Installing This Release of Windows Server 2008

This document provides information about installing the Windows Server® 2008 operating system. It also provides information that you can use to troubleshoot problems that may occur during the installation.

Setup works in several stages. You will be prompted for some basic information, then Setup will copy files and restart the computer. Setup concludes by presenting a menu for Initial Configuration Tasks, which you can use to adjust the server configuration for your specific needs.

Preinstallation information

System requirements

The following are estimated system requirements for Windows Server 2008. If your computer has less than the "Minimum" requirements, you will not be able to install this product correctly. Actual requirements will vary based on your system configuration and the applications and features you install.

Processor

Processor performance depends not only on the clock frequency of the processor, but also on the number of processor cores and the size of the processor cache. The following are the processor requirements for this product:

- **Minimum**: 1 GHz (for x86 processors) or 1.4 GHz (for x64 processors)
- **Recommended**: 2 GHz or faster

  📝 **Note**

  An Intel Itanium 2 processor is required for Windows Server 2008 for Itanium-Based Systems.

RAM

The following are the RAM requirements for this product:

- **Minimum**: 512 MB
- **Recommended**: 2 GB or more
- **Maximum (32-bit systems)**: 4 GB (for Windows Server 2008 Standard) or 64 GB (for Windows Server 2008 Enterprise or Windows Server 2008 Datacenter)
- **Maximum (64-bit systems):** 32 GB (for Windows Server 2008 Standard) or 2 TB (for Windows Server 2008 Enterprise, Windows Server 2008 Datacenter, or Windows Server 2008 for Itanium-Based Systems)

Disk space requirements

The following are the approximate disk space requirements for the system partition. Itanium-based and x64-based operating systems will vary from these estimates. Additional disk space may be required if you install the system over a network. For more information, see http://go.microsoft.com/fwlink/?LinkId=99285.

- **Minimum**: 10 GB
- **Recommended**: 40 GB or more

  📝 **Note**

  Computers with more than 16 GB of RAM will require more disk space for paging, hibernation, and dump files.
- DVD-ROM drive
- Super VGA (800 x 600) or higher-resolution monitor
- Keyboard and Microsoft mouse (or other compatible pointing device)

Important information for x64-based operating systems

Ensure that you have updated and digitally signed kernel-mode drivers for x64-based versions of Windows Server 2008. (These include the 64-bit versions of Windows Server 2008 except for Windows Server 2008 for Itanium-Based Systems.)

If you install a Plug and Play device, you may receive a warning if the driver is not digitally signed. If you install an application that contains a driver that is not digitally signed, you will not receive an error during Setup. In both cases, Windows Server 2008 will not load the unsigned driver.

If you are not sure whether the driver is digitally signed, or if you are unable to boot into your computer after the installation, use the following procedure to disable the driver signature requirement. This procedure enables your computer to start correctly, and the unsigned driver will load successfully.

To disable the signature requirement for the current boot process:

1. Restart the computer and during startup, press F8.
2. Select **Advanced Boot Options**.
3. Select **Disable Driver Signature Enforcement**.
4. Boot into Windows and uninstall the unsigned driver.

For more information, see http://go.microsoft.com/fwlink/?LinkId=66577.

Before you start Setup

Before you install Windows Server 2008, follow the steps in this section to prepare for the installation.

- **Check for application compatibility.** To help with this, you can use the Microsoft Application Compatibility Toolkit. Although it is primarily used to provide compatibility information about network applications, you can also use it to prepare for Windows Server 2008. For more information, see the Microsoft TechNet Web site about Windows Application Compatibility (http://go.microsoft.com/fwlink/?LinkID=29880).
- **Disconnect UPS devices.** If you have an uninterruptible power supply (UPS) connected to your destination computer, disconnect the serial cable before running Setup. Setup

automatically attempts to detect devices that are connected to serial ports, and UPS equipment can cause issues with the detection process.

- **Back up your servers.** Your backup should include all data and configuration information that is necessary for the computer to function. It is important to perform a backup of configuration information for servers, especially those that provide network infrastructure, such as Dynamic Host Configuration Protocol (DHCP) servers. When you perform the backup, be sure to include the boot and system partitions and the system state data. Another way to back up configuration information is to create a backup set for Automated System Recovery.

- **Disable your virus protection software.** Virus protection software can interfere with installation. For example, it can make installation much slower by scanning every file that is copied locally to your computer.

- **Run the Windows Memory Diagnostic tool.** You should run this tool to test the random access memory (RAM) on your computer. To use the Windows Memory Diagnostic tool, follow the instructions in the Windows Memory Diagnostic Users Guide (http://go.microsoft.com/fwlink/?LinkId=50362).

- **Provide mass storage drivers.** If your manufacturer has supplied a separate driver file, save the file to a floppy disk, CD, DVD, or universal serial bus (USB) flash drive in either the root directory of the media or in one of the following folders: **amd64** for x64-based computers, **i386** for 32-bit computers, or **ia64** for Itanium-based computers. To provide the driver during Setup, on the disk selection page, click **Load Driver** (or press F6). You can browse to locate the driver or have Setup search the media.

- **Be aware that Windows Firewall is on by default.** Server applications that must receive unsolicited inbound connections will fail until you create inbound firewall rules to allow them. Check with your application vendor to determine which ports and protocols are necessary for the application to run correctly.

  For more information about Windows Firewall see (http://go.microsoft.com/fwlink/?LinkID=84639).

- **Prepare your Active Directory® environment with Windows Server 2008 updates.** Before you can add a domain controller that is running Windows Server 2008 to an Active Directory environment that is running Windows® 2000 or Windows Server 2003, you will need to update the environment.

  To do this, you need to update the Active Directory environment by using the following procedure. If you are performing an unattended installation, perform this step before you install the operating system. Otherwise, you will need to do this after you run Setup and before you install Active Directory Domain Services.

  To prepare a forest

  a. Log on to the schema master as a member of the **Enterprise Admins**, **Schema Admins**, or **Domain Admins** group.

  b. Copy the contents of the \sources\adprep folder from the Windows Server 2008 installation DVD to the schema master role holder.

c. Open a Command Prompt window, navigate to the Adprep folder, and run **adprep /forestprep**.

d. If you plan to install a read-only domain controller (RODC), run **adprep /rodcprep**.

e. Allow the operation to complete and the changes to replicate before following the next procedure.

To prepare a domain

a. Log on to the infrastructure master as a member of the **Domain Admins** group.

b. Copy the contents of the \sources\adprep folder from the installation DVD to the infrastructure master role holder.

c. Open a Command Prompt window, navigate to the Adprep folder, and run **adprep /domainprep /gpprep**.

d. Allow the operation to complete and the changes to replicate.

After completing these steps, you can add domain controllers that are running Windows Server 2008 to the domains you have prepared. Among its tasks, the **adprep** command extends the schema, updates default security descriptors of selected objects, and adds new directory objects as required by some applications.

For more information about **adprep**, see http://go.microsoft.com/fwlink/?linkid=50439.

Known issues

For the most up-to-date information about known issues with Windows Server 2008, see the online version of this document and the release notes (http://go.microsoft.com/fwlink/?LinkId=99299).

Installing a Server Core installation

When installing a Server Core installation of Windows Server 2008 on an x86-based or x64-based server, you will be prompted during Setup to install one of the following options. You can use the following explanations to determine which one to choose:

- **Windows Server 2008** *VERSION* **(Full Installation).** This option installs the complete installation of Windows Server 2008. This installation includes the entire user interface, and it supports all of the server roles.

- **Windows Server 2008** *VERSION* **(Server Core Installation)**. This option installs a minimal server installation of Windows Server 2008, which you can use to run supported server roles. For a complete list of server roles available in Server Core installations, see http://go.microsoft.com/fwlink/?LinkId=99300.

  When you select this option, Setup will install only the files that are required for these server roles to function. For example, the traditional Windows interface will not be installed—you configure and manage the server locally from the command prompt. You should consider this

option because it will reduce the servicing and management requirements and the attack surface of your server.

📝 **Note**

For more information about the Server Core installation option, including detailed procedures for installing and managing server roles and features, see the step-by-step guide (http://go.microsoft.com/fwlink/?LinkId=87369).

Installing multiple operating systems on the same computer

We recommend that you install Windows Server 2008 on a partition separate from your previous operating system. By doing this, you will still have access to the other operating system. For best results, we recommend that you start Setup from within Windows (rather than booting from the product DVD), and then perform a custom (clean) installation onto a separate partition.

Performing an unattended installation

For information about performing an unattended installation, see the Windows Vista Deployment Step-by-Step Guide (http://go.microsoft.com/fwlink/?linkid=66066).

For additional information about unattended installation of Windows Server 2008, see the Windows Server 2008 Windows Automated Installation Kit User's Guide (Waik.chm).

📝 **Note**

These guides apply to both Windows Server 2008 and Windows Vista operating systems.

Upgrading

You have the option to upgrade computers to Windows Server 2008 instead of having to perform a clean installation.

For the most up-to-date information about upgrading Windows Server 2008, see the online version of this document and the release notes (http://go.microsoft.com/fwlink/?LinkId=92507).

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