

Install Windows Server 2008

The following article will guide you step by step to install Windows Server 2008, from the preparation process until the actual installation.

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Determine hardware requirements

Problem: Any operating system offers minimum and optimal hardware requirements so that the system can run smoothly. So you need to determine if your system's hardware strength meets the requirements of Windows Server 2008 operating system?

Resolution: Determine the hardware requirements at the three minimum, recommended, and optimal levels of Windows Server 2008, and compare it to your system.

You need to focus on the three main parts, which are RAM, processor, and free space on the hard drive.

Hardware / Configuration

Minimum

Suggest

Optimal

RAM memory

512MB

1GB

2GB

Processor

1Ghz

2Ghz

3Ghz

Hard drive (empty)

10GB

40GB

80GB

The recommended configuration is only required to run the operating system. You should consult the hardware requirements of the applications that will be run on the system for proper adjustments.

If you upgrade RAM to more than 16GB, you need to increase the amount of free space on the hard drive to make room for virtual memory (pagefile), Hibernate mode and dump files (dump file).

You can use the Microsoft Assessment and Planning Toolkit (MAP) tool to evaluate the server system. This tool will create a report to help you determine which server is ready to install Windows Server 2008.

Detailed steps to install Windows Server 2008

1. Determine hardware requirements
2. Perform preparation steps
3. Check application compatibility
 1. Disconnect the power without interrupting the UPS
 2. Run the Windows Memory Diagnostic tool
 3. Prepare drivers for storage devices
 4. Back up the server
 5. Disable antivirus software
 6. Prepare Active Directory
4. Decide which version of Windows Server 2008 to install
 1. Windows Web Server 2008
 2. Windows Server 2008 Standard
 3. Windows Server 2008 Enterprise
 4. Windows Server 2008 Datacenter
 5. Windows HPC Server 2008
 6. Windows Server 2008 for Itanium-Based Systems
5. Install Windows Server 2008
 1. Manual installation
 2. Automatic installation

Perform preparation steps

Problem: After you have determined that the system meets the Windows Server 2008 hardware requirements, the next step is to perform the preparation before proceeding with the installation. Specifically, what are these?

Resolution: The following is a list of things to do during the pre-installation process.

1. Check application compatibility

2. Disconnect the power without interrupting the UPS
3. Run the Windows Memory Diagnostic tool
4. Prepare drivers for storage devices
5. Back up the server
6. Disable antivirus software
7. Prepare Active Directory

Above is all that should be done before installing Windows Server 2008. You may not have to do all of the above, because it depends on whether you will install it completely or upgrade it. level directly from the old operating system. In addition, you only need to take steps to prepare the Active Directory if you intend to turn your Windows Server 2008-based computer into a domain controller and add it to an existing Windows 2000/2003 domain.

Next is the detail of each job:

Check application compatibility

Before installing Windows Server 2008, you need to make sure that third-party applications that run on the system are supported by this operating system. To do this, you can check the documentation that came with the application or contact the vendor for a solution to see if this application is running on Windows Server 2008. In a professional working environment, technical documentation is extremely important because it helps you deploy applications on the system properly and effectively.

Another tool you can use is Microsoft Application Compatibility Toolkit 5.0 (ACT 5.0). This tool is used to collect compatibility data and save it to a centralized data store. These are very useful information when assessing risks that may occur after upgrading the operating system.

Note: You can also use ACT 5.0 in cases where the system has a smaller change, such as upgrading your browser or updating Windows. Please come here for more details.

Disconnect the power without interrupting the UPS

During the installation process, Windows Server 2008 will attempt to detect devices connected to the serial port. If you are connecting the UPS power via the serial port, you may have problems with the installer. So it is best to disconnect the UPS source until the installation is complete.

Run the Windows Memory Diagnostic tool

Please use Windows Memory Diagnostic tool to check RAM on the server. Click here to download the tool and then follow these steps:

1. Run the *mtinst.exe* file to start installing Windows Memory Diagnostic.
2. If you want to use the floppy disk to boot the server, select **Create Startup Disk** to install the Windows Memory Diagnostic on the floppy disk. If you use the CD, select **Save CD Image to Disk** .
3. Restart the server with the boot disk you just created.
4. The server will automatically boot into the Windows Memory Diagnostic interface and start the test.

Note: To check the server memory more carefully, you can run the extended test mode by pressing **T** when the Windows Memory Diagnostic is working. When choosing this mode, it is best to let the program run overnight.

Prepare drivers for storage devices

If your storage device has a driver (driver) included, you should save the driver to a floppy disk, CD, DVD or USB drive. During the installation process, you may need these drivers.

Back up the server

Backing up server data is an indispensable operation before making changes on the system. Make sure your important data is backed up carefully. When performing an operating system upgrade, you should have a backup of the system boot partition as well as system state data. These data can be backed up by creating a backup copy for Automated System Recovery (ASR).

Disable antivirus software

Anti-virus software will scan all files copied to the server, so it may affect the speed of system upgrade.

Prepare Active Directory

There are two steps to preparing the Active Directory service:

1. Prepare the forest.
2. Prepare the domain.

Note: You only need to prepare Active Directory when you intend to build a domain controller using Windows Server 2008 and join the existing Windows 2000/2003 domain.

Steps to prepare the forest:

1. Log in to the Schema Master of the current domain using the account that is a member of one of the Enterprise Administrators, Schema Administrators, or Domain Administrators groups.
2. Copy the adprep folder from sourcesadprep on the Windows Server 2008 installation disc into the Schema Master.
3. From the command line, go to the newly copied adprep folder, then run `adprep / forestprep` .
4. For read-only domain controllers (RODC), run `adprep / rodcprep` .
5. Wait for the task to complete and replicate before proceeding to the second step in the Active Directory service preparation stage.

Next is the domain preparation steps:

1. Log in to the Infrastructure Master of the current domain using the account that is a member of the Domain Administrators group.
2. Copy the adprep folder from sourcesadprep on the Windows Server 2008 installation disc into the Infrastructure Master.
3. From the command line, navigate to the newly copied adprep folder, then run `adprepdomainprepprep`
4. Wait for the task to complete and replicate.

At this point, you are done with the preparation and you can start installing Windows Server 2008. However, first you need to decide which edition to install?

Decide which version of Windows Server 2008 to install

Problem: Windows Server 2008 has many different versions, supports x86, x64 and Itanium processors and supports high availability, load balancing and virtualization. You need to review all editions and decide what is the best version for your company needs.

Resolution: You need to have a detailed look at each version of Windows Server 2008 and make an assessment in terms of company needs.

Windows Server 2008 has the following editions:

1. Windows Web Server 2008
2. Windows Server 2008 Standard
3. Windows Server 2008 Standard without Hyper-V
4. X86 Windows Server 2008 Enterprise
5. Windows Server 2008 Enterprise x64
6. Windows Server 2008 Enterprise without Hyper-V
7. Windows Server 2008 Datacenter
8. Windows Server 2008 Datacenter without Hyper-V
9. Windows HPC Server 2008
10. Windows Server 2008 for Itanium-Based Systems

Note: The next article does not describe Windows Server 2008 Standard, Enterprise, and Datacenter versions 'without Hyper-V' because they are identical to the corresponding versions with Hyper-V.

Windows Web Server 2008

As its name suggests, this edition is built for a single purpose: to become a web server. Windows Web Server 2008 has architectural improvements in IIS 7.0, ASP.NET and Microsoft .NET Framework. This is the version used to deploy web pages, web applications and web services.

Windows Web Server 2008 support:

1. 32GB Ram on 64-bit system (4GB on 32-bit system)
2. 4 multi-core processors

Windows Server 2008 Standard

Windows Server 2008 Standard is a powerful server operating system that integrates many features to improve security, management, and reduce infrastructure costs, including:

1. Web services
2. Hyper-V
3. Terminal Services

4. Presentation virtualization
5. Application virtualization
6. Network Access Protection (NAP)
7. BitLocker
8. RODCs
9. Windows Service Hardening
10. Bidirectional Windows Firewall
11. Next-generation cryptography support
12. Server Manager
13. Windows Deployment Services
14. Windows PowerShell
15. Next-generation TCP / IP
16. Server Core

Windows Server 2008 Standard support:

1. 32GB Ram on 64-bit system (4GB on 32-bit system)
2. 4 multi-core processors
3. 250 network access service connections (Network Access Services - NAS)
4. 50 connecting network policy server (Network Policy Server - NPS)
5. 250 connecting terminal server (Terminal Server)
6. Hyper-V virtualization with a free solution

Windows Server 2008 Enterprise

Windows Server 2008 Enterprise adds high availability, the latest security technologies and upgrade capabilities compared to the Standard edition. Here are a few outstanding features:

1. Failover cluster - up to 16 nodes (Failover clustering)
2. Fault-tolerant memory synchronization (Fault-tolerant memory)
3. Cross copy
4. Grant up to 4 additional virtual machines
5. Active Directory Federation Services (ADFS)
6. Advanced certificate services
7. Active Directory Domain Services (ADDS)

Support Windows Server 2008 Enterprise:

1. 8 processors
2. 2TB Ram on 64-bit systems (64GB on 32-bit systems)
3. Unlimited number of VPN connections (virtual private network)
4. Unlimited number of network access service connections
5. Unlimited number of network policy server connections

Windows Server 2008 Datacenter

This is a publication for large-scale virtualization needs and is added with the ability to upgrade critical applications in large IT infrastructure. Here are the outstanding features:

1. Large-scale virtualization - allows you to add a multitude of virtual solutions
2. Failover clustering
3. Dynamic hardware division
4. Windows Server High Availability Program

Windows Server 2008 Datacenter supports:

1. 2TB Ram on 64-bit systems (64GB on 32-bit systems)
2. 64 processors 64-bit x64 and 32 32-bit x86 processors
3. Unlimited access to virtual images
4. 16 failover clustering node (failover clustering link)
5. Hot add / replace hot memory and processor on supported hardware
6. Memory synchronization ignores errors
7. Cross copy
8. Unlimited number of network access service connections
9. Unlimited number of network policy server connections
10. 65,535 connecting the terminal server
11. Advanced identity management

Windows HPC Server 2008

Dedicated to high-performance computing (HPC) environments, this edition allows you to scale up to thousands of processor cores. This is beneficial when you are mass load balancing work across multiple processors and need management as well as monitoring HPC environmental stability and health.

Windows Server 2008 for Itanium-Based Systems

Windows Server 2008 for Itanium-Based Systems allows you to run Windows Server 2008 on Itanium-based systems. Itanium platform processors are able to handle the fast computing needs of business applications in enterprise-class environments. The Itanium processor uses a completely new structure, not just extending from 32-bit structure to 64-bit. Another feature of this microprocessor is the architecture of Parallel Command Computing (EPIC), which improves performance through command-level parallelism, maximizing the opportunity to execute parallel instructions. Up to six statements can be executed in parallel.

Windows Server 2008 for Itanium-Based Systems support:

1. Dynamic hardware division
2. Take advantage of Itanium's advantages (reliability, availability and upgradeability)
3. 2TB RAM
4. 64 Itanium processors or 64 cores
5. Hot add / replace hot RAM and processor
6. 8 failover clustering nodes
7. Memory synchronization ignores errors
8. Licensing is not limited to virtual solutions with third party virtualization products

At this point, you already know the Windows Server 2008 editions and can make your decisions. Suppose you choose to install Windows Server 2008 Standard edition, we will proceed with the installation now.

Install Windows Server 2008

Problem: You have decided to install Windows Server 2008 Standard. Next, you need to choose whether to proceed with manual installation or automatic installation. It is possible that many servers will also need to upgrade.

Resolution: The next section of the article will cover step by step the installation of Windows Server 2008, both manually and automatically.

Manual installation

The Windows Server 2008 installation process is very organized. If you've ever installed Windows Server 2003, you may still remember that during the installation process, you are asked to answer configuration questions. With Windows Server 2008, these requests have been moved to the Initial Configuration Task Wizard that appears when the installation is complete. The following is a list of the information you need to provide during the installation process:

1. Language, currency and keyboard information (input language)
2. Valid product activation key
3. Installation location
4. Copy the operating system to install (if not enter the product key)
5. Install a new upgrade or installation

The entire installation of Windows Server 2008 only goes through three parts:

1. Install the operating system, including valid key validation
2. Initialize Initial Configuration Tasks configuration
3. Server Manager installation

Install the operating system

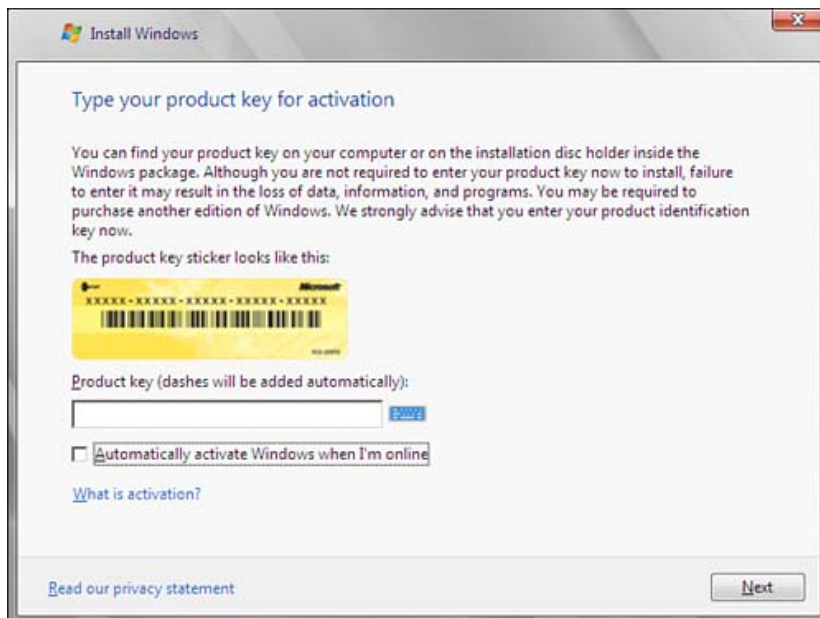
Follow these steps to install the operating system:

1. Insert the Windows Server 2008 installation disc into the drive and boot the server from the installation disk.
2. When asked to select a language, time, currency and keyboard information, make the appropriate choice and click **Next** .



Set language, time and currency, keyboard information.

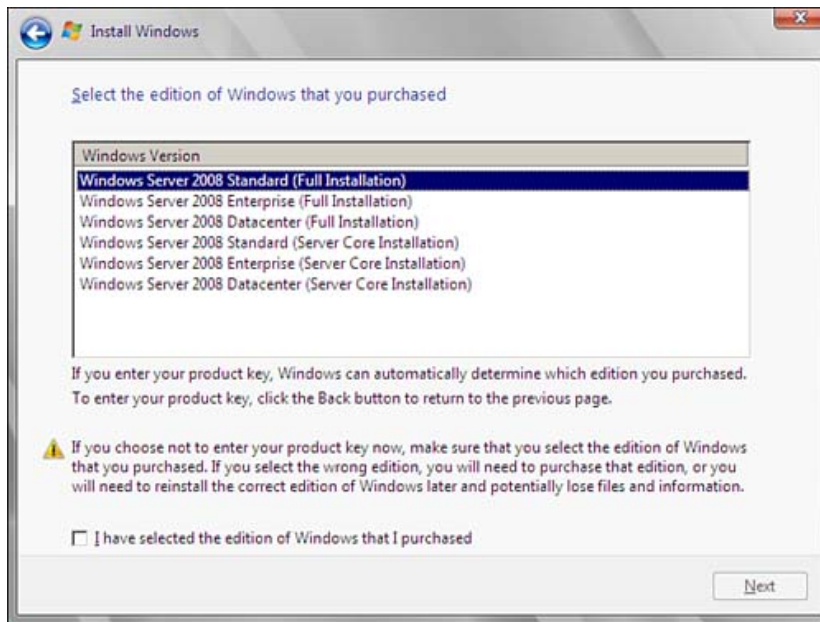
3. The Install Now option appears. If you are not sure about the hardware requirements, you can click on the *What to Know Before link Installing Windows* for more details.
4. Enter the product key and check the box on *Automatically Activate Windows When I'm Online* . Click **Next** .



Enter a valid product activation key.

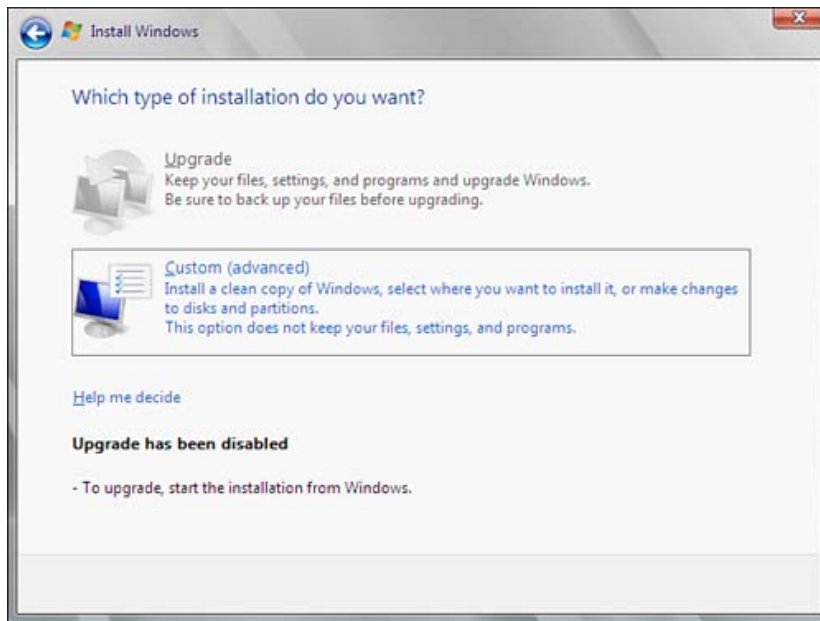
5. If you have not entered the product key in the previous section, you will now have to select the upcoming Windows Server 2008 edition and check the *I Have Selected an Edition of Windows box that I Purchased* .

If you have entered a valid product key, the installer will automatically identify the version of Windows Server 2008 you are about to install. Click **Next** .



Select the Windows Server 2008 edition to install.

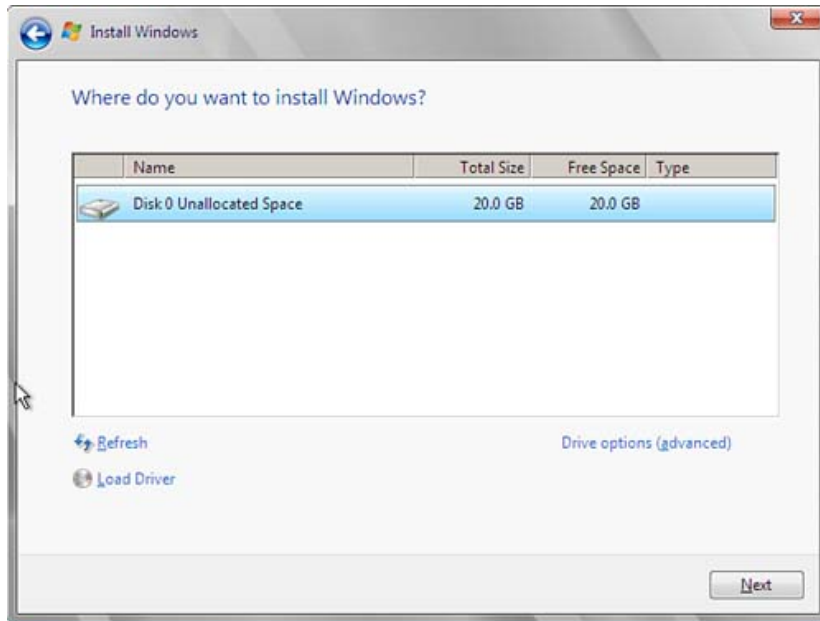
6. Read the terms and accept them by checking the checkbox. Click **Next** .
7. In the new window that appears, because you boot the computer from the installation disk, the Upgrade option has been disabled. Click **Custom (Advanced)** .



The Upgrade option has been disabled when you boot from the installation disk.

Note: If you want to proceed with the upgrade installation, you need to run the installer in a Windows environment.

8. On the next window, you need to select the Windows installation location. If there are drivers for third-party storage devices, install them now by clicking the *Load Driver* link.



Download the drivers of the third-party storage devices and select the installation location.

At this point, Windows will begin to be installed on the system. You can see that the step-by-step process is expressed in percent. During the installation process, the server will have to restart several times. The installer will complete the following tasks:

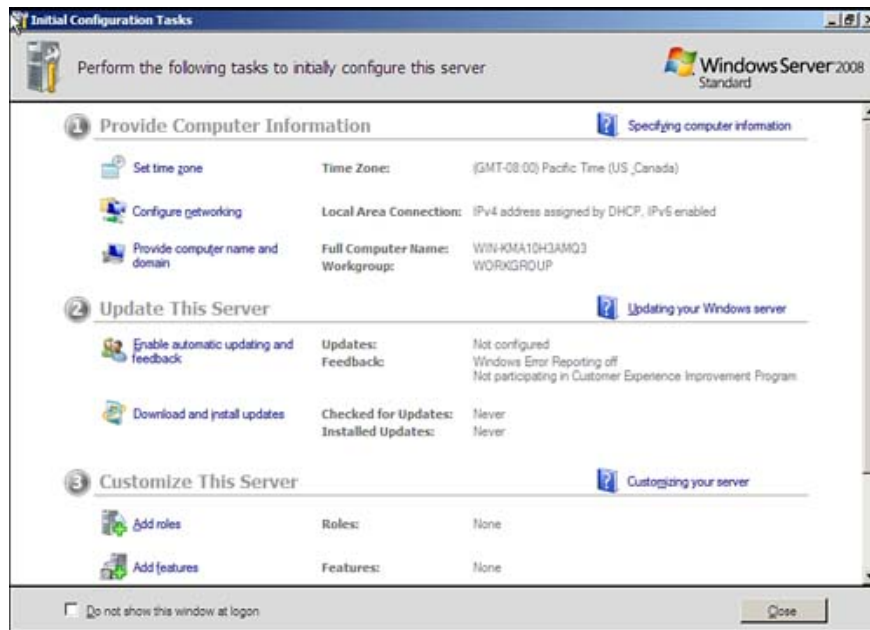
- Copy the file
 - Expand the file
 - Function setting
 - Install updates
 - Finish
9. When the installation process is complete, change the administrator administrator account password before logging in. After the password has been changed and you are logged in to the operating system, you are done with part 1 of the installation.

Initialize the configuration

After you log in to the operating system, the Initial Configuration Tasks Wizard window appears, consisting of three items:

1. Provide computer information (Provide system information)
2. Update this server (Update server)

3. Customize this server (Customize the server)



Initial Configuration Tasks Wizard

So, in these sections, what changes can you make to the configuration?

In *Provide Computer Information* , you can do the following:

1. Change time zone
2. Set up network configuration on the network interface card interface (NIC). You can also assign a static IP address, subnet mask, default gateway (default gateway) and DNS / WINS server. In many environments, you will probably be grouped with two network interface cards for the production data LAN (using third party software) and have a separate network interface card dedicated to backing up data. connect to backup LAN. In addition, you can leave the settings automatically assigned by the DHCP server, of course in case you have the DHCP server configured.

Note: In fact, you will often assign static IP addresses to infrastructure servers. In this case, you will need to collect that information with a valid IP address for the default gateway and for the DNS / WINS server before installing.

3. Provide the computer name for the server, along with domain or workgroup information. You need to restart the server for the changes to take effect.

In the *Update This Server section* , you can do the following:

1. Allow automatic updating and feedback
2. Configure the download and installation of operating system updates

In the *Customize This Server section* , you can do the following:

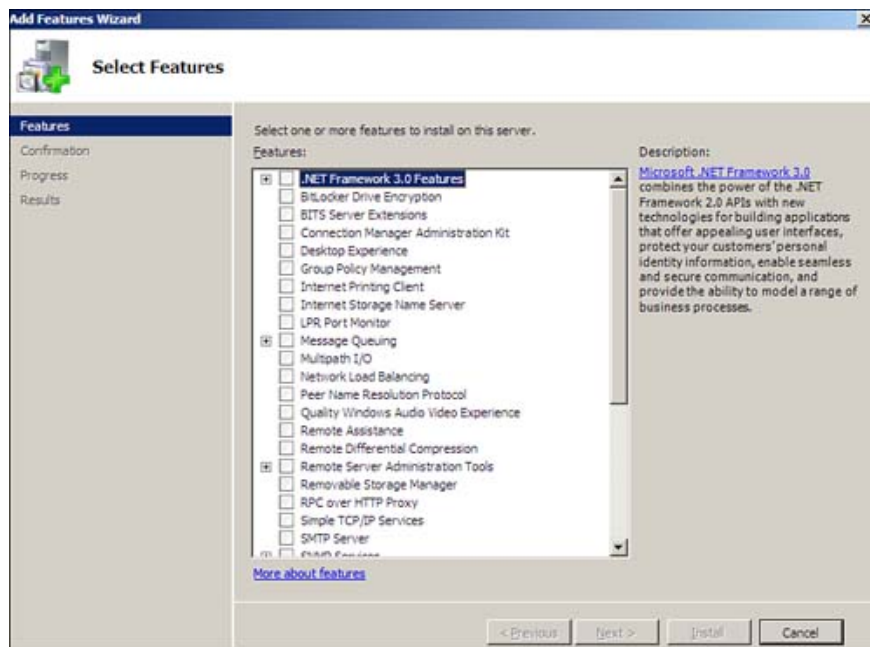
1. Add server role (role).

When you choose a role, the wizard will help you complete the role installation. You can choose the following roles:

1. Active Directory Certificate Services
2. Active Directory Domain Services
3. Active Directory Federation Services
4. Active Directory Lightweight Directory Services
5. Active Directory Rights Management Services
6. Application Server
7. DHCP Server
8. DNS Server
9. Fax Server
10. File Services
11. Network Policy and Access Services
12. Print Services
13. Terminal Services
14. UDDI Services
15. Web Server (IIS)
16. Windows Deployment Services

2. Add features.

As well as adding roles, when you select the feature, the wizard will help you complete the installation of that feature. There are many features for you to choose from.



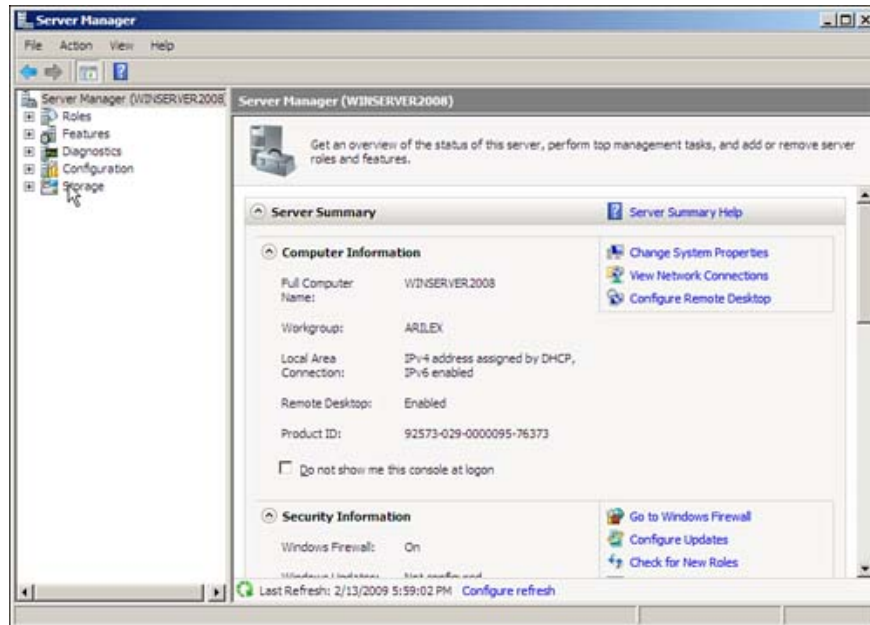
Select the feature you want to install

Note: For both list of roles and features, when you highlight a role or feature, you will see a description on the right of the list. When you choose roles and features, remember to install as little as possible, preferably just choose the things you intend to use. If you install unnecessary roles or features, you will also install useless services and be able to open ports that are not valuable in production so that the server is no longer secure.

1. Allow Remote Desktop to connect to the server
2. Configure operating system firewall settings. By default, the firewall is enabled.

Next will be the third part of the installation process.

Server Manager installation



Server Manager gives you a global view of the server. When looking at the default details, you can see computer information, security information, and a summary of installed roles and features. Looking down, you will see resources and support. On the left side of the window are tools to help you add / remove and configure roles and features. You will also see options to diagnose, configure and manage drives. After setting the changes in Server Manager, your manual installation is complete.

Automatic installation

So you have completed the manual installation, the next part of the article will introduce you to the automatic installation process. With Windows Server 2008, use the *unattend.xml* file instead of unattend.txt. In fact, the unattend.xml file also replaces both the Sysprep.inf, Winbom.ini, and Cmdlines.txt files. The XML format has been adopted because it makes it easier to describe nested values, add new elements, and validate answer files. You can open the unattend.xml file in Internet Explorer version 5.5 and above to parse the .xml file and see if it is completely built. If the file is not built correctly, Internet Explorer will tell you where the error is.

To install automatically, run the setup.exe file with the *unattend* keyword

```
C:> setup.exe /unattend:unattend.xml
```

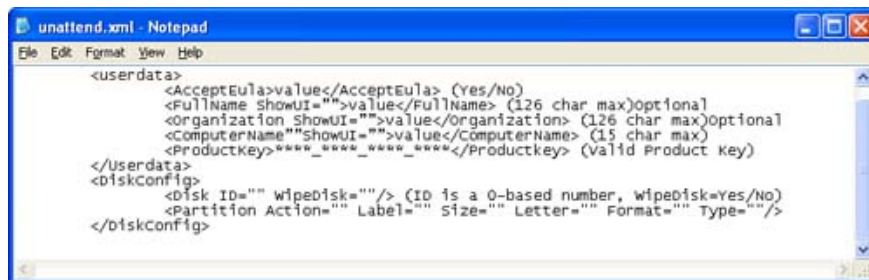
The unattend.xml file contains the necessary answers when running setup.exe, namely information such as computer name, acceptance of the end user license agreement (EULA), installation disk information, etc. v . You can also show or hide the user interface (UI) for each value set using the **ShowUI flag = Yes / No**. The following is how the installer responds when you use the ShowUI flag:

1. ShowUI flag = Yes and the setting specified in the unattend.xml file: The installer uses the settings specified in the unattend.xml file and displays the user interface according to that setting.
2. ShowUI flag = No and the setting specified in the unattend.xml file: The installer uses the settings specified in the unattend.xml file and does not display the user interface.
3. ShowUI flag = Yes and the setting is not specified in the unattend.xml file: The installer displays the user interface with default values ??and users can change this setting if needed.
4. ShowUI flag = No and the setting is not specified in the unattend.xml file: The installer uses the default value and does not display the user interface.

When performing automatic installation over the network, the system installer must have access to the unattend.xml file. When the installer starts from the CD / DVD drive, it will search for the unattend.xml file in the following locations:

1. Current directory
2. The location starts the setup.exe file
3. Floppy drive, USB or other CD / DVD drive

The syntax for the unattend.xml file is broken down into elements, and each element needs to be opened and closed in the correct order (when nested). Once ensured this, it will be a completely built .xml file. There is only one root element:



```
unattend.xml - Notepad
File Edit Format View Help
<userdata>
  <AcceptEula>value</AcceptEula> (Yes/No)
  <FullName ShowUI="">value</FullName> (126 char max)optional
  <Organization ShowUI="">value</Organization> (126 char max)optional
  <ComputerName ShowUI="">value</ComputerName> (15 char max)
  <Productkey>****_****_****_****</Productkey> (Valid Product Key)
</userdata>
<diskconfig>
  <Disk ID="" wipeDisk=""/> (ID is a 0-based number, wipeDisk=Yes/No)
  <Partition Action="" Label="" Size="" Letter="" Format="" Type=""/>
</diskconfig>
```

A paragraph in the unattend.xml file

The operation of the unattend.xml file will stop with an error message if any of the following is true:

1. End user license agreement is not accepted
2. Product activation key is invalid
3. Unable to write to the installation disc

Creating an unattend.xml file can be a bit confusing, but once you've created it successfully, it will make the job a lot easier. There are a number of tools available on the web that can help you create this file. You can also get creative by adding a few scripts to automatically name computers that follow your naming convention and many other configuration options.

See more:

1. Instructions for installing Windows Server 2012 step by step
2. Instructions for installing Windows Server 2016 on Windows 10

You finished reading the article "**Install Windows Server 2008**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.
