when other methods of network monitoring are unavailable.
- **The IPCONFIG command does not display the NIC connection order.**

The NIC connection order is used to satisfy network segment or protocol priority. In previous versions of the Windows operating system, you could view the NIC connection order by opening a command prompt and typing IPCONFIG. However, the IPCONFIG

command in Windows Server 2003 no longer displays this information.

To view the NIC connection order, click the **Start** button and select **Settings**→**Network Connections**→**Advanced**→**Advanced Settings**→**Connections**.

SCSI and RAID Controllers

- The operating system does not shut down after you install a PERC 3/QC card (PowerEdge 7150 systems only).

If you add a PERC 3/QC card to a PowerEdge 7150 system after you install Windows Server 2003 using the QLogic 12160 controller, the operating system may not shut down.

To avoid this issue, upgrade the PERC 3/QC card's firmware to version 1.61 or later before you install the PERC 3/QC card in your system. You can download the firmware from the Dell Support website at support.dell.com.

If a PERC card was installed in your system, clear the configuration from the system by performing the following steps:

- a During system startup, press <Ctrl><m>.
 - b Select **Configure**→**Clear Configuration**→**Yes**.
 - c Press <Esc> several times to return to the main **Management Menu**.
 - d Press <Ctrl><Alt><Delete> to restart your system.
- A yellow "bang" appears in Device Manager for the RAID controller.

If you install a PERC 3/QC card into a PowerEdge 7150 system and the firmware is not updated to version 1.61 or later, a yellow "bang" appears in Device Manager for the RAID controller.

To avoid this issue, update the PERC 3/QC card's firmware to version 1.61 or later *before* you install the operating system. You can download the updated firmware from the Dell Support website at support.dell.com.

Other Issues

- **Error appears during POST.**

Before you reinstall the operating system, you might see the following error during POST before the **EFI Boot Manager** starts:

```
Loading Device Drivers
Load of Auxiliary Floating Point Driver failed:
Unsupported
Pause - press any key to continue
```

To avoid this issue, perform the following steps:

- a** When the error appears, press any key.
The **EFI Boot Manager** menu displays.
- b** Scroll down to **EFI-Shell** and press <Enter>.
- c** At the shell prompt type the following information and press <Enter>:

```
bcfg driver dump
```
- d** Verify that the **Auxiliary Floating Point Driver** is set to 01.
- e** At the shell prompt, type the following information and press <Enter>:

```
bcfg driver rm 01
```

The system displays a message stating that driver 01 has been removed.
- f** At the shell prompt, type `reset` and press <Enter>.
Your system reboots.

- **Yellow warning message in the Event Viewer System Log.**

After you install Windows Server 2003, the System Log in the Event Viewer displays the following warning message:

Source	Event
-----	-----
WMIxWDM	98

To avoid this issue, clear the entry in the Event Viewer System Log. Dell is currently working with Microsoft to correct this problem.

- **Device Manager may not display USB devices status correctly.**

The Windows Server 2003 operating system supports USB devices. However, if you replace a USB device with a PS/2 device or a PS/2 device with a USB device while the system is running, the operating system may not display USB devices correctly in Device Manager.

While this issue may cause some confusion, USB devices operate normally.

- **Unable to delete volume folders after mounting a volume using Disk Management.**

After mounting a volume using Disk Management, any folders created in the volume cannot be deleted.

To correct this issue, press <Shift><Delete> to delete a volume folder.

Getting Help

If at any time you do not understand a procedure described in this guide, or if your system does not perform as expected, Dell provides a number of tools to help you. For more information about these help tools, see "Getting Help" in your PowerEdge *Installation and Troubleshooting Guide*.

Dell Enterprise Training and Certification is available now; see www.dell.com/training for more information. This service may not be offered in all locations.

Using the Dell Technical Support Service

Dell provides the following service to assist you.



NOTE: Technical information is available from the Dell Support website at support.dell.com.

Dell DirectLine™ Network Operating System Support Service



NOTE: The following service is not always available in all locations outside the continental U.S. Call your local Dell representative for information on availability.

Technical assistance is provided through a fee-based service, the Dell DirectLine Networking Operating System support service. DirectLine provides assistance for troubleshooting network issues and for making problem determinations. Dell technicians propose corrections for both hardware and operating system error messages and provide problem resolution. Administrative services, such as assistance with the installation of the operating system or other utility software, are also covered by the Dell DirectLine service.

DirectLine does not provide assistance for non-Dell hardware or any onsite response for upgrades or patches beyond what is covered in your service contract. If you require technical assistance, you can contact Dell using the appropriate numbers provided in your Dell DirectLine documentation.

