

**Microsoft Windows Server 2012 For Dell PowerEdge
Systems
Installation Instructions And Important Information**



Notes, Cautions, and Warnings



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



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



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Rev. A01

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Introduction

This document provides information on:

- Installing the Microsoft Windows Server 2012 operating system for Datacenter, Standard, Foundation, and Essentials edition
- Drive partitioning

Setting Up The Preinstalled Microsoft Windows Server 2012 Operating System

This section provides the information on procedures required for completing the set up of the Windows Server 2012 operating system preinstalled on your system.

 **NOTE:** Before you begin, see the documentation that shipped with the operating system for important product information. For additional information on completing the installation, see the documentation included with your software or see support.microsoft.com.

Setting Up Windows Server 2012 Operating System For Datacenter, Standard and Foundation Edition


To set up your Windows Server 2012 operating system for Datacenter, Standard and Foundation edition:


1. Connect the keyboard, monitor, mouse, network cable, power cord, and other peripherals to your system.
2. Turn on your system.
The **Settings** screen is displayed.

3. Select the appropriate language and click **Next** to complete the installation.

 **NOTE:** This screen is not displayed for Simplified or Traditional Chinese operating system.

4. Select the **I accept the license terms for Windows and this computer** option and click **Accept**.


 **NOTE:** You cannot proceed with the installation if you do not choose the **I accept the license terms** option.


 **NOTE:** Before using your system, read the software license agreements that are included with each program that you ordered.

5. Select your **Country or Region**, **Language**, and **Keyboard** layout and click **Next**.

The system prompts you to change the administrator password before logging in for the first time.

6. Enter the administrator password and click **Finish**.

 **NOTE:** This procedure may take several minutes to complete.




 **NOTE:** The password must conform to the password complexity rules. For more information about password complexity rules, see your operating system documentation.

The Password is changed and you can login using the new password. A Dell Customized help file is displayed with various value added scripts/add-ins provided with your system.

7. Read the help file and click **Proceed**.
8. Use the password set in step 5 to log in to your system.
The **Server Manager Dashboard** is displayed. Use the dashboard to configure your system with different roles and features.

Setting Up Windows Server 2012 Operating System For Essentials Edition


To set up your Windows Server 2012 operating system for Essentials edition:

1. Connect the keyboard, monitor, mouse, network cable, power cord, and other peripherals to your system.
2. Turn on your system.
The **Settings** screen is displayed.
3. Select the appropriate language and click **Next**.
 **NOTE:** The option to select languages is not applicable for Simplified or Traditional Chinese versions of operating system.
4. Select your **Country or Region**, **Time and Currency**, and **Keyboard** layout. Click **Next**.
The page, **Verify the date and time settings** is displayed.
5. Click **Change system date and time settings** to select the date, time, and time zone settings for your server and click **Next**.
Microsoft and Dell **End User License Agreement (EULA)** is displayed.
6. Read and select the checkbox to accept the Microsoft and Dell EULAs. Click **Next**.
The **Choose server installation mode** page is displayed.
7. On the **Choose server installation mode** page, select the appropriate installation mode and provide the required data. For a new installation select **Clean install** and to migrate from an existing operating system select **Server migration**. Proceed with required inputs to configure your install.
For detailed steps on configuring your Windows Server 2012 Essentials install, see technet.microsoft.com/en-us/sbs/jj159331.aspx
8. Create the **Administrator user account** and **Standard user account** and complete the installation.
 **NOTE:** The Dell factory-installed Windows operating system is pre-activated and does not require any additional activation steps if you reinstall the operating system using your Dell reinstallation media.
 **NOTE:** It is recommended that you download and install patches, hotfixes, and service packs from support.microsoft.com.


Installing Microsoft Windows Server 2012 For Datacenter, Standard, Foundation and Essentials Edition


You can use one of the following methods if you don't have the operating system installed on your server or you wish to re-install it:

- Using the Dell Systems Management Tools and Documentation Media
- Using the Operating System Media

 **NOTE:** Dell currently does not support Windows Server 2012 installation using Unified Server Configurator (USC). However, this method of installation will be supported in a future release of the operating system. Currently if you want to use the latest drivers, go to dell.com/support and download the drivers or install the operating system using the latest *Dell Systems Management Tools and Documentation* media.

 **CAUTION:** The following installation procedure erases all data on your hard drive. It is recommended that you take a backup of all important data before you begin installation.

 **NOTE:** If you purchased a Dell system without an operating system, it is strongly recommended that you use the supported version of the *Dell Systems Management Tools and Documentation* media to guide you through the operating system installation.

 **NOTE:** If you are using the *Operating System* media to install the operating system, you must install the latest device drivers located either on the *Dell Systems Management Tools and Documentation* media or dell.com/support.

To determine the devices that are installed on your system, boot your system from the *Dell Systems Management Tools and Documentation* media and select **View Hardware** option in the **System Software Manager** window. The devices installed on your system are listed on your screen.


Pre-Installation Requirements


Before you install the operating system:

- Read any additional documentation shipped with your operating system media.
- Ensure that your system has the latest BIOS, firmware, and drivers required for installation. If required, download the latest BIOS, firmware, and driver updates from dell.com/support.
- Create a device driver media (USB drive, CD, or DVD).

Using The Dell Systems Management Tools And Documentation Media

 **CAUTION:** Backup all data from the system before installing or upgrading the operating system.


 **NOTE:** Dell OpenManage 7.2 provides the latest drivers for Windows Server 2012 and complete support for Windows Server 2012 Standard, Foundation, and Essentials edition.

 **NOTE:** This method of installation is supported in both BIOS and UEFI modes.


You must configure the system to boot from the optical drive. To install the operating system using the Dell Systems Management Tools and Documentation media:

1. Connect the keyboard, monitor, mouse, and any additional peripherals to your system.
2. Turn on the system and the attached peripherals.
3. Insert the *Dell Systems Management Tools and Documentation* media into the optical drive.
4. Press <F2> when you are prompted to run the setup utility.


The **BIOS Settings** screen is displayed.

 **NOTE:** You can press <F11> and directly boot from the DVD ROM and skip to step 7.

5. Using the arrow keys, scroll to the **Boot setting** → **Boot Sequence** field and press <Enter>.
6. Configure the DVD ROM drive to be the first boot option and press <Esc> to exit the **BIOS Settings** screen. The system now prepares to boot from the optical drive. The *Dell Systems Management Tools and Documentation* media menu launches with several options.
7. Select **Dell Systems Build and Update Utility**. The system now boots from the selected option and the **Dell Systems Build and Update Utility** screen is displayed.

 **NOTE:** This may take several minutes depending on the speed of the drive.

8. In the **Welcome to the Dell Systems Build and Update Utility** section, select the language when prompted. Read and accept the Dell software License agreement.
9. In the **Systems Build and Update Utility** home page, select **Configure against Server OS Installation**.
10. Set the time and time zone and click **Continue**. The **Select Operating System** screen is displayed with a list of compatible operating systems.
11. Choose **Microsoft Windows Server 2012**.
12. Click **Continue**. The **Select RAID Configuration** screen is displayed. If RAID has been configured, the screen displays the existing RAID configuration details.
13. Select **Retain existing configuration on the system**. If RAID is not configured, you can configure it at this time and click **Continue**. The **Operating System Installation Summary** screen is displayed, with the installation options that you have selected.
14. Click **Back** to change the installation options. If the options displayed are accurate, click **Apply Now**.
15. The operating system installation begins.

 **CAUTION:** The **Dell Systems Build and Update Utility** screen prompts you to remove the media after all the installation settings are finalized. Remove the *Dell Systems Management Tools and Documentation* media. The system reboots to local hard drives and then prompts for the Windows installation media. Do not boot directly to the optical drive at this stage.


16. Insert the Windows installation media in the optical drive and click **OK**. If the correct media for installation is found during installation, the following message is displayed:

Valid Operating System installation media was found

17. Press **OK** to continue with installation.

 **CAUTION: All system partitions are erased along with all data on the local hard drives.**


18. Select the appropriate language that you want to deploy.

 **NOTE:** This screen is not displayed for Simplified or Traditional Chinese versions of operating system.

19. In the **Windows Setup** screen, select the appropriate option for **Language, Time and Currency Format**, and **Keyboard or Input Method**.

20. Click **Next** to continue.

21. On the next screen, click **Install Now**.

 **NOTE:** In Windows Server 2012 Essentials edition, on clicking **Install Now**, the **License terms** window is displayed.

22. In the **Operating System Install** screen, select the appropriate operating system you want to install. Click **Next**. The **License Agreement** window is displayed. Read the information carefully. If you agree with all of the information, select **I accept the license terms**.

23. Click **Next**.

24. In the **Which Type of Installation Do You Want** screen, click **Custom: Install Windows only (advanced)**, if it is not selected already.

25. In the **Where do you want to install Windows** screen, specify the partition on which you want to install the operating system.


To create a partition and begin installation:

- a. Click **Drive options (advanced)** → **New**.
- b. Specify the size of the partition in MB, and click **Apply**.

The following message is displayed:


```
To ensure that all Windows features work correctly, Windows might create additional partition for system files
```

- c. Click **OK**.

 **NOTE:** The recommended minimum partition size for the Primary partition is 50 GB. If you are installing additional memory on your system, you may require additional primary partition space to accommodate page file and hibernation. During installation, a recommended partition size is displayed on the screen based on the memory size of your system. Follow the instructions on the screen. If you select Core installation, you may require less hard drive space for the Primary partition. For information on drive partitioning see "Partitioning a Drive".

26. Select the newly-created operating system partition and click **Next**. The **Installing Windows** screen is displayed and the installation process begins.

After the operating system is installed, the system reboots. You must set the administrator password before you can log in for the first time.

 **NOTE:** For Windows Server 2012 Essentials edition, after the installation is complete you must configure the system before setting the administrator password.

27. To configure your system for Windows Server 2012 Essentials edition:

- a) After reboot, the **Set Up Windows Server 2012 Essentials** page is displayed. Click **Change system date and time settings** to select the date, time, and time zone settings for your server and click **Next**.

The **Choose server installation mode** page is displayed.

- b) On the **Choose server installation mode** page, select the appropriate installation mode and provide the required data. For a new installation select **Clean install** and to migrate from an existing operating system select **Server migration**. Proceed with required inputs to configure your install.

For detailed steps on configuring your Windows Server 2012 Essentials install, see technet.microsoft.com/en-us/sbs/jj159331.aspx

- c) Create the **Administrator user account** and **Standard user account** and complete the installation.

28. Set the administrator password before you can log in for the first time.
29. In the **Settings** screen, enter the password, confirm the password, and click **Finish**.

The operating system installation is complete.

Using The Operating System Media

Before you install Microsoft Windows Server 2012 using the Operating System media, you must:


- Create a device driver media
- Download the DRAC diskette image
- Create a USB drive driver disk

Creating A Device Driver Media

Use one of the methods described in the following sections to create a device driver media.

Using The DRAC Diskette Image

Install the Dell mass storage drivers using Dell Remote Access Controller (DRAC) 5 or iDRAC diskette images located on the Dell Support website at dell.com/support For more information on setting up the virtual diskette drive media, see the DRAC/iDRAC documentation that shipped with your system.

 **NOTE:** You can install drivers using the DRAC diskette image only if your system has DRAC/iDRAC installed and configured.


Creating USB Drive Driver Disk To Auto Load All Drivers

Create **\$WinPEdrivers\$** directly on the root directory of your USB device.


Copy all drivers to that directory leaving them in the directory structure downloaded from dell.com/support There should be one subdirectory for each driver as indicated in the example below:

- **\$WinPEdrivers\$KVMR1**
- **\$WinPEdrivers\$VC208**
- **\$WinPEdrivers\$H6P56**

To install the Microsoft Windows Server 2012 operating system for Standard or Foundation and Essentials edition :

 **NOTE:** It is recommended that you use the *Dell Systems Management Tools and Documentation* media as it includes the latest drivers and hot fixes for your Dell system.


1. Connect a keyboard, monitor, mouse, and any additional peripherals to your system.
2. Turn on your system and any attached peripherals.
Several BIOS screens are displayed during startup, but do not require any user intervention.

 **NOTE:** This method of installation is supported in the BIOS and UEFI modes.

3. Insert the Microsoft Windows Server 2012 media into the DVD drive.


The following message is displayed:

Loading Files

 **NOTE:** If a Windows operating system is installed on your system, the following message is displayed:


```
Press any key to boot from the CD/DVD ... Press any key to begin the
installation
```

4. After the files are loaded, click on the appropriate language that you want to deploy.

 **NOTE:** This screen is not displayed for the Simplified or Traditional Chinese versions of operating system.

5. In the **Windows Setup** screen, select the appropriate **Language, Time & Currency**, and **Keyboard or Input** values and click **Next**.
6. In the **Windows Server 2012** screen, click **Install Now**.

The **Operating System Install** screen is displayed.

 **NOTE:** In Windows Server 2012 Essentials edition, on clicking **Install Now**, the **License terms** window is displayed.


7. In the **Select the operating system you want to install** screen, select the operating system from the available list and click **Next**.
The **license terms** window is displayed.
8. Read the information carefully. If you agree with all of the information, select **I accept the license terms** and then click **Next**.
9. In the **Which type of installation do you want** screen, select **Custom: Install Windows only (advanced)** if it is not selected already.
10. In the **Where do you want to install Windows** screen, specify the partition on which you want to install the operating system.

To create a partition and begin installation:

- a. Click **Drive options (advanced)** → **New**.
- b. Specify the size of the partition in MB, and click **Apply**. The following message is displayed:


```
To ensure that all Windows features work correctly, Windows might create
additional partition for system files
```

- c. Click **OK**.

 **NOTE:** The recommended minimum partition size for the Primary partition is 50 GB. If you are installing additional memory on your system, you may require additional primary partition space to accommodate page file and hibernation. During installation, a recommended partition size is displayed on the screen based on the memory size of your system. Follow the instructions on the screen. If you select **Core installation**, you may require less hard drive space for the Primary partition. For information on drive partitioning see "Partitioning a Drive".

11. Select the newly-created operating system partition and click **Next**.

After the operating system is installed, the system reboots. You must set the administrator password before you can log in for the first time.

 **NOTE:** For Windows Server 2012 Essentials edition, after the installation is complete you must configure the system before setting the administrator password.

12. To configure your system for Windows Server 2012 Essentials edition:

- a) After reboot, the **Set Up Windows Server 2012 Essentials** page is displayed. Click **Change system date and time settings** to select the date, time, and time zone settings for your server and click **Next**.

The **Choose server installation mode** page is displayed.

- b) On the **Choose server installation mode** page, select the appropriate installation mode and provide the required data. For a new installation select **Clean install** and to migrate from an existing operating system select **Server migration**. Proceed with required inputs to configure your install.

For detailed steps on configuring your Windows Server 2012 Essentials install, see technet.microsoft.com/en-us/sbs/jj159331.aspx


c) Create the **Administrator user account** and **Standard user account** and complete the installation.

13. In the **Settings** screen, enter the password, confirm the password, and click **Finish**.

14. The system is locked now and you can log into the system by pressing <Ctrl+Alt+Delete>.

15. Enter the Administrator password and press <Enter> to log into the system.

The operating system installation is now complete.

 **NOTE:** After you log into the system, you can use the **Server Manager Dashboard** to configure and manage different roles and features in the operating system.

Partitioning A Drive

Drive partitioning allows you to divide a physical hard drive into multiple virtual hard drives. Each virtual hard drive is called a partition. There are two types of partition schemes:

- Master boot record scheme
- GUID partition table scheme


Master Boot Record Scheme

Master boot record (MBR) scheme is a legacy partition scheme that can be used by most operating systems. The total data storage space of a computer hard drive is divided into at most four primary partitions.

GUID Partition Table Scheme

GUID partition table (GPT) scheme is a new standard for the layout of the partition table on a physical hard drive. It is part of the extensible firmware interface (EFI) standard, which is a replacement for the system BIOS.

Choosing Between Partition Schemes


 **NOTE:** To change your partition scheme from BIOS to UEFI and vice versa during POST, press <F2> , select **Boot Settings**, and press <Enter>. Change the value of <Boot Mode> to BIOS or UEFI. For more information, follow steps 1 to 9 in “Installing Microsoft Windows Server 2012 Using Unified Server Configurator (USC)”.

The main considerations for choosing between the partition schemes are:

- Hard drive size
- Operating system version
- Software tools used in the operating system

The MBR partition scheme is used across older versions of Microsoft operating systems. MBR partitioning scheme supports a volume size smaller than 2 TB. Use the GPT partition scheme for newer operating systems such as Windows Server 2012, Windows Server 2008 R2, Windows Server 2008, or Windows Small Business Server 2008, Windows Small Business Server 2011 and hard drive sizes larger than 2 TB.

 **NOTE:** GPT boot (UEFI boot) is supported only on 11th generation servers onwards.

 **NOTE:** It is recommended that you use the GPT partition scheme as it is more flexible, supports larger hard drive sizes, and has a number of features and recovery mechanisms that are not available in the MBR partition scheme.

For more information on partitions and volumes, see partitions and volumes on technet.microsoft.com and for information on GPT, see the Windows and GPT frequently asked questions on microsoft.com.