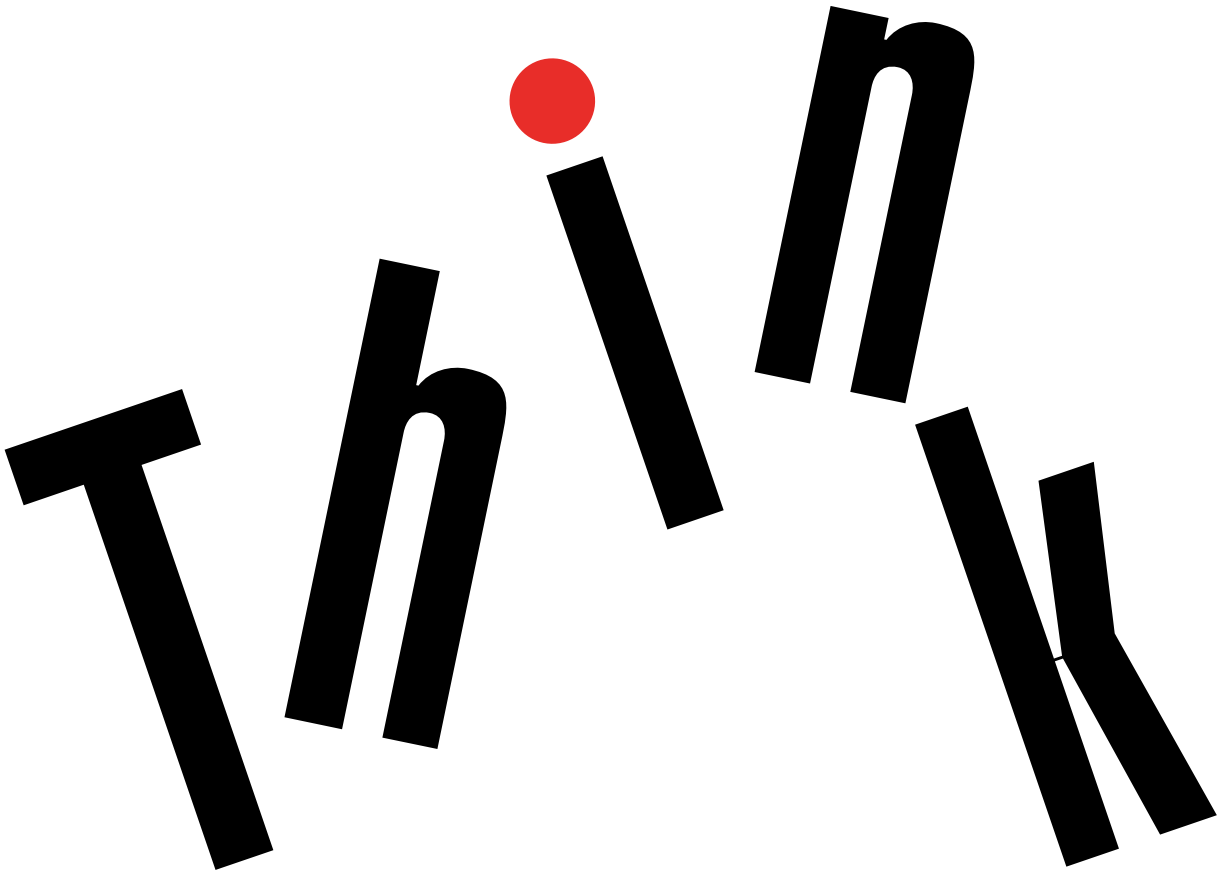
Lenovo

ThinkServer®

ThinkServer TS150
Operating System Installation Guide



Note: Before using this information and the product it supports, be sure to read and understand the safety information provided on the Lenovo Web site at:
https://support.lenovo.com/documents/LNVO-DOCS

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Chapter 1. Introduction

This guide provides instructions on how to install an operating system on the Lenovo ThinkServer® TS150 servers.

The supported operating systems vary by the configuration on your server. The following table provides a list on the supported operating system of your server.

Supported operating systems	AHCI	SATA RAID	Add-On RAID	Skylake	Kaby Lake
Microsoft® Windows Server® 2012 Standard Edition	Yes	Yes	Yes	Yes	No
Microsoft Windows Server 2012 Foundation Edition	Yes	Yes	Yes	Yes	No
Microsoft Windows Server 2012 Essentials Edition	Yes	Yes	Yes	Yes	No
Microsoft Windows Server 2012 R2 Standard Edition	Yes	Yes	Yes	Yes	Yes
Microsoft Windows Server 2012 R2 Foundation Edition	Yes	Yes	Yes	Yes	Yes
Microsoft Windows Server 2012 R2 Essentials Edition	Yes	Yes	Yes	Yes	Yes
Microsoft Windows Server 2016 Datacenter Edition	Yes	Yes	Yes	Yes	Yes
Microsoft Windows Server 2016 Standard Edition	Yes	Yes	Yes	Yes	Yes
Microsoft Windows Server 2016 Essentials Edition	Yes	Yes	Yes	Yes	Yes
Microsoft Windows® Multipoint Server 2012	Yes	Yes	Yes	Yes	No
Microsoft Windows 10	Yes	Yes	Yes	Yes	Yes
Microsoft Windows 10 Professional	Yes	Yes	Yes	Yes	Yes
Microsoft Windows Server Version 1709	Yes	Yes	Yes	Yes	Yes
Hyper-V® Server 2012	Yes	No	Yes	Yes	Yes
Hyper-V Server 2012 R2	Yes	No	Yes	Yes	Yes
Hyper-V Server 2016	Yes	No	Yes	Yes	Yes
SUSE Linux® Enterprise Server 11 with Service Pack 4	Yes	Yes	Yes	Yes	Yes
SUSE Linux Enterprise Server 12.1	Yes	Yes	Yes	Yes	No
SUSE Linux Enterprise Server 12.2	Yes	Yes	Yes	Yes	Yes
SUSE Linux Enterprise Server 12.3	Yes	Yes	Yes	Yes	Yes
SUSE Linux Enterprise Server 15	Yes	Yes	Yes	Yes	Yes
Red Hat® Enterprise Linux 6.7	Yes	Yes	Yes	Yes	No
Red Hat Enterprise Linux 6.8	Yes	Yes	Yes	Yes	No
Red Hat Enterprise Linux 6.9	Yes	Yes	Yes	Yes	Yes
Red Hat Enterprise Linux 6.10	Yes	Yes	Yes	Yes	Yes
Red Hat Enterprise Linux 7.2	Yes	Yes	Yes	Yes	No
Red Hat Enterprise Linux 7.3	Yes	Yes	Yes	Yes	Yes
Red Hat Enterprise Linux 7.4	Yes	Yes	Yes	Yes	Yes

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Supported operating systems	AHCI	SATA RAID	Add-On RAID	Skylake	Kaby Lake
Red Hat Enterprise Linux 7.5	Yes	Yes	Yes	Yes	Yes
Red Hat Enterprise Linux 7.6	Yes	Yes	Yes	Yes	Yes
VMware ESXi® 5.5 p07	Yes	No	Yes	Yes	No
VMware ESXi 6.0 p02	Yes	No	Yes	Yes	No
VMware ESXi 6.0 Update 2	Yes	No	Yes	Yes	No
VMware ESXi 6.0 Update 3	Yes	No	Yes	No	Yes
VMware ESXi 6.5	Yes	No	Yes	Yes	Yes
VMware ESXi 6.5a	Yes	No	Yes	Yes	Yes
VMware ESXi 6.5 Update 1	Yes	No	Yes	Yes	Yes
VMware ESXi 6.5 Update 2	Yes	No	Yes	Yes	Yes
VMware ESXi 6.7	Yes	No	Yes	Yes	Yes

Notes:

- The Hyper-V Server 2012 operating system cannot be installed on the SD card or USB storage device that does not have the fixed_disk property. It is recommended by Microsoft that you install the Hyper-V Server 2012 operating system on the following storage devices:
  - Kingston DataTraveler Ultimate
  - Super Talent Express RC8
  - Western Digital My Passport Enterprise

  For detailed information, go to:
  http://technet.microsoft.com/en-us/library/jj733589.aspx
- Windows Server 2012 R2 operating system doesn't support auto-update on servers using processors based on the Kaby Lake platform. For detailed information, go to:
  https://support.microsoft.com/en-us/help/4012982/ the-processor-is-not-supported-together-with-the-windows-version-that-

Chapter 2. Installing an operating system in UEFI mode

This chapter provides information about installing operating systems in UEFI mode.

Before installing an operating system in UEFI mode

This topic contains the following items:

- “Preparing the driver” on page 3
- “Configuring the BIOS setting” on page 3

Preparing the driver

Before installing an operating system in UEFI mode, download your desired driver from the Lenovo Web site at http://www.lenovo.com/drivers. Then, copy the driver to a USB storage device.

Configuring the BIOS setting

Before installing an operating system in UEFI mode, configure the BIOS setting by doing the following:

1. Start the Setup Utility program.
2. On the **Startup** menu, select **CSM** and click **Disable**.

Installing the Microsoft Windows Server 2012 operating system

This topic provides instructions on how to install the following operating systems and the drivers:

- Microsoft Windows Server 2012 Standard Edition
- Microsoft Windows Server 2012 Foundation Edition

To install the Microsoft Windows Server 2012 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.

   Note: If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
2. In the Windows Server 2012 window, select the language and other options. Then click **Next**.
3. Click **Install now**.
4. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
5. Select the operating system you want to install, and then click **Next**.
6. Read the license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** or **ADD on RAID card**): do the following:

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a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
b. Click **Browse** to locate the required driver and then click **OK**.
c. In the “Select the driver to be installed” window, select **Hide drivers that aren’t compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.

- If your SATA configuration is set as **AHCI**: go to step 9.

9. In the “Where do you want to install Windows?” window, click **Drive options (advanced)**.
10. Select the drive on which you want to install the operating system, and then click **New**.
11. Type the amount of space (in MB), and then click **Apply**.
12. In the Windows Setup window, click **OK**.
13. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.
14. In the Settings window, type your password and click **Finish**.

    Note: The password must contain at least eight characters and consist of upper case letters, lower case letters, and numbers.
15. Follow the instructions on the screen to log in to the operating system when prompted.

Installing the Microsoft Windows Server 2012 Essentials operating system

This topic provides instructions on how to install the Windows Server 2012 Essentials operating system.

Note: Before installing this operating system, connect your server to the network.

To install the Windows Server 2012 Essentials operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. If the message `The Windows is loading files...` is displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that aren’t compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.

- If your SATA configuration is set as **AHCI**: go to step 9.

9. In the “Where do you want to install Windows?” window, click **Drive options (advanced)**. Then click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.

    Notes:

    - If the following message displays “Errors occurred during installation”, you need to manually install the Ethernet driver. To install the driver, do the following:
      a. Download the driver for an Ethernet card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at: http://www.lenovo.com/drivers
      b. Copy the folder that contains the driver to your USB storage device and connect the USB storage device to your server.
      c. Open the Device Manager window. Right-click on the graphics card that requires drivers, and then select **Update Driver Software**.
      d. In the “How do you want to search for driver software” window, click **Browse my computer for driver software**.
      e. In the“ Browse for driver software on your computer” window, click **Browse** to locate the driver you want to install.
      f. Locate the driver and click **Next**.
      g. When the message “Windows has successfully updated your driver software” is displayed, click **Close**.
13. Configure the date and time, and then click **Next**.
14. Choose the type of installation you need. The following steps are based on the scenario that **Clean install** is selected.
15. Personalize the server by typing the computer name and then click **Next**.
16. In the “Provide your administrator information (account 1 of 2)” window, type your user name and password, and then click **Next**.

    Note: The password must contain at least eight characters and consist of upper case letters, lower case letters, and numbers.
17. In the “Provide your administrator information (account 2 of 2)” window, type your user name and password, and then click **Next**.
18. In the “Keep your server up-to-date automatically” window, configure the settings you need. Your server will restart several times.
19. When the “Your server is now ready to be used” window prompted, click **Close**. The installation is completed.

Installing a Microsoft Windows Server 2012 R2 operating system

This topic provides instructions on how to install the following operating systems:

- Microsoft Windows Server 2012 R2 Standard Edition
- Microsoft Windows Server 2012 R2 Foundation Edition

To install a Microsoft Windows Server 2012 R2 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 R2 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Select the Windows operation system edition that you want to install. Then click **Next**. The following steps are based on the scenario that **Windows Server 2012 R2 Standard (Server with a GUI)** is selected in this step.
7. Read the license terms and select **I accept the license terms**. Then click **Next**.
8. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
9. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 10.
10. In the “Where do you want to install Windows?” window, click **New**.
11. Type the amount of space (in MB), and then click **Apply**. The Windows Setup window is displayed.
12. Click **OK**.
13. Ensure that the drive partition is correct, and then click **Next**. The installation begins.
14. When the Settings window is displayed, set an administrator password and click **Finish**. Then, follow the instructions on the screen to sign in when prompted.

    Note: The password must be a combination of upper case letters, lower case letters, and numbers.

Installing the Microsoft Windows Server 2012 R2 Essentials operating system

This topic provides instructions on how to install the Windows Server 2012 R2 Essentials operating system.

Note: Before installing this operating system, connect your server to the network.

To install the Windows Server 2012 R2 Essentials operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.

2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `The Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 R2 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the "Where do you want to install Windows?" window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the "Select the driver to be installed" window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 9.
9. In the "Where do you want to install Windows?" window, click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Notes:

    - Your server will restart several times during the installation.
13. When the Settings window is displayed, set an administrator password and click **Finish**. Then, follow the instructions on the screen to sign in when prompted.

    Note: The password must be a combination of upper case letters, lower case letters, and numbers.

Installing the Microsoft Windows Multipoint Server 2012 operating system

This topic provides instructions on how to install the following operating systems and the drivers:

- Microsoft Windows Multipoint Server 2012 Standard Edition
- Microsoft Windows Multipoint Server 2012 Premium Edition

Note: Ensure that the keyboard and mouse need to be connected with server by HUB.

To install the Microsoft Windows Multipoint Server 2012 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.

3. When the Windows Server 2012 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and click **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the "Where do you want to install Windows?" window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the "Select the driver to be installed" window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 9.
9. In the "Where do you want to install Windows?" window, click **Drive options (advanced)**. Then click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Notes:

    - Your server will restart several times during the installation.
13. When the Settings window is displayed, click **Next**.
14. In the Windows Update window, click **Next**. Then, set an administrator password and click **Finish**.

    Note: The password must be a combination of upper case letters, lower case letters, and numbers.
15. When the message `MultiPoint Server Configuration Error` is displayed, press any key. Follow the instructions on the screen to sign in when prompted.
16. Type the user name and password, and press Enter. The user name will be configured as "administrator" after your server restarts.

Installing the Microsoft Windows 10 Professional operating system

This topic provides instructions on how to install the Microsoft Windows 10 Professional (x64) operating system.

To install the Microsoft Windows 10 Professional (x64) operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. If the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter.
3. In the Windows window, select the language and other options. Then click **Next**.
4. Click **Install now**.

5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, select the drive on which you want to install the operating system, and then click **New**.
9. Type the amount of space, and then click **Apply**.
10. In the Windows Setup window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.
12. In the Get going fast window, select **Use express settings**.
13. In the Create an account for this PC window, type your user name and password, and then click **Next** to log in to the operating system.

Installing the Microsoft Windows Server 2016 Standard operating system

This topic provides instructions on how to install the Microsoft Windows Server 2016 Standard operating system.

To install the Microsoft Windows Server 2016 Standard operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. Wait several minutes for the system to load the files.
3. In the Windows Server 2016 window, select the language and other options. Then, click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**.
6. Select **Windows Server 2016 Standard (Desktop Experience)**, and then click **Next**.
7. Read the license terms and select **I accept the license terms**. Then, click **Next**.
8. Select the type of installation as you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
9. In the “Where do you want to install Windows?” window, choose the storage device to install the operating system, and then click **New**.
10. Type the amount of space, and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.
13. In Settings window, type your password and click **Finish**.
14. Follow the instructions on the screen to log in to the operating system when prompted.

Installing the Microsoft Windows Server 2016 Essentials operating system

This topic provides instructions on how to install the Microsoft Windows Server 2016 Essentials operating system.

To install the Microsoft Windows Server 2016 Essentials operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. Wait several minutes for the system to load the files.
3. In the Windows Server 2016 window, select the language and other options. Then, click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**.
6. Read the license terms and select **I accept the license terms**. Then, click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, choose the storage device to install the operating system, and then click **New**.
9. Type the amount of space, and then click **Apply**.
10. In the Windows Setup window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins.
12. In Settings window, type your password and click **Finish**.
13. Follow the instructions on the screen to log in to the operating system when prompted.

Installing the Windows Server SAC

This topic provides instructions on how to install the following operating system:

- Windows Server Version 1709

To install the Windows Server operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. If the message `Press any key to boot from CD or DVD...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. In the Windows Server window, configure the language and other options and then click **Next**. Select the language as you need and then click **Next**.
4. Click **Install now**.
5. The “setup is starting ”window is displayed.
6. In the “Select the operating system you want to install” window, select the type of installation as you need. The following steps are based on the scenario that **Windows Server Standard** is selected in this step, and then click **Next**.
7. Read the license terms and select **I accept the license terms**. Then, click **Next**.
8. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **onboard SATA RAID** and **Add-on RAID**): go to step 9.
   - If your SATA configuration is set as **AHCI**: go to step 9. Be sure to install the AHCI driver after the operating system installation is completed, see “Installing the driver for the SATA AHCI” on page 64.

9. In the “Where do you want to install Windows?” window, click **New**. Type the amount of space (in MB), and then click **Apply**.
10. In the Windows Setup window, click **OK**, and then click **Next**. The installation begins.

    Note: After the installation, your server restarts. Then the operating system loading window is displayed for configuration for several minutes, and then the server restarts again.
11. In the CMD manager window, click **OK**. Follow the instructions on the screen to change the password, and then press Enter to log in to the operating system.

Installing the Hyper-V Server 2012 operating system

This topic provides instructions on how to install the Hyper-V Server 2012 operating system.

To install the Hyper-V Server 2012 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from CD or DVD...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the “Microsoft Hyper-V Server 2012” window is displayed, configure the language and other options you need and then click **Next**.
4. Click **Install now**.
5. Read the license terms and select **I accept the license terms**. Then click **Next**.
6. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install the newer version of Hyper-V Server only (advanced)** is selected in this step.
7. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 8.
8. In the “Where do you want to install Hyper-V Server?” window, click **Drive options (advanced)**.
9. Select the hard disk drive on which you want to install the operating system, and then click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Install Microsoft Hyper-V Server Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Note: Your server will restart several times during the installation.
13. When the Press Ctrl+Alt+Delete to sign in window prompted, press Ctrl+Alt+Delete.
14. Click **Administrator**. Follow the instructions on the screen to change the password and then log in to the operating system.

Installing the Hyper-V Server 2012 R2 operating system

This topic provides instructions on how to install the Hyper-V Server 2012 R2 operating system.

To install the Hyper-V Server 2012 R2 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd or dvd...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the "Microsoft Hyper-V Server 2012 R2" window is displayed, configure the language and other options you need and then click **Next**.
4. Click **Install now**.
5. Read the license terms and select **I accept the license terms**. Then click **Next**.
6. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install the newer version of Hyper-V Server only (advanced)** is selected in this step.
7. In the "Where do you want to install Hyper-V Server?" window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the "Select the driver to be installed" window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 8.
8. In the "Where do you want to install Hyper-V Server?" window, select the hard disk drive on which you want to install the operating system, and then click **New**.
9. Type the amount of space (in MB), and then click **Apply**.
10. In the "Microsoft Hyper-V Server Setup" window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Note: Your server will restart several times during the installation.
12. When the following message displays "The user's password must be changed before signing in.", click **OK**.
13. Click **Administrator**. Follow the instructions on the screen to change the password and then log in to the operating system.

Installing the Hyper-V Server 2016 operating system

This topic provides instructions on how to install the Hyper-V Server 2016 operating system.

To install the Hyper-V Server 2016 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. If the message `Press any key to boot from CD or DVD...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter.

3. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
4. In the “Microsoft Hyper-V Server 2016” window, select the language and other options and then click **Next**.
5. Click **Install now**.
6. Read the applicable notices and license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install the newer version of Hyper-V Server only (advanced)** is selected in this step.
8. In the “Where do you want to install Hyper-V Server?” window, choose the storage device to install the operating system.
9. Click **New**, type the amount of space, and then click **Apply**.
10. In the “Microsoft Hyper-V Server Setup” window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.
12. When the message “The user’s password must be changed before signing” is displayed, click **OK**.
13. When the Administrator window is displayed, follow the instructions on the screen to change the password.
14. When the message `Your password has been changed` is displayed, click **OK** to log in to the operating system.

Installing the SUSE Linux Enterprise Server 11 operating system with Service Pack 4

This topic provides instructions on installing the SUSE Linux Enterprise Server 11 operating system with Service Pack 4.

To install the SUSE Linux Enterprise Server 11 operating system with Service Pack 4, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the “SUSE Linux Enterprise Server Welcome” window, select **Installation** and then press Enter.
3. In the Welcome window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
4. In the Media Check window, click **Next** to go ahead.
5. In the Installation Mode window, select **New Installation**, and then click **Next**.
6. Verify your region and time zone, and then click **Accept → Next**.
7. In the Server Base Scenario window, select **Physical Machine(Also for Fully Virtualized Guests)** and then click **Next**.
8. When the Installation Settings window is displayed, create a drive partition you need.
   - Manually create a root partition (/)

     To create a root partition, do the following:

     a. Click **Partitioning** and select **Custom Partition (for experts)**. Click **Next**.
     b. In the Expert Partitioner window, select **Hard Disks**, and then click **Add**.
     c. In the New Partitions Size window, select **Custom Size**.
     d. Type the amount of space (in MB) in the **Custom Size** field and then click **Next**.
     e. In the **Formatting Options** area, select **Ext3** from the **File system** drop-down list box.

f. In the **Mounting partition** area, select the forward slash **(/)** from the **Mount Point** drop-down list box.

g. Click **Finish**.

- Manually create a boot partition (/boot)

  To create a boot partition, do the following:

  a. In the Expert Partitioner window, select **Hard Disks**, and then click **Add**.

  b. In the New Partitions Size window, select **Custom Size**.

  c. Type the amount of space (in MB) in the **Custom Size** field and then click **Next**.

  d. In the **Formatting Options** area, select **FAT** from the **File System** drop-down list box.

  e. In the **Mounting partition** area, select **/boot/efi** from the **Mount Point** drop-down list box.

  f. Click **Finish**.

- Manually create a swap partition

  To create a swap partition, do the following:

  a. In the Expert Partitioner window, select **Hard Disks**, and then click **Add**.

  b. In the New Partitions Size window, select **Custom Size**.

  c. Type the amount of space (in MB) in the **Custom Size** field.

  d. In the **Formatting Options** area, select **Swap** from the **File system** drop-down list box.

  e. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.

  f. Click **Finish**.

Go to the Expert Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Accept**. The drive partition is finished.

9. In the Installation Settings window, click **Software** to select your desired software programs, and then click **OK**. If the YaST window is displayed, click **Accept**.
10. Click **Install** to install the software programs that you have selected.

    Notes:

    - If a Warning window is displayed, select the option you need. The following steps are based on the scenario that **Ignore this conflict of ...** is selected. Do the following:

      a. Click **OK-TryAgain**.

      b. In the YaST window, click **Accept**.

      c. In the Installation Settings window, click **Install** to begin the installation.

    - If the YaST2 window is displayed, click **Install** to begin the installation.
11. When the Confirm Installation window is displayed, click **Install**. When the installation process is completed, the server will restart automatically.
12. The setup process continues after the server restarts. Set your root user password. Then click **Next**. When the YaST2 window is displayed, click **Yes**.

    Note: The password is optional and must contain at least six characters and consist of upper case letters, lower case letters, and numbers.
13. Set your host name and domain name in the Hostname and Domain Name window. Then click **Next**.
14. Configure your network in the Network Configuration window. Then click **Next**.

    Note: If the Test Internet Connection window is displayed, configure the settings you need. Then click **Next**.

15. In the Network Services Configuration window, click **Next**.
16. In the User Authentication Method window, configure the settings you need. Then, click **Next**.
17. In the New Local User window, configure the settings you need. Then, click **Next → Yes**.
18. In the Release Notes window, click **Next**.
19. In the Hardware Configuration window, click **Next**.
20. In the Installation Completed window, click **Finish**.

    Note: If the YaST2 window is displayed, click **Continue** or **Yes**.
21. Follow the instructions on the screen to log in to the operating system.

Installing the SUSE Linux Enterprise Server 12.1 operating system

This topic provides instructions on how to install the SUSE Linux Enterprise Server 12.1 (x64) operating system.

To install the SUSE Linux Enterprise Server 12.1 (x64) operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Language, Keyboard and License Agreement window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
3. In the Registration window, configure the information as prompted and click **Next**. The following steps are based on the scenario that **Skip Registration** is selected in this step.
4. In the Add On Product window, select add-ons to be installed and click **Next**. The following steps are based on the scenario that default options are selected in this step.
5. In the Suggested Partitioning window, use the suggested partitioning method and click **Next**. If you want to create a drive partition, do one of the following:
   - Manually create a root partition (/)
     a. Click **Create Partition Setup** and select **Custom Partitioning (for experts)**. Click **Next**.
     b. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     c. In the New Partitions Size window, select **Custom Size**.
     d. Type the amount of space (for example, 80 GB) in the **Size** field and then click **Next**.
     e. Select **Operating System** from **Role**.
     f. In the **Formatting Options** area, select **BtrFS** from the **File system** drop-down list box.
     g. In the **Mount partition** area, select the forward slash (**/**) from the **Mount Point** drop-down list box.
     h. Click **Finish**.
   - Manually create a boot partition (/boot/efi)
     a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     b. In the New Partitions Size window, select **Custom Size**.
     c. Type the amount of space (for example, 2 GB) in the **Size** field and then click **Next**.
     d. Select **Operating System** from **Role**.
     e. In the **Formatting Options** area, select **FAT** from the **File System** drop-down list box.
     f. In the **Mounting partition** area, select **/boot/efi** from the **Mount Point** drop-down list box.
     g. Click **Finish**.

- Manually create a swap partition
  a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
  b. In the New Partitions Size window, select **Custom Size**.
  c. Type the amount of space (for example, 2 GB) in the **Size** field.
  d. Select **Swap** from **Role** and click **Next**.
  e. In the **Format partition** area, select **Swap** from the **File system** drop-down list box.
  f. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.
  g. Click **Finish**.

  Go to the Expert Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Accept**. Then, click **Next**.

6. In the Clock and Time Zone window, set the time zone and time and click **Next**.

   For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to the local time. If “Do you want to continue with your selection (local time)?” is displayed, click **Continue**.

7. In the Create New User window, set a user name and password, and then click **Next**.

   Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

8. In the “Password for the System Administrator–root” window, set a root password and click **Next**.

   Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

9. In the Installation Settings window, click **Software** to select software applications to be installed.

   For example, if you want to install all software, do the following:

   a. Click **Software**.
   b. In the Software Selection and System Tasks window, right-click any software application and choose **All in This List-Install**.
   c. Click **OK → Install**. If the Confirm Installation window is displayed, click **Install**.

10. The system will restart after the installation is finished.

Installing the SUSE Linux Enterprise Server 12.2 operating system

This topic provides instructions on how to install the SUSE Linux Enterprise Server 12.2 (x64) operating system.

To install the SUSE Linux Enterprise Server 12.2 (x64) operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Language, Keyboard and License Agreement window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
3. In the Registration window, configure the information as prompted and click **Next**. The following steps are based on the scenario that **Skip Registration** is selected in this step.
4. In the Add On Product window, select add-ons to be installed and click **Next**. The following steps are based on the scenario that default options are selected in this step.

5. In the Suggested Partitioning window, use the suggested partitioning method and click **Next**. If you want to create a drive partition, do one of the following:
   - Manually create a root partition (/)
     a. Click **Create Partition Setup** and select **Custom Partitioning (for experts)**. Click **Next**.
     b. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     c. In the New Partitions Size window, select **Custom Size**.
     d. Type the amount of space (for example, 80 GB) in the **Size** field and then click **Next**.
     e. Select **Operating System** from **Role** and click **Next**.
     f. In the **Formatting Options** area, select **BtrFS** from the **File system** drop-down list box.
     g. In the **Mount partition** area, select the forward slash (**/**) from the **Mount Point** drop-down list box.
     h. Click **Finish**.
   - Manually create a boot partition (/boot/efi)
     a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     b. In the New Partitions Size window, select **Custom Size**.
     c. Type the amount of space (for example, 2 GB) in the **Size** field and then click **Next**.
     d. Select **Operating System** from **Role** and click **Next**.
     e. In the **Formatting Options** area, select **FAT** from the **File System** drop-down list box.
     f. In the **Mounting partition** area, select **/boot/efi** from the **Mount Point** drop-down list box.
     g. Click **Finish**.
   - Manually create a swap partition
     a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     b. In the New Partitions Size window, select **Custom Size**.
     c. Type the amount of space (for example, 2 GB) in the **Size** field.
     d. Select **Swap** from **Role** and click **Next**.
     e. In the **Format partition** area, select **Swap** from the **File system** drop-down list box.
     f. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.
     g. Click **Finish**.

     Go to the Expert Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Accept**. Then, click **Next**.
6. In the Clock and Time Zone window, set the time zone and time and click **Next**.

   For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to the local time. If “Do you want to continue with your selection (local time)?” is displayed, click **Continue**.
7. In the Create New User window, set a user name and password, and then click **Next**.

   Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.
8. In the “Password for the System Administrator–root” window, set a root password and click **Next**.

Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

9. In the Installation Settings window, click **Software** to select software applications to be installed.

   For example, if you want to install all software, do the following:

   a. Click **Software**.

   b. In the Software Selection and System Tasks window, right-click any software application and choose **All in This List-Install**.

   c. Click **OK → Install**. If the Confirm Installation window is displayed, click **Install**.

10. The system will restart after the installation is finished.

Installing the SUSE Linux Enterprise Server 12.3 operating system

This topic provides instructions on installing the SUSE Linux Enterprise Server 12.3 operating system (x64).

To install the SUSE Linux Enterprise Server 12.3 operating system (x64), do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the SUSE Welcome window is displayed, select **Installation** and press Enter.
3. In the “Language, Keyboard and License Agreement” window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
4. In the Network Settings window, select the network card to be used and click **Next**. The following steps are based on the scenario that default options are selected in this step.
5. In the Registration window, configure the information as prompted and click **Next**. The following steps are based on the scenario that **Skip Registration** is selected in this step. When the “Really skip the registration now?” window is displayed, select **Yes**.

   Note: If the Warning window is displayed, click **OK**.

6. In the Add On Product window, select add-ons to be installed and click **Next**. The following steps are based on the scenario that default options are selected in this step.
7. In the System Role window, select **Default System** and then click **Next**.
8. In the Suggested Partitioning window, use the suggested partitioning method and click **Next**. If you want to create a drive partition, do one of the following:
   - Manually create a root partition (/)
     a. In the Suggested Partitioning window, click **Create Partition Setup** and select **Custom Partitioning (for experts)**. Click **Next**.
     b. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the disk (for example, **sda**) for installing the operating system and click **Add**.
     c. In the New Partitions Size window, select **Custom Size**.
     d. Type the amount of space (for example, 80 GB) in the **Custom Size** field and then click **Next**.
     e. Select **Operating System** from **Role**.
     f. In the **Formatting Options** area, select **BtrFS** from the **File system** drop-down list box.
     g. In the **Mount partition** area, select the forward slash **(/)** from the **Mount Point** drop-down list box.
     h. Click **Finish**.
   - Manually create a boot partition (**/boot** in legacy mode) or (**/boot/efi** in UEFI mode)
     a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the disk (for example, **sda**) for installing the operating system and click **Add**.

b. In the New Partitions Size window, select **Custom Size**.

c. Type the amount of space (for example, 2 GB) in the **Custom Size** field and then click **Next**.

d. Select **Operating System** from **Role**.

e. In the **Formatting Options** area, select **FAT** (or select **Ext4** in legacy mode) from the **File System** drop-down list box.

f. In the **Mounting partition** area, select **/boot/efi** (or select **/boot** in legacy mode) from the **Mount Point** drop-down list box.

g. Click **Finish**.

- Manually create a swap partition

a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the disk (for example, **sda**) for installing the operating system and click **Add**.

b. In the New Partitions Size window, select **Custom Size**.

c. Type the amount of space (for example, 2 GB) in the **Custom Size** field and click **Next**.

d. Select **Swap** from **Role** and click **Next**.

e. In the **Format partition** area, select **Swap** from the **File system** drop-down list box.

f. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.

g. Click **Finish**.

Go to the Expert Partitioner window. The created swap partition and root partition are displayed in the window. Ensure that the created partitions are correct and click **Accept**.

Note: If the “Really use this setup?” window is displayed, click **Yes**.

9. In the Clock and Time Zone window, set the time zone and time and click **Next**.

   For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to local time. If the “Do you want to continue with your selection (local time)?” window is displayed, click **Continue**.

10. In the Create New User window, set a user name and password, and then click **Next**.

    Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

11. In the “Password for the System Administrator–root” window, set a root password and click **Next**.

    Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

12. In the Installation Settings window, click **Software** to select software applications to be installed.

    For example, if you want to install all software, do the following:

    a. Click **Software**.

    b. In the Software Selection and System Tasks window, select any software application and then right-click. Choose **All in This List-Install**.

    c. Click **OK → Install**. If the Confirm Installation window is displayed, click **Install**.

    d. In the “System will reboot now” window, click **OK** or restart the server to finish.

Installing the SUSE Linux Enterprise Server 15 operating system

This topic provides instructions on installing the SUSE Linux Enterprise Server 15 operating system (x64).

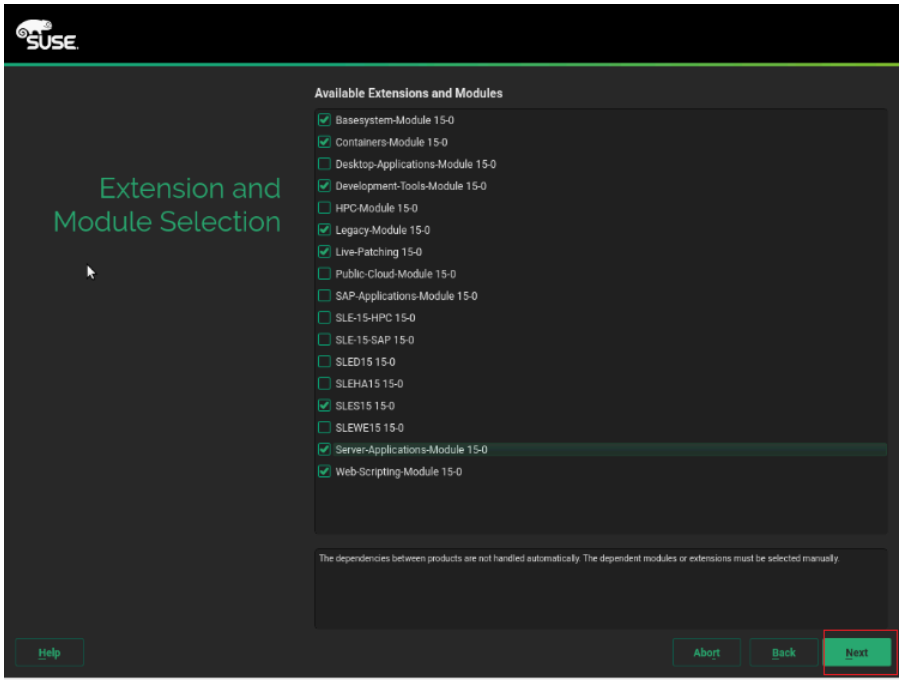
Note: SUSE Linux Enterprise Server 15 operating system (x64) includes two ISO image files: the SUSE Linux Enterprise Server 15 Installer image file and the SUSE Linux Enterprise Server 15 Packages image file. Select

the SUSE Linux Enterprise Server 15 Installer image file if not installing any modules, and select the SUSE Linux Enterprise Server 15 Packages image file if installing modules. Select either image file in the Pre-boot Execution Environment (PXE) based on your needs.

To install the SUSE Linux Enterprise Server 15 operating system (x64), do the following:

1. Insert the SUSE Linux Enterprise Server 15 Installer disc into one optical drive, insert the SUSE Linux Enterprise Server 15 Packages disc into the other optical drive, and start the server from the optical drive.
2. When the SUSE Welcome window is displayed, select **Installation**. When the Initializing window is displayed, click **OK**.
3. In the “Language, Keyboard and Product Selection” window, select your language and keyboard layout, and select **SUSE Linux Enterprise Server 15**. Click **Next**.
4. In the “SUSE LINUX Enterprise Server 15 License Agreement” window, select **I Agree to the License Terms**, and then click **Next**. The following steps are based on the scenario that default options are selected in this step.
5. In the Registration window, click **Network Configuration** on the top right corner to configure the network, and then click **Next** to return to the Registration window.
6. In the Registration window, fill in the information according to the prompt. The following steps are based on the scenario that **Skip Registration** is selected in this step. Click **OK → Next** when the Warning window is displayed.
7. In the Add On Product window, select **DVD**, and then click **Next**.
8. In the “Insert the add-on product DVD” window, select the optical drive that contains the SUSE Linux Enterprise Server 15 Packages disc, and then click **Continue**.
9. In the “Extension and Module Selection” window, select the modules to be installed based on your needs, and then click **Next**. The following steps are based on the scenario that the following modules are selected in this step.

   Note: When selecting some modules, if the SLEHA15 15-0 License Agreement window is displayed, select **I Agree to the License Terms**, and then click **Next**.



10. In the Add On Product Installation window, ensure that the modules selected are correct, and then click **Next**.
11. In the System Role window, select **Default System**, and then click **Next**.
12. In the Suggested Partitioning window, use the suggested partitioning method, and then click **Next**. If you want to customize drive partitions, use the Expert Partitioner by doing the following:
    - Manually create a root partition (/):
      a. In the Suggested Partitioning window, click **Expert Partitioner**, and then select **Start with Current Proposal**.
      b. In the Expert Partitioner window, click **System view**, and select **Hard Disks**. Select the disk (for example, **sda**) for installing the operating system, and then click **Add**.
      c. In the New Partitions Size window, select **Custom Size**.
      d. Type the amount of space (for example, 80 GB) in the **Size** field, and then click **Next**.
      e. Click **Role**, select **Operating System**, and then click **Next**.
      f. In the Formatting Options window, click **Format device**, and then select **BtrFS** from the **Filesystem** drop-down list box.
      g. Click **Mount Options**, select **(/)** from the **Mount Point** drop-down list box, and then click **Next**.
    - Manually create a **/boot/efi** partition:
      a. In the Expert Partitioner window, click **System view**, and select **Hard Disks**. Select the disk (for example, **sda**) for installing the operating system, and then click **Add Partition**.
      b. In the New Partitions Size window, select **Custom Size**.
      c. Type the amount of space (for example, 500 MB) in the **Size** field, and then click **Next**.
      d. Click **Role**, and select **Operating System**.
      e. In the Formatting Options window, click **Format device**, and then select **FAT** from the **File System** drop-down list box.
      f. Click **Mount Options**, select **/boot/efi** from the **Mount Point** drop-down list box, and then click **Next**.
    - Manually create a swap partition:
      a. In the Expert Partitioner window, click **System view**, and select **Hard Disks**. Select the disk (for example, **sda**) for installing the operating system, and then click **Add Partition**.
      b. In the New Partitions Size window, select **Custom Size**.
      c. Type the amount of space (for example, 2 GB) in the **Size** field, and then click **Next**.
      d. Click **Role**, select **Swap**, and then click **Next**.
      e. Click **Format Options**, select **Swap** from the **File system** drop-down list box.
      f. Click **Mount Options**, select **Swap** from the **Mount Point** drop-down list box, and then click **Next**.

      Go to the Expert Partitioner window. The created swap partition and root partition are displayed in the window. Ensure that the created partitions are correct and click **Accept**.
13. In the Suggested Partitioning window, click **Next**.
14. In the Clock and Time Zone window, set the time zone and time and click **Next**.

    For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to local time. If the “Do you want to continue with your selection (local time)?” window is displayed, click **Continue**.
15. In the Local Users window, set a user name and password, and then click **Next**.

Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

16. In the “Password for the System Administrator root” window, set a root password and click **Next**.

    Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

17. In the Installation Settings window, click **Software** to select software applications to be installed.

    For example, if you want to install all software, do the following:

    a. Click **Software**.

    b. In the Software Selection and System Tasks window, select any software application and then right-click. Select **All in This List → Install**, and then click **OK**.

    c. In the Installation Settings window, click **Install**.

    Note: If the Confirm Installation window is displayed, click **Install**.

    d. In the “The system will reboot now” window, click **OK** or wait for the server to restart.

Installing the Red Hat Enterprise Linux 6.7 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 6.7 operating system.

To install the Red Hat Enterprise Linux 6.7 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the new window, click **Next**.
3. In the RED HAT window, click **Next**.
4. Select the language that you want to use during the installation process and click **Next**.
5. Select the appropriate keyboard layout for the system and click **Next**.
6. Select the type of devices that are involved in the installation, and then click **Next**.

   Note: If the Storage Device Warning window is displayed, click **Yes, discard any data**. If the following message displays “At least one existing installation has been detected on your system. What would you like to do?”, select the option you need and then click **Next**.

7. Type a name for your server. Then click **Next**.
8. Specify your time zone by selecting the nearest city in your time zone. Then click **Next**.
9. Personalize the server by typing the root password for the root user account. Then click **Next**.

   Note: If a message prompts you that the password is weak, click **Use Anyway**.

10. In the “Which type of the installation would you like?” window, select your desired option. The following steps are based on the scenario that **Create Custom Layout** is selected in this step and click **Next**.
11. In the Please Select A Device window, do one of the following to create a partition and then click **Next**.

    - Manually create a root partition (/)

      To create a root partition, do the following:

      a. Click **Create**. The Create Storage window is displayed.

      b. Select **Standard Partition** and then click **Create**.

      c. In the Add Partition window, select the forward slash **(/)** from the **Mount Point** drop-down list box.

      d. Select **Ext4** from the **File System Type** drop-down list box.

e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.

f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

- Manually create a boot partition (/boot/efi)

  To create a boot partition, do the following:

  a. Click **Create**. The Create Storage window is displayed.

  b. Select **Standard Partition** and then click **Create**.

  c. In the Add Partition window, select **/boot/efi** from the **Mount Point** drop-down list box.

  d. Select **EFI System Partition** from the **File System Type** drop-down list box.

  e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.

  f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

- Manually create a swap partition

  To create a swap partition, do the following:

  a. Click **Create**. The Create Storage window is displayed.

  b. Select **Standard Partition** and then click **Create**.

  c. In the Add Partition window, select **swap** from the **File System Type** drop-down list box.

  d. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.

  e. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

Go back to the Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Next**. The drive partition is finished.

12. In the Format Warnings window, click **Format** to format the hard disk drive.
13. In the “Writing storage configuration to disk” window, click **Write changes to disk**.
14. In the “Boot loader operating system list” window, click **Next**.
15. The default installation is a basic server installation. You can customize your server by selecting a different set of software from the software list or adding additional repositories that you want to use for the software installation. Select **Customize now**. Then click **Next**. The installation process begins.

    Notes:

    - When a warning window is displayed, select the option of your choice and then continue with the installation.
    - When you are selecting the software installation packages, ensure that the check box **tboot-1.7.4-1.el6.X86_64 - Performs a verified launch using Intel TXT** is cleared.
16. After the installation is completed, click **Reboot** to restart your server.
17. The installation continues after the server restarts. In the Welcome window, click **Forward**.
18. In the License Information window, select **Yes, I agree to the License Agreement**, and then click **Forward**.
19. In the Set Up Software Updates window, configure the settings you need, and then click **Forward**. If “Are you sure?” window is displayed, click **Register later**.
20. In the Finish Updates Setup window, click **Forward**.
21. Set your user name and password and then click **Forward**.
22. Set your time and date and then click **Forward**.

23. In the Kdump window, select **Enable kdump** if you want to enable kdump, and then click **Finish** to complete the installation.

    Note: When prompted to restart the server, click **Yes** or **OK**.

24. Follow the instructions on the screen to log in to the operating system.

Installing the Red Hat Enterprise Linux 6.8 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 6.8 (x64) operating system.

To install the Red Hat Enterprise Linux 6.8 (x64) operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. In the Disk Found window, click **Skip**.

   Note: If the operating system is installed on the SAN card through iSCSI, the Networking Device window is displayed. Select the desired **Ethernet device**, and then click **OK**. In the Configure TCP/IP window, select the option according to the network environment. The following steps are based on the scenario that **Enable Ipv4 support->Dynamic IP configuration (DHCP)** is selected.
3. In the RED HAT window, click **Next**.
4. Select the language that you want to use during the installation process and click **Next**.
5. Select the appropriate keyboard layout for the system and click **Next**.
6. Select the type of devices that are involved in the installation, and then click **Next**.

   Note: If the Storage Device Warning window is displayed, click **Yes, discard any data**. If the message displays as “At least one existing installation has been detected on your system. What would you like to do?”, select the option as you desired and then click **Next**.
7. Type a name for your server. Then click **Next**.
8. Specify your time zone by selecting the nearest city in your time zone. Then click **Next**.
9. Personalize the server by typing the root password for the root user account. Then click **Next**.

   Note: If a message prompts you that the password is weak, click **Use Anyway**.
10. In the “Which type of the installation would you like?” window, select your desired option. The following steps are based on the scenario that **Create Custom Layout** is selected in this step and click **Next**.
11. In the Please Select A Device window, do one of the following to create a partition and then click **Next**.
    - Manually create a root partition (**/**)

      To create a root partition, do the following:

      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select the forward slash **(/)** from the **Mount Point** drop-down list box.
      d. Select **ext4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the storage device on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a boot partition (**/boot/efi**)

      To create a boot partition, do the following:

      a. Click **Create**. The Create Storage window is displayed.

b. Select **Standard Partition** and then click **Create**.
c. In the Add Partition window, select **/boot/efi** from the **Mount Point** drop-down list box.
d. Select **EFI System Partition** from the **File System Type** drop-down list box.
e. In the Allowable Drives window, select the storage device on which you want to install the operating system.
f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

- Manually create a swap partition

  To create a swap partition, do the following:

  a. Click **Create**. The Create Storage window is displayed.
  b. Select **Standard Partition** and then click **Create**.
  c. In the Add Partition window, select **swap** from the **File System Type** drop-down list box.
  d. In the Allowable Drives window, select the storage device on which you want to install the operating system.
  e. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

Go back to the Partitioner window. Ensure that the created root partition, boot partition, and swap partition are correct. Click **Next**.

12. If the Format Warnings window is displayed, click **Format** to format the hard disk drive.
13. In the “Writing storage configuration to disk” window, click **Write changes to disk**.
14. In the “Boot loader operating system list” window, click **Next**.
15. The default installation is a basic server installation. You can customize your server by selecting a different set of software from the software list or adding additional repositories that you want to use for the software installation. Select **Customize now**. Then, click **Next**. The installation process begins.

    Notes:

    - If a warning window is displayed, select the option of your choice and then continue with the installation.
    - If you install the operating system in UEFI mode, ensure that the check box **tboot-1.7.4-1.el6.X86_64 - Performs a verified launch using Intel TXT** is cleared.
16. After the installation is completed, click **Reboot** to restart your server.
17. The installation continues after the server restarts. In the Welcome window, click **Forward**.
18. In the License Information window, select **Yes, I agree to the License Agreement**, and then click **Forward**.
19. In the Set Up Software Updates window, configure the settings you need, and then click **Forward**. If the message “Are you sure?” is displayed, click **Register later**.
20. In the Finish Updates Setup window, click **Forward**.
21. Set your user name and password and then click **Forward**.
22. Set your time and date and then click **Forward**.
23. In the Kdump window, select **Enable kdump** if you want to enable kdump, and then click **Finish** to complete the installation.

    Note: When prompted to restart the server, click **Continue** or **Yes**.
24. Follow the instructions on the screen to log in to the operating system.

Installing the Red Hat Enterprise Linux 6.9 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 6.9 (x64) operating system.

To install the Red Hat Enterprise Linux 6.9 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. The Welcome to Red Hat Enterprise Linux 6.9! window is displayed. Click **Install system with basic video driver**.
3. In the Disk Found window, click **Skip** and press Enter.

   Note: If the operating system is installed on the SAN card through iSCSI, the Networking Device window is displayed. Select the desired **Ethernet device**, and then click **OK**. In the Configure TCP/IP window, select the option according to the network environment. The following steps are based on the scenario that **Enable Ipv4 support->Dynamic IP configuration (DHCP)** is selected.
4. In the RED HAT window, click **Next**.
5. Select the language that you want to use during the installation process and click **Next**.
6. Select the appropriate keyboard layout for the system and click **Next**.
7. Select the type of devices that are involved in the installation, and then click **Next**.

   Note: If the Storage Device Warning window is displayed, click **Yes, discard any data**. If the message displays as “At least one existing installation has been detected on your system. What would you like to do?”, select the option as you desired and then click **Next**.
8. Type a name for your server. Then click **Next**.
9. Specify your time zone by selecting the nearest city in your time zone. Then click **Next**.
10. Personalize the server by typing the root password for the root user account. Then click **Next**.

    Note: If a message prompts you that the password is weak, click **Use Anyway**.
11. In the “Which type of the installation would you like?” window, select your desired option. The following steps are based on the scenario that **Create Custom Layout** is selected in this step and click **Next**.
12. In the Please Select A Device window, do one of the following to create a partition and then click **Next**.
    - Manually create a root partition (/)

      To create a root partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select the forward slash **(/)** from the **Mount Point** drop-down list box.
      d. Select **Ext4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a boot partition (**/boot** in legacy mode) or (**/boot/efi** in UEFI mode)

      To create a boot partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **/boot/efi** (or select **/boot** in legacy mode) from the **Mount Point** drop-down list box.

d. Select **EFI System Partition** (or select **Ext4** in legacy mode) from the **File System Type** drop-down list box.
e. In the Allowable Drives window, select the storage device on which you want to install the operating system.
f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

- Manually create a swap partition

  To create a swap partition, do the following:

  a. Click **Create**. The Create Storage window is displayed.
  b. Select **Standard Partition** and then click **Create**.
  c. In the Add Partition window, select **Swap** from the **File System Type** drop-down list box.
  d. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
  e. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

Go back to the Partitioner window, the created root partition, boot partition, and swap partition are displayed. Click **Next**. The drive partition is finished.

13. In the Format Warnings window, click **Format** to format the hard disk drive.
14. In the “Writing storage configuration to disk” window, click **Write changes to disk**.
15. In the “Boot loader operating system list” window, click **Next**.
16. The default installation is a basic server installation. You can customize your server by selecting a different set of software from the software list or adding additional repositories that you want to use for the software installation. Select **Customize now**. Then, click **Next**. The installation process begins.

    Notes:

    - If a warning window is displayed, select the option of your choice and then continue with the installation.
    - If you install the operating system in the UEFI mode, ensure that the `tboot-1.7.4-1.el6.x86_64 - Performs a verified launch using Intel TXT` package is not selected.
17. After the installation is completed, click **Reboot** to restart your server.

Installing the Red Hat Enterprise Linux 6.10 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 6.10 (x64) operating system.

To install the Red Hat Enterprise Linux 6.10 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. The Welcome to Red Hat Enterprise Linux 6.10! window is displayed. Click **Install system with basic video driver**.
3. In the Disk Found window, click **Skip** and press Enter.

   Note: If the operating system is installed on the SAN card through iSCSI, the Networking Device window is displayed. Select the desired **Ethernet device**, and then click **OK**. In the Configure TCP/IP window, select the option according to the network environment. The following steps are based on the scenario that **Enable Ipv4 support->Dynamic IP configuration (DHCP)** is selected.
4. In the RED HAT window, click **Next**.
5. Select the language that you want to use during the installation process and click **Next**.

6. Select the appropriate keyboard layout for the system and click **Next**.
7. Select the type of devices that are involved in the installation, and then click **Next**.

   Note: If the Storage Device Warning window is displayed, click **Yes, discard any data**. If the message displays as “At least one existing installation has been detected on your system. What would you like to do?”, select the option as you desired and then click **Next**.
8. Type a name for your server. Then click **Next**.
9. Specify your time zone by selecting the nearest city in your time zone. Then click **Next**.
10. Personalize the server by typing the root password for the root user account. Then click **Next**.

    Note: If a message prompts you that the password is weak, click **Use Anyway**.
11. In the “Which type of the installation would you like?” window, select your desired option. The following steps are based on the scenario that **Create Custom Layout** is selected in this step and click **Next**.
12. In the Please Select A Device window, do one of the following to create a partition and then click **Next**.
    - Manually create a root partition (/)

      To create a root partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select the forward slash **(/)** from the **Mount Point** drop-down list box.
      d. Select **Ext4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a boot partition (**/boot** in legacy mode) or (**/boot/efi** in UEFI mode)

      To create a boot partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **/boot/efi** (or select **/boot** in legacy mode) from the **Mount Point** drop-down list box.
      d. Select **EFI System Partition** (or select **Ext4** in legacy mode) from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the storage device on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a swap partition

      To create a swap partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **Swap** from the **File System Type** drop-down list box.
      d. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      e. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

    Go back to the Partitioner window, the created root partition, boot partition, and swap partition are displayed. Click **Next**. The drive partition is finished.

13. In the Format Warnings window, click **Format** to format the hard disk drive.
14. In the “Writing storage configuration to disk” window, click **Write changes to disk**.
15. In the “Boot loader operating system list” window, click **Next**.
16. The default installation is a basic server installation. You can customize your server by selecting a different set of software from the software list or adding additional repositories that you want to use for the software installation. Select **Customize now**. Then, click **Next**. The installation process begins.

    Notes:

    - If a warning window is displayed, select the option of your choice and then continue with the installation.
    - If you install the operating system in the UEFI mode, ensure that the `tboot-1.7.4-1.el6.x86_64 - Performs a verified launch using Intel TXT` package is not selected.
17. After the installation is completed, click **Reboot** to restart your server.

Installing the Red Hat Enterprise Linux 7.2 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.2 (x64) operating system.

To install the Red Hat Enterprise Linux 7.2 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.2** and press Enter.
3. When“What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.
4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.
5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a storage device from **Local Standard Disks** for installing the operating system, and click **Done**.

   Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

   - Manually create a root partition (/)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select forward slash (**/**) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
   - Manually create a boot partition (/boot/efi)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **/boot/efi** from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.

d. Click **Add mount point**.

- Manually create a swap partition
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select **swap** from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.

Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.

8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. In the Configuration window, click **Root Password** to set the root password.
10. When file copying is completed, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.
14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Time Zone window, set the time zone and click **Next**.
17. In the About You window, set the user name and click **Next**.
18. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.
19. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the Red Hat Enterprise Linux 7.3 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.3 (x64) operating system.

To install the Red Hat Enterprise Linux 7.3 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.3** and press Enter.
3. When “What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.
4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.
5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a storage device from **Local Standard Disks** for installing the operating system, and click **Done**.

Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

- Manually create a root partition (/)
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select forward slash (**/**) from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.
- Manually create a boot partition (/boot/efi)
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select **/boot/efi** from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.
- Manually create a swap partition
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select **swap** from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.

Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.

8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. In the Configuration window, click **Root Password** to set the root password.
10. When file copying is completed, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.
14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Time Zone window, set the time zone and click **Next**.
17. In the About You window, set the user name and click **Next**.
18. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.
19. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the Red Hat Enterprise Linux 7.4 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.4 (x64) operating system.

To install the Red Hat Enterprise Linux 7.4 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.4** and press Enter.
3. When “What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.
4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.
5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a storage device from **Local Standard Disks** for installing the operating system, and click **Done**.

   Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

   - Manually create a root partition (/)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select forward slash (**/**) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
     e. Change **Device Type** to **Standard Partition**.
   - Manually create a boot partition (**/boot** in legacy mode) or (**/boot/efi** in UEFI mode)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **/boot/efi** (or select **/boot** in legacy mode) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
   - Manually create a swap partition
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **Swap** from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.

   Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.
8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. During the installation, in the Configuration window, click **Root Password** to set the root password and then click **Done**.
10. When the installation is completed, in the Configuration window, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.

14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Privacy window, set the location services as you are desired and click **Next**.
17. In the Time Zone window, set the time zone and click **Next**.
18. In the Online Accounts window, select your desired online account.

    Note: Online Accounts is optional. Click **Skip** if you do not want to select an online account.
19. In the About You window, set the user name and click **Next**.
20. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.
21. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the Red Hat Enterprise Linux 7.5 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.5 (x64) operating system.

To install the Red Hat Enterprise Linux 7.5 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.5** and press Enter.
3. When “What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.
4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.
5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a storage device from **Local Standard Disks** for installing the operating system, and click **Done**.

   Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

   - Manually create a root partition (/)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select forward slash (**/**) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
     e. Change **Device Type** to **Standard Partition**.
   - Manually create a boot partition (**/boot/efi** in UEFI mode or **/boot** in legacy mode)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.

b. In the Add a New Mount Point window, select **/boot/efi** (or select **/boot** in legacy mode) from the **Mount Point** drop-down list.
c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
d. Click **Add mount point**.

- Manually create a swap partition
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select **Swap** from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.

Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.

8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. During the installation, in the Configuration window, click **Root Password** to set the root password and then click **Done**.
10. When the installation is completed, in the Configuration window, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.
14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Privacy window, set the location services as you are desired and click **Next**.
17. In the Time Zone window, set the time zone and click **Next**.
18. In the Online Accounts window, select your desired online account.

    Note: Online Accounts is optional. Click **Skip** if you do not want to select an online account.
19. In the About You window, set the user name and click **Next**.
20. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.
21. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the Red Hat Enterprise Linux 7.6 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.6 (x64) operating system.

To install the Red Hat Enterprise Linux 7.6 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.6** and press Enter.
3. When “What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.

4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.
5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a storage device from **Local Standard Disks** for installing the operating system, and click **Done**.

   Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

   - Manually create a root partition (*/*)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select forward slash (*/*) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
     e. Change **Device Type** to **Standard Partition**.
   - Manually create a boot partition (**/boot/efi** in UEFI mode or **/boot** in legacy mode)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **/boot/efi** (or select **/boot** in legacy mode) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
   - Manually create a swap partition
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **Swap** from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.

   Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.
8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. During the installation, in the Configuration window, click **Root Password** to set the root password and then click **Done**.
10. When the installation is completed, in the Configuration window, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.
14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Privacy window, set the location services as you are desired and click **Next**.
17. In the Time Zone window, set the time zone and click **Next**.
18. In the Online Accounts window, select your desired online account.

Note: Online Accounts is optional. Click **Skip** if you do not want to select an online account.

19. In the About You window, set the user name and click **Next**.
20. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.

21. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the VMware hypervisor

This topic provides instructions on how to install the following operating systems:

- VMware ESXi 5.5 p07
- VMware ESXi 6.0 p02
- VMware ESXi 6.0 Update 2
- VMware ESXi 6.0 Update 3
- VMware ESXi 6.5
- VMware ESXi 6.5a
- VMware ESXi 6.5 Update 1
- VMware ESXi 6.5 Update 2
- VMware ESXi 6.7

Note: If the operating system is to be installed on SAN, download the instructional file *How to Create a Customized VMWare ESXi ISO Image* from http://support.lenovo.com/us/en/products/servers/thinkserver-rack-servers/thinkserver-rd650/documents/HT100820?tabName=Solutions. Then, follow the instructions to prepare the ISO file.

To install the VMware ESXi operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive. Wait several minutes for the system to load the files.
2. When the “Welcome to the VMware ESXi ... Installation” window is displayed, press Enter.
3. When the “End User License Agreement (EULA)” window is displayed, press F11.
4. When the “Select a Disk to Install or Upgrade” window is displayed, press Enter.
5. Select a keyboard layout and then press Enter.
6. Set the root password and then press Enter.

   Notes:

   - For VMware ESXi 5.1 P5, the password must contain at least seven characters. If you do not want to set the password, press Enter.
   - For VMware ESXi 6.7, the password must contain at least seven characters with numbers, upper-case and lower-case letters, and symbols.

7. When the Confirm Install window is displayed, press F11. The installation process starts.
8. When the Installation Complete window is displayed, press Enter. The server restarts. The operating system is installed successfully.

Chapter 3. Installing an operating system in legacy mode

This chapter provides information about installing operating systems in legacy mode.

Before installing an operating system in legacy mode

This topic contains the following items:

- "Preparing the driver" on page 37
- "Configuring the BIOS setting" on page 37

Preparing the driver

Before installing an operating system in legacy mode, download your desired driver from the Lenovo Web site at http://www.lenovo.com/drivers. Then, copy the driver to a USB storage device.

If the operating system is installed on a storage area network (SAN), download the driver for the host bus adapter (HBA) or converged network adapter (CNA) that is connected to the SAN. Then, copy the driver to a USB storage device.

Notes:

- You can load driver files using a USB storage device or a disc. The steps in this document are based on the scenario that you use a USB storage device to load driver files. If the USB storage device fails to load driver files, try using a disc. If you are installing an SUSE operating system, your are advised to use a disc to load .iso driver files.
- Depending on the configuration, you might install the operating system on a SAN or a hard disk drive. For Microsoft Windows operating systems, the two installation procedures are the same.
- Set the optical drive that you want to use as the first startup device. Depending on the server model, an external optical drive might be required.

Configuring the BIOS setting

Before installing an operating system in legacy mode, configure the BIOS setting by doing the following:

1. Start the Setup Utility program.
2. On the **Startup** menu, select **CSM** and click **Enable**.

Installing the Microsoft Windows Server 2012 operating system

This topic provides instructions on how to install the following operating systems and the drivers:

- Microsoft Windows Server 2012 Standard Edition
- Microsoft Windows Server 2012 Foundation Edition

To install the Microsoft Windows Server 2012 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.

   Note: If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` is displayed. Wait several minutes for the system to load the files.

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2. In the Windows Server 2012 window, select the language and other options. Then, click **Next**.
3. Click **Install now**.
4. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
5. Select the operating system you want to install, and then click **Next**.
6. Read the license terms and select **I accept the license terms**. Then, click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the "Where do you want to install Windows?" window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** or **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the "Select the driver to be installed" window, select **Hide drivers that are not compatible with hardware on this computer**, select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 9.
9. In the "Where do you want to install Windows?" window, click **Drive options (advanced)**.
10. Select the drive on which you want to install the operating system, and then click **New**.
11. Type the amount of space (in MB), and then click **Apply**.
12. In the Windows Setup window, click **OK**.
13. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.
14. In Settings window, type your password and click **Finish**.

    Note: The password must contain at least eight characters and consist of upper case letters, lower case letters, and numbers.
15. Follow the instructions on the screen to log in to the operating system when prompted.

Installing the Microsoft Windows Server 2012 Essentials operating system

This topic provides instructions on how to install the Windows Server 2012 Essentials operating system.

Note: Before installing this operating system, connect your server to the network.

To install the Windows Server 2012 Essentials operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.

5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and select **I accept the license terms**. Then, click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the "Where do you want to install Windows?" window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the "Select the driver to be installed" window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 9,.
9. In the "Where do you want to install Windows?" window, click **Drive options (advanced)**. Then click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Notes:

    - Your server will restart several times during the installation.
    - If the message displays as "Errors occurred during installation", you need to manually install the Ethernet driver. To install the driver, do the following:
      a. Download the driver for an Ethernet card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at: http://www.lenovo.com/drivers
      b. Copy the folder that contains the driver to your USB storage device and connect the USB storage device to your server.
      c. Open the Device Manager window. Right-click on the graphics card that requires drivers, and then select **Update Driver Software**.
      d. In the Update Driver Software window, click **Browse my computer for driver software**.
      e. In the Browse for driver software on your computer window, click **Browse** to locate the driver you want to install.
      f. Locate the driver and click **Next**.
      g. When the message "Windows has successfully updated your driver software" is displayed, click **Close**.
13. Configure the date and time, and then click **Next**.
14. Choose the type of installation you need. The following steps are based on the scenario that **Clean install** is selected.
15. Personalize the server by typing the computer name and then click **Next**.
16. In the "Provide your administrator information (account 1 of 2)" window, type your user name and password, and then click **Next**.

Note: The password must contain at least eight characters and consist of upper case letters, lower case letters, and numbers.

17. In the “Provide your administrator information (account 2 of 2)” window, type your user name and password, and then click **Next**.
18. In the “Keep your server up-to-date automatically” window, configure the settings you need. Your server will restart several times.
19. When the “Your server is now ready to be used” prompted, click **Close**. The installation is completed.

Installing a Microsoft Windows Server 2012 R2 operating system

This topic provides instructions on how to install the following operating systems:

- Microsoft Windows Server 2012 R2 Standard Edition
- Microsoft Windows Server 2012 R2 Foundation Edition

To install a Microsoft Windows Server 2012 R2 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 R2 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.

   Note: If you are installing the Microsoft Windows Server 2012 R2 Standard Edition or Microsoft Windows Server 2012 R2 Datacenter Edition operating system, ignore this step.
6. Select the Windows operation system edition that you want to install. Then click **Next**. The following steps are based on the scenario that **Windows Server 2012 R2 Standard (Server with a GUI)** is selected in this step.
7. Read the license terms and select **I accept the license terms**. Then click **Next**.
8. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
9. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 10.
10. In the “Where do you want to install Windows?” window, click **New**.
11. Type the amount of space (in MB), and then click **Apply**. The Windows Setup window is displayed.
12. Click **OK**.

13. Ensure that the drive partition is correct, and then click **Next**. The installation begins.
14. When the Settings window is displayed, set an administrator password and click **Finish**. Then, follow the instructions on the screen to sign in when prompted.

    Note: The password must be a combination of upper case letters, lower case letters, and numbers.

Installing the Microsoft Windows Server 2012 R2 Essentials operating system

This topic provides instructions on how to install the Windows Server 2012 R2 Essentials operating system.

To install the Windows Server 2012 R2 Essentials operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` is displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 R2 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and select **I accept the license terms**. Then, click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD onRAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**, select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 9.
9. In the “Where do you want to install Windows?” window, click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Notes:

    - Your server will restart several times during the installation.
13. When the Settings window is displayed, set an administrator password and click **Finish**. Then, follow the instructions on the screen to sign in when prompted.

    Note: The password must be a combination of upper case letters, lower case letters, and numbers.

Installing the Microsoft Windows Multipoint Server 2012 operating system

This topic provides instructions on how to install the following operating systems and the drivers:

- Microsoft Windows Multipoint Server 2012 Standard Edition
- Microsoft Windows Multipoint Server 2012 Premium Edition

Note: Ensure that the keyboard and mouse need to be connected with server by HUB.

To install the Microsoft Windows Multipoint Server 2012 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the Windows Server 2012 window is displayed, configure the language and other options you need, and then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and click **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **OB SATA RAID** and **ADD on RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 9.
9. In the “Where do you want to install Windows?” window, click **Drive options (advanced)**. Then click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Notes:

    - Your server will restart several times during the installation.
13. When the Settings window is displayed, click **Next**.
14. In the Windows Update window, click **Next**. Then, set an administrator password and click **Finish**.

    Note: The password must be a combination of upper case letters, lower case letters, and numbers.
15. When the message `MultiPoint Server Configuration Error` is displayed, press any key. Follow the instructions on the screen to sign in when prompted.

16. Type the user name and password, and press Enter. The user name will be configured as “administrator” after your server restarts.

Installing the Microsoft Windows 10 Professional operating system

This topic provides instructions on how to install the Microsoft Windows 10 Professional (x64) operating system.

To install the Microsoft Windows 10 Professional (x64) operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter.
3. In the Windows 10 window, select the language and other options you need. Then click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**. The product key information is available on the Microsoft Certificate of Authenticity label or product packaging.
6. Read the license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **OB RAID** or **Add on RAID**, do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**. Then, select the driver that you want to install, and click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**, click **Drive options (advanced)**.
9. Click **New**, type the amount of space, and then click **Apply**.
10. In the Windows Setup window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.
12. In the Get going fast window, select **Use express settings**.
13. In the Create an account for this PC window, type your user name and password, and then click **Next** to log in to the operating system.

Installing the Microsoft Windows Server 2016 Standard operating system

This topic provides instructions on how to install the Microsoft Windows Server 2016 Standard operating system.

To install the Microsoft Windows Server 2016 Standard operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. Wait several minutes for the system to load the files.

3. In the Windows Server 2016 window, select the language and other options. Then, click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**.
6. Select **Windows Server 2016 Standard (Desktop Experience)**, and then click **Next**.
7. Read the license terms and select **I accept the license terms**. Then, click **Next**.
8. Select the type of installation as you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
9. In the “Where do you want to install Windows?” window, choose the storage device to install the operating system, and then click **New**.
10. Type the amount of space, and then click **Apply**.
11. In the Windows Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.
13. In Settings window, type your password and click **Finish**.
14. Follow the instructions on the screen to log in to the operating system when prompted.

Installing the Microsoft Windows Server 2016 Essentials operating system

This topic provides instructions on how to install the Microsoft Windows Server 2016 Essentials operating system.

To install the Microsoft Windows Server 2016 Essentials operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. If the message `Press any key to boot from cd or dvd` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. Wait several minutes for the system to load the files.
3. In the Windows Server 2016 window, select the language and other options. Then, click **Next**.
4. Click **Install now**.
5. Type your product key and then click **Next**.
6. Read the license terms and select **I accept the license terms**. Then, click **Next**.
7. Select the type of installation as you need. The following steps are based on the scenario that **Custom: Install Windows only (Advanced)** is selected in this step.
8. In the “Where do you want to install Windows?” window, choose the storage device to install the operating system, and then click **New**.
9. Type the amount of space, and then click **Apply**.
10. In the Windows Setup window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server restarts several times during the installation.
12. In Settings window, type your password and click **Finish**.
13. Follow the instructions on the screen to log in to the operating system when prompted.

Installing the Windows Server SAC

To install the Windows Server operating system, see “Installing the Windows Server SAC” on page 10.

Installing the Hyper-V Server 2012 operating system

This topic provides instructions on how to install the Hyper-V Server 2012 operating system.

To install the Hyper-V Server 2012 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from CD or DVD...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
3. When the "Microsoft Hyper-V Server 2012" window is displayed, configure the language and other options you need and then click **Next**.
4. Click **Install now**.
5. Read the license terms and select **I accept the license terms**. Then click **Next**.
6. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install the newer version of Hyper-V Server only (advanced)** is selected in this step.
7. In the "Where do you want to install Windows?" window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **ADD on RAID** and **OB RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the "Select the driver to be installed" window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 8.
8. In the "Where do you want to install Hyper-V Server?" window, click **Drive options (advanced)**.
9. Choose the storage device to install the operating system, and then click **New**.
10. Type the amount of space (in MB), and then click **Apply**.
11. In the Install Microsoft Hyper-V Server Setup window, click **OK**.
12. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Note: Your server will restart several times during the installation.
13. When the "Press Ctrl+Alt+Delete to sign in" window prompts, press Ctrl+Alt+Delete.
14. Click **Administrator**. Follow the instructions on the screen to change the password and then log in to the operating system.

Installing the Hyper-V Server 2012 R2 operating system

This topic provides instructions on how to install the Hyper-V Server 2012 R2 operating system.

To install the Hyper-V Server 2012 R2 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from cd or dvd...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.

3. When the “Microsoft Hyper-V Server 2012 R2” window is displayed, configure the language and other options you need and then click **Next**.
4. Click **Install now**.
5. Read the license terms and select **I accept the license terms**. Then click **Next**.
6. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install the newer version of Hyper-V Server only (advanced)** is selected in this step.
7. In the “Where do you want to install Hyper-V Server?” window, depending on the SATA configuration on your server, do one of the following:
   - If your SATA configuration is set as **RAID** (both **ADD on RAID** and **OB RAID**): do the following:
     a. Connect the USB storage device that contains the driver to your server and click **Load Driver**.
     b. Click **Browse** to locate the required driver and then click **OK**.
     c. In the “Select the driver to be installed” window, select **Hide drivers that are not compatible with hardware on this computer**. Select the driver that you want to install, and then click **Next** to install the driver.
   - If your SATA configuration is set as **AHCI**: go to step 8..
8. In the “Where do you want to install Hyper-V Server?” window, select the hard disk drive on which you want to install the operating system, and then click **New**.
9. Type the amount of space (in MB), and then click **Apply**.
10. In the “Microsoft Hyper-V Server Setup” window, click **OK**.
11. Ensure that the drive partition is correct, and then click **Next**. The installation begins.

    Note: Your server will restart several times during the installation.
12. When the message displays as “The user’s password must be changed before signing in.”, click **OK**.
13. In the Administrator window, follow the instructions on the screen to change the password and then click **OK** to log in to the operating system.

Installing the Hyper-V Server 2016 operating system

This topic provides instructions on how to install the Hyper-V Server 2016 operating system.

To install the Hyper-V Server 2016 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. When the message `Press any key to boot from CD or DVD...` is displayed, press any key. If the message `Windows Setup [EMS Enabled]` is displayed, press Enter.
3. The message `Loading files...` will be displayed. Wait several minutes for the system to load the files.
4. When the “Microsoft Hyper-V Server 2016” window is displayed, select the language and other options you need and then click **Next**.
5. Click **Install now**.
6. Read the applicable notices and license terms and select **I accept the license terms**. Then click **Next**.
7. Select the type of installation you need. The following steps are based on the scenario that **Custom: Install the newer version of Hyper-V Server only (advanced)** is selected in this step.
8. In the “Where do you want to install Hyper-V Server?” window, choose the storage device to install the operating system, and then click **New**.
9. Type the amount of space, and then click **Apply**.
10. In the “Microsoft Hyper-V Server Setup” window, click **OK**.

11. Ensure that the drive partition is correct, and then click **Next**. The installation begins. Your server will restart several times during the installation.
12. When the message `The user's password must be changed before signing` is displayed, click **OK**.
13. When the Administrator window is displayed, follow the instructions on the screen to change the password.
14. When the message `Your password has been changed` is displayed, click **OK** to log in to the operating system.

Installing the SUSE Linux Enterprise Server 11 operating system with Service Pack 4

This topic provides instructions on installing the SUSE Linux Enterprise Server 11 operating system with Service Pack 4.

Note: During the installation, ensure that the boot partition (/boot) is within the first 1 TB of the hard disk drive.

To install the SUSE Linux Enterprise Server 11 operating system with Service Pack 4, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the "SUSE Linux Enterprise Server Welcome" window, select **Installation** and then press Enter.
3. In the Welcome window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
4. In the Media Check window, click **Next** to go ahead.
5. In the Installation Mode window, select **New Installation** and then click **Next**.
6. Verify your region and time zone, and then click **Accept → Next**.
7. In the Server Base Scenario window, select **Physical Machine(Also for Fully Virtualized Guests)** and then click **Next**.
8. When the Installation Settings window is displayed, create a drive partition you need.
   - Manually create a root partition (/)

     To create a root partition, do the following:

     a. Click **Partitioning** and select **Custom Partition (for experts)**. Click **Next**.
     b. In the Expert Partitioner window, select **Hard Disks**, and then click **Add**.
     c. In the New Partitions Size window, select **Custom Size**.
     d. Type the amount of space (in MB) in the **Custom Size** field and then click **Next**.
     e. In the **Formatting partition** area, select **Ext3** from the **File system** drop-down list box.
     f. In the **Mounting partition** area, select the forward slash **(/)** from the **Mount Point** drop-down list box.
     g. Click **Finish**.
   - Manually create a boot partition (/boot)

     To create a boot partition, do the following:

     a. In the Expert Partitioner window, select **Hard Disks**, and then click **Add**.
     b. In the New Partitions Size window, select **Custom Size**.
     c. Type the amount of space (in MB) in the **Custom Size** field and then click **Next**.
     d. In the **Formatting Options** area, select **Ex3** from the **File System** drop-down list box.

e. In the **Mounting partition** area, select **/boot** from the **Mount Point** drop-down list box.

f. Click **Finish**.

- Manually create a swap partition

  To create a swap partition, do the following:

  a. In the Expert Partitioner window, select **Hard Disks**, and then click **Add**.

  b. In the New Partitions Type, select **Primary Partition**.

  c. In the New Partitions Size window, select **Custom Size**.

  d. Type the amount of space (in MB) in the **Custom Size** field.

  e. In the **Formatting Options** area, select **Swap** from the **File system** drop-down list box.

  f. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.

  g. Click **Finish**.

Go to the Expert Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Accept**. The drive partition is finished.

9. In the Installation Settings window, click **Software** to select your desired software programs, and then click **OK**. If the YaST window is displayed, click **Accept**.
10. Click **Install** to install the software programs that you have selected.

    Notes:

    - If a Warning window is displayed, select the option you desired. The following steps are based on the scenario that **Ignore this conflict of ...** is selected. Do the following:

      a. Click **OK-TryAgain**.

      b. In the YaST window, click **Accept**.

      c. In the Installation Settings window, click **Install** to begin the installation.

    - If the YaST2 window is displayed, click **Install** to begin the installation.
11. When the Confirm Installation window is displayed, click **Install**. When the installation process is completed, the server will restart automatically.
12. The setup process continues after the server restarts. Set your root user password. Then, select **Next**. When the YaST2 window is displayed, click **Yes**.

    Note: The password is optional and must contain at least six characters and consist of upper case letters, lower case letters, and numbers.
13. Set your host name and domain name in the Hostname and Domain Name window. Then click **Next**.
14. Configure your network in the Network Configuration window. Then click **Next**.

    Note: If the Test Internet Connection window is displayed, configure the settings you need. Then click **Next**.
15. In the Network Services Configuration window, click **Next**.
16. In the User Authentication Method window, configure the settings you need. Then click **Next**.
17. In the New LDAP User window, configure the settings you need. Then click **Next → Yes**.
18. In the Release Notes window, click **Next**.
19. In the Hardware Configuration window, click **Next**.
20. In the Installation Completed window, click **Finish**.

    Note: If the YaST2 window is displayed, click **Continue**.

21. Follow the instructions on the screen to log in to the operating system.

Installing the SUSE Linux Enterprise Server 12.1 operating system

This topic provides instructions on how to install the SUSE Linux Enterprise Server 12.1 (x64) operating system.

To install the SUSE Linux Enterprise Server 12.1 (x64) operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Language, Keyboard and License Agreement window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
3. In the Registration window, configure the information as prompted and click **Next**. The following steps are based on the scenario that **Skip Registration** is selected in this step.
4. In the Add On Product window, select add-ons to be installed and click **Next**. The following steps are based on the scenario that default options are selected in this step.
5. In the Suggested Partitioning window, use the suggested partitioning method and click **Next**. If you want to create a drive partition, do one of the following:
   - Manually create a root partition (/)
     a. Click **Create Partition Setup** and select **Custom Partitioning (for experts)**. Click **Next**.
     b. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     c. In the New Partition Type window, select **Primary Partition**.
     d. In the New Partitions Size window, select **Custom Size**.
     e. Type the amount of space (for example, 80 GB) in the **Size** field and then click **Next**.
     f. Select **Operating System** from **Role**.
     g. In the **Formatting Options** area, select **BtrFS** from the **File system** drop-down list box.
     h. In the **Mount partition** area, select the forward slash (**/**) from the **Mount Point** drop-down list box.
     i. Click **Finish**.
   - Manually create a boot partition (/boot)
     a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     b. In the New Partition Type window, select **Primary Partition**.
     c. In the New Partitions Size window, select **Custom Size**.
     d. Type the amount of space (for example, 2 GB) in the **Size** field and then click **Next**.
     e. Select **Operating System** from **Role**.
     f. In the **Formatting Options** area, select **Ext4** from the **File System** drop-down list box.
     g. In the **Mounting partition** area, select **/boot** from the **Mount Point** drop-down list box.
     h. Click **Finish**.
   - Manually create a swap partition
     a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the drive (for example, **sda**) for installing the operating system and click **Add**.
     b. In the New Partition Type window, select **Primary Partition**.
     c. In the New Partitions Size window, select **Custom Size**.

d. Type the amount of space (for example, 2 GB) in the **Size** field.

e. Select **Swap** from **Role** and click **Next**.

f. In the **Format partition** area, select **Swap** from the **File system** drop-down list box.

g. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.

h. Click **Finish**.

Go to the Expert Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Accept**. Then, click **Next**.

6. In the Clock and Time Zone window, set the time zone and time and click **Next**.

   For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to the local time. If "Do you want to continue with your selection (local time)?" is displayed, click **Continue**.

7. In the Create New User window, set a user name and password, and then click **Next**.

   Note: If the "Really use this password?" window is displayed, change the password according to your need or click **Yes** to keep the current password.

8. In the "Password for the System Administrator–root" window, set a root password and click **Next**.

   Note: If the "Really use this password?" window is displayed, change the password according to your need or click **Yes** to keep the current password.

9. In the Installation Settings window, click **Software** to select software applications to be installed.

   For example, if you want to install all software, do the following:

   a. Click **Software**.

   b. In the Software Selection and System Tasks window, right-click any software application and choose **All in This List-Install**.

   c. Click **OK → Install**. If the Confirm Installation window is displayed, click **Install**.

10. The system will restart after the installation is finished.

Installing the SUSE Linux Enterprise Server 12.2 operating system

This topic provides instructions on how to install the SUSE Linux Enterprise Server 12.2 operating system.

To install the SUSE Linux Enterprise Server 12.2 operating system (x64), do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. Select **Installation** and configure the network settings. The following steps are based on the scenario that **No** is selected in this step.
3. Click **OK**. In the "Language, Keyboard and License Agreement" window, select your language and keyboard layout and then select **I Agree to the License Terms**. Click **Next**.
4. In the Registration window, configure the information as prompted and click **Next**. The following steps are based on the scenario that **Skip Registration** is selected in this step. Select **OK** in the Warning window.
5. In the Add On Product window, select add-ons to be installed and click **Next**. The following steps are based on the scenario that default options are selected in this step.
6. In the Suggested Partitioning window, use the suggested partitioning method and click **Next**. If you want to create a drive partition, do one of the following:

   - Manually create a root partition (/)

a. Click **Create Partition Setup** and select **Custom Partitioning (for experts)**. Click **Next**.
b. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the disk (for example, **sda**) for installing the operating system and click **Add**. Select the default partition type, then click **Next**.
c. In the New Partitions Size window, select **Custom Size**.
d. Type the amount of space (for example, 80 GB) in the **Custom Size** field and then click **Next**.
e. Select **Operating System** from **Role** and click **Next**.
f. In the **Formatting Options** area, select **BtrFS** from the **File system** drop-down list box.
g. In the **Mount partition** area, select the forward slash **(/)** from the **Mount Point** drop-down list box.
h. Click **Finish**.

- Manually create a boot partition (/boot)
  a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the disk (for example, **sda**) for installing the operating system and click **Add**. Select the default partition type, then click **Next**.
  b. In the New Partitions Size window, select **Custom Size**.
  c. Type the amount of space (for example, 2 GB) in the **Custom Size** field and then click **Next**.
  d. Select **Operating System** from **Role** and click **Next**.
  e. In the **Formatting Options** area, select **Ext4** from the **File System** drop-down list box.
  f. In the **Mounting partition** area, select **/boot** from the **Mount Point** drop-down list box.
  g. Click **Finish**.
- Manually create a swap partition
  a. In the Expert Partitioner window, select **Hard Disks** from **System view**. Then select the disk (for example, **sda**) for installing the operating system and click **Add**. Select the default partition type, then click **Next**.
  b. In the New Partitions Size window, select **Custom Size**.
  c. Type the amount of space (for example, 2 GB) in the **Custom Size** field.
  d. Select **Swap** from **Role** and click **Next**.
  e. In the **Format partition** area, select **Swap** from the **File system** drop-down list box.
  f. In the **Mount partition** area, select **Swap** from the **Mount Point** drop-down list box.
  g. Click **Finish**.

  Go to the Expert Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Accept**. Then, click **Next**.

7. In the Clock and Time Zone window, set the time zone and time and click **Next**.

   For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to local time. If “Do you want to continue with your selection (local time)?” is displayed, click **Continue**.

8. In the Create New User window, set a user name and password, and then click **Next**.

   Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

9. In the “Password for the System Administrator–root” window, set a root password and click **Next**.

   Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.

10. In the Installation Settings window, click **Software** to select software applications to be installed.

    For example, if you want to install all software, do the following:

    a. Click **Software**.

    b. In the Software Selection and System Tasks window, select any software application and then right-click. Choose **All in This List-Install**.

    c. Click **OK → Install**. If the Confirm Installation window is displayed, click **Install**.

Installing the SUSE Linux Enterprise Server 12.3 operating system

To install the SUSE Linux Enterprise Server 12.3 operating system (x64), see “Installing the SUSE Linux Enterprise Server 12.3 operating system” on page 18.

Installing the SUSE Linux Enterprise Server 15 operating system

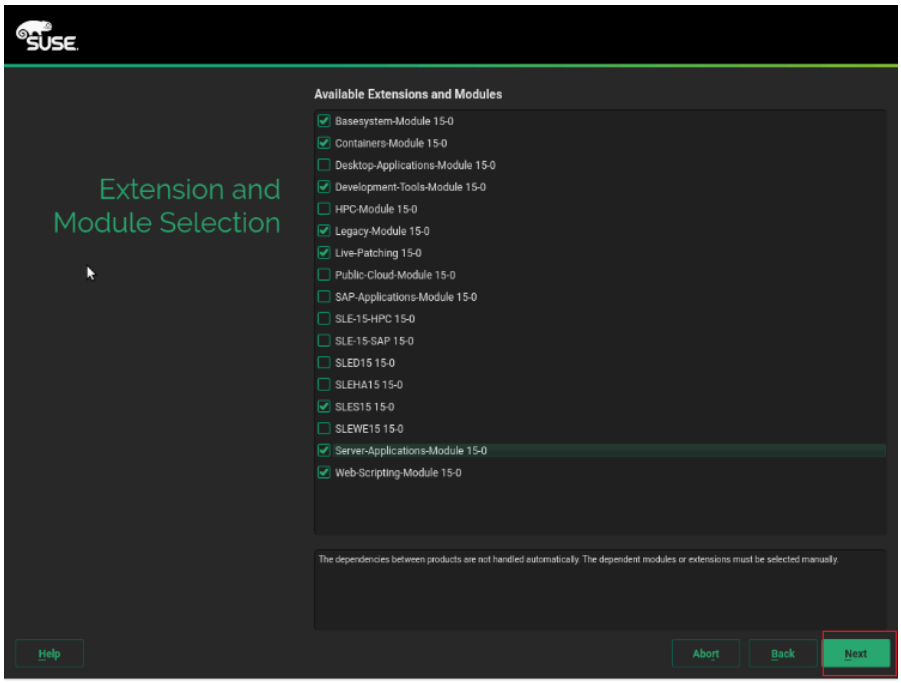
This topic provides instructions on installing the SUSE Linux Enterprise Server 15 operating system (x64).

Note: SUSE Linux Enterprise Server 15 operating system (x64) includes two ISO image files: the SUSE Linux Enterprise Server 15 Installer image file and the SUSE Linux Enterprise Server 15 Packages image file. Select the SUSE Linux Enterprise Server 15 Installer image file if not installing any modules, and select the SUSE Linux Enterprise Server 15 Packages image file if installing modules. Select either image file in the Pre-boot Execution Environment (PXE) based on your needs.

To install the SUSE Linux Enterprise Server 15 operating system (x64), do the following:

1. Insert the SUSE Linux Enterprise Server 15 Installer disc into one optical drive, insert the SUSE Linux Enterprise Server 15 Packages disc into the other optical drive, and start the server from the optical drive.
2. When the SUSE Welcome window is displayed, select **Installation**. When the Initializing window is displayed, click **OK**.
3. In the “Language, Keyboard and Product Selection” window, select your language and keyboard layout, and select **SUSE Linux Enterprise Server 15**. Click **Next**.
4. In the “SUSE LINUX Enterprise Server 15 License Agreement” window, select **I Agree to the License Terms**, and then click **Next**. The following steps are based on the scenario that default options are selected in this step.
5. In the Registration window, click **Network Configuration** on the top right corner to configure the network, and then click **Next** to return to the Registration window.
6. In the Registration window, fill in the information according to the prompt. The following steps are based on the scenario that **Skip Registration** is selected in this step. Click **OK → Next** when the Warning window is displayed.
7. In the Add On Product window, select **DVD**, and then click **Next**.
8. In the “Insert the add-on product DVD” window, select the optical drive that contains the SUSE Linux Enterprise Server 15 Packages disc, and then click **Continue**.
9. In the “Extension and Module Selection” window, select the modules to be installed based on your needs, and then click **Next**. The following steps are based on the scenario that the following modules are selected in this step.

    Note: When selecting some modules, if the SLEHA15 15-0 License Agreement window is displayed, select **I Agree to the License Terms**, and then click **Next**.



10. In the Add On Product Installation window, ensure that the modules selected are correct, and then click **Next**.
11. In the System Role window, select **Default System**, and then click **Next**.
12. In the Suggested Partitioning window, use the suggested partitioning method, and then click **Next**. If you want to customize drive partitions, use the Expert Partitioner by doing the following:
    - Manually create a BIOS Boot Partition:
        a. In the Suggested Partitioning window, click **Expert Partitioner**, and then select **Start with Current Proposal**.
        b. In the Expert Partitioner window, click **System view**, and select **Hard Disks**. Select the disk (for example, **sda**) for installing the operating system, and then click **Add**.
        c. In the New Partitions Size window, select **Custom Size**.
        d. Type the amount of space (for example, 8 MB) in the **Size** field, and then click **Next**.
        e. Click **Role**, select **Operating System**, and then click **Next**.
        f. In the Formatting Options window, select **Do not format device**.
        g. Click **Partition ID**, select **BIOS Boot Partition**, and then click **Next**.
    - Manually create a root partition (/) or a home partition (/home):
        a. In the Expert Partitioner window, click **System view**, and select **Hard Disks**. Select the disk (for example, **sda**) for installing the operating system, and then click **Add Partition**.
        b. In the New Partitions Size window, select **Custom Size**.
        c. Type the amount of space (for example, 50 GB for root partition, and 100 GB for home partition) in the **Size** field, and then click **Next**.
        d. Click **Role**, select **Operating System**.
        e. In the Formatting Options window, click **Format device**, and then select **BtrFS** from the **Filesystem** drop-down list box.
        f. Click **Mount Options**, select **/** or select **/home** from the **Mount Point** drop-down list box, and then click **Next**.

- Manually create a swap partition:
  a. In the Expert Partitioner window, click **System view**, and select **Hard Disks**. Select the disk (for example, **sda**) for installing the operating system, and then click **Add Partition**.
  b. In the New Partitions Size window, select **Custom Size**.
  c. Type the amount of space (for example, 2 GB) in the **Size** field, and then click **Next**.
  d. Click **Role**, select **Swap**, and then click **Next**.
  e. Click **Format options**, select **Swap** from the **File system** drop-down list box.
  f. Click **Mount partition**, select **Swap** from the **Mount Point** drop-down list box.
  g. Click **Next**.

  Go to the Expert Partitioner window. The created swap partition and root partition are displayed in the window. Ensure that the created partitions are correct and click **Accept**.

13. In the Suggested Partitioning window, click **Next**.
14. In the Clock and Time Zone window, set the time zone and time and click **Next**.

    For example, set **Region** to **Asia** and set **TimeZone** to **Beijing**. Clear the **Hardware Clock Set to UTC** check box and set the time to local time. If the “Do you want to continue with your selection (local time)?” window is displayed, click **Continue**.
15. In the Local Users window, set a user name and password, and then click **Next**.

    Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.
16. In the “Password for the System Administrator root” window, set a root password and click **Next**.

    Note: If the “Really use this password?” window is displayed, change the password according to your need or click **Yes** to keep the current password.
17. In the Installation Settings window, click **Software** to select software applications to be installed.

    For example, if you want to install all software, do the following:
    a. Click **Software**.
    b. In the Software Selection and System Tasks window, select any software application and then right-click. Select **All in This List → Install**, and then click **OK**.
    c. In the Installation Settings window, click **Install**.

       Note: If the Confirm Installation window is displayed, click **Install**.
    d. In the “The system will reboot now” window, click **OK** or wait for the server to restart.

Installing the Red Hat Enterprise Linux 6.7 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 6.7 operating system.

To install the Red Hat Enterprise Linux 6.7 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the “RedHat Enterprise Linux 6.7 Welcome” window, select **Install or upgrade an existing system** in multiple options and press Enter.
3. When the Disk Found window is displayed, select **Skip** and then press Enter.
4. In the RED HAT window, click **Next**.
5. Select the language that you want to use during the installation process and click **Next**.

6. Select the appropriate keyboard layout for the system and click **Next**.
7. Select the type of devices that are involved in the installation, and then click **Next**.

   Note: If the Storage Device Warning window is displayed, click **Yes, discard any data**. If the message displays as “At least one existing installation has been detected on your system. What would you like to do?”, select the option you desired and then click **Next**.
8. Type a name for your server. Then, click **Next**.
9. Specify your time zone by selecting the nearest city in your time zone. Then click **Next**.
10. Personalize the server by typing the root password for the root user account. Then click **Next**.

    Note: If a message prompts you that the password is weak, click **Use Anyway**.
11. In the Which type of the installation would you like window, select your desired option. The following steps are based on the scenario that **Create Custom Layout** is selected in this step.
12. In the Please Select A Device window, do one of the following to create a partition and then click **Next**.
    - Manually create a root partition (/)

      To create a root partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select the forward slash **(/)** from the **Mount Point** drop-down list box.
      d. Select **Ext4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a boot partition (/boot/efi)

      To create a boot partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **/boot** from the **Mount Point** drop-down list box.
      d. Select **Ex4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a swap partition

      To create a swap partition, do the following:
      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **swap** from the **File System Type** drop-down list box.
      d. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      e. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

    Go back to the Partitioner window. The created root partition, boot partition, or swap partition is displayed in the window. Ensure that the created partition is correct and click **Next**. The drive partition is finished.
13. In the Format Warnings window, click **Format** to format the hard disk drive.

14. In the “Writing storage configuration to disk” window, click **Write changes to disk**.
15. In the “Boot loader operating system list” window, click **Next**.
16. The default installation is a basic server installation. You can customize your server by selecting a different set of software from the software list or adding additional repositories that you want to use for the software installation. Select **Customize now**. Then click **Next**. The installation process begins.

    Note: When a warning window is displayed, select the option of your choice and then continue with the installation.
17. After the installation is completed, click **Reboot** to restart your server.
18. The installation continues after the server restarts. In the Welcome window, click **Forward**.
19. In the License Information window, select **Yes, I agree to the License Agreement**, and then click **Forward**.
20. In the Set Up Software Updates window, configure the settings you need, and then click **Forward**. If the “Are you sure?” window is displayed, click **Register Later**.
21. In the Finish Updates Setup window, click **Forward**.
22. Set your user name and password and then click **Forward**.
23. Set your time and date and then click **Forward**.
24. In the Kdump window, select **Enable kdump** if you want to enable kdump, and then click **Finish** to complete the installation.

    Note: When prompted to restart the server, click **Yes** or **OK**.
25. Follow the instructions on the screen to log in to the operating system.

Installing the Red Hat Enterprise Linux 6.8 operating system

This topic provides instructions on how to install Red Hat Enterprise Linux 6.8 (x64 or x86) operating system

To install the Red Hat Enterprise Linux 6.8 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive.
2. In the Disk Found window, click **Skip**.

   Note: If the operating system is installed on the SAN card through iSCSI, the Networking Device window is displayed. Select the desired **Ethernet device**, and then click **OK**. In the Configure TCP/IP window, select the option according to the network environment. The following steps are based on the scenario that **Enable Ipv4 support->Dynamic IP configuration (DHCP)** is selected.
3. In the RED HAT window, click **Next**.
4. Select the language that you want to use during the installation process and click **Next**.
5. Select the appropriate keyboard layout for the system and click **Next**.
6. Select the type of devices that are involved in the installation, and then click **Next**.

   Note: If the Storage Device Warning window is displayed, click **Yes, discard any data**. If the message displays as “At least one existing installation has been detected on your system. What would you like to do?”, select the option as you desired and then click **Next**.
7. Type a name for your server. Then click **Next**.
8. Specify your time zone by selecting the nearest city in your time zone. Then click **Next**.
9. Personalize the server by typing the root password for the root user account. Then click **Next**.

Note: If a message prompts you that the password is weak, click **Use Anyway**.

10. In the “Which type of the installation would you like?” window, select your desired option. The following steps are based on the scenario that **Create Custom Layout** is selected in this step and click **Next**.
11. In the Please Select A Device window, do one of the following to create a partition and then click **Next**.
    - Manually create a root partition (**/**)

      To create a root partition, do the following:

      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select the forward slash **(/)** from the **Mount Point** drop-down list box.
      d. Select **ext4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a boot partition (**/boot**)

      To create a boot partition, do the following:

      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **/boot** from the **Mount Point** drop-down list box.
      d. Select **ext4** from the **File System Type** drop-down list box.
      e. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      f. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.
    - Manually create a swap partition

      To create a swap partition, do the following:

      a. Click **Create**. The Create Storage window is displayed.
      b. Select **Standard Partition** and then click **Create**.
      c. In the Add Partition window, select **swap** from the **File System Type** drop-down list box.
      d. In the Allowable Drives window, select the hard disk drive on which you want to install the operating system.
      e. Type the amount of space (in MB) in the New Partitions Size window and then click **OK**.

    Go back to the Partitioner window. Ensure that the created root partition, boot partition, and swap partition are correct. Click **Next**.
12. If the Format Warnings window is displayed, click **Format** to format the hard disk drive.
13. In the “Writing storage configuration to disk” window, click **Write changes to disk**.
14. In the “Boot loader operating system list” window, click **Next**.
15. The default installation is a basic server installation. You can customize your server by selecting a different set of software from the software list or adding additional repositories that you want to use for the software installation. Select **Customize now**. Then, click **Next**. The installation process begins.

    Note: If a warning window is displayed, select the option of your choice and then continue with the installation.
16. After the installation is completed, click **Reboot** to restart your server.
17. The installation continues after the server restarts. In the Welcome window, click **Forward**.

18. In the License Information window, select **Yes, I agree to the License Agreement**, and then click **Forward**.
19. In the Set Up Software Updates window, configure the settings you need, and then click **Forward**. If the message “Are you sure?” is displayed, click **Register later**.
20. In the Finish Updates Setup window, click **Forward**.
21. Set your user name and password and then click **Forward**.
22. Set your time and date and then click **Forward**.
23. In the Kdump window, select **Enable kdump** if you want to enable kdump, and then click **Finish** to complete the installation.

    Note: When prompted to restart the server, click **Continue** or **Yes**.
24. Follow the instructions on the screen to log in to the operating system.

Installing the Red Hat Enterprise Linux 6.9 operating system

To install the Red Hat Enterprise Linux 6.9 (x64) operating system, see “Installing the Red Hat Enterprise Linux 6.9 operating system” on page 26.

Installing the Red Hat Enterprise Linux 6.10 operating system

To install the Red Hat Enterprise Linux 6.10 (x64) operating system, see “Installing the Red Hat Enterprise Linux 6.10 operating system” on page 27.

Installing the Red Hat Enterprise Linux 7.2 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.2 (x64) operating system.

To install the Red Hat Enterprise Linux 7.2 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.2** and press Enter.
3. When “What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.
4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.
5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a hard disk drive from **Local Standard Disks** for installing the operating system, and click **Done**.

   Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

   - Manually create a root partition (/)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select forward slash (**/**) from the **Mount Point** drop-down list.

c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
d. Click **Add mount point**.

- Manually create a boot partition (/boot)
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select **/boot** from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.
- Manually create a swap partition
  a. In the Manual Partitioning window, click **+** in the bottom left corner.
  b. In the Add a New Mount Point window, select **swap** from the **Mount Point** drop-down list.
  c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
  d. Click **Add mount point**.

Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.

8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. In the Configuration window, click **Root Password** to set the root password.
10. When file copying is completed, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.
14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Time Zone window, set the time zone and click **Next**.
17. In the About You window, set the user name and click **Next**.
18. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.
19. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the Red Hat Enterprise Linux 7.3 operating system

This topic provides instructions on installing the Red Hat Enterprise Linux 7.3 (x64) operating system.

To install the Red Hat Enterprise Linux 7.3 operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device, and start the server from the optical drive.
2. In the Welcome window, select **Install RedHat Enterprise Linux 7.3** and press Enter.
3. When “What language would you like to ...” is displayed, select a required language (for example, English) and click **Continue**.
4. In the Installation Summary window, set **Date&Time**, **Language Support**, **Keyboard**, **Security Policy**, and **Installation Source**. The following steps are based on the scenario that the default settings are used in this step.

5. In the Installation Summary window, click **Software Selection** and select software packages to be installed. The following steps are based on the scenario that **Server with GUI** is selected and all items in the right pane are selected. Then click **Done**.
6. In the Installation Summary window, click **Installation Destination**.
7. In the Installation Destination window, select a storage device from **Local Standard Disks** for installing the operating system, and click **Done**.

   Notes: If you want to create a drive partition, select **I will configure partitioning** and click **Done**. In the Manual Partitioning window, do one of the following to create a required drive partition:

   - Manually create a root partition (/)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select forward slash (**/**) from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 80 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
   - Manually create a boot partition (/boot)
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **/boot** from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.
   - Manually create a swap partition
     a. In the Manual Partitioning window, click **+** in the bottom left corner.
     b. In the Add a New Mount Point window, select **swap** from the **Mount Point** drop-down list.
     c. Type the amount of space (for example, 2 GB) in the **Desired Capacity** field.
     d. Click **Add mount point**.

   Verify that the created drive partition is correct and click **Done**. In the Summary of Changes window, click **Accept Changes**.
8. In the Installation Summary window, click **Begin Installation** to start installing the operating system.
9. In the Configuration window, click **Root Password** to set the root password.
10. When file copying is completed, click **Reboot**.
11. In the Initial Setup window, click **License Information**.
12. Select **I accept the license agreement** and click **Done**.
13. In the Initial Setup window, click **Finish Configuration**.
14. In the Welcome window, select a required language (for example, English) and click **Next**.
15. In the Typing window, select a specific language type (for example, English US) and click **Next**.
16. In the Time Zone window, set the time zone and click **Next**.
17. In the About You window, set the user name and click **Next**.
18. In the Password window, set the password and click **Next**.

    Note: The password is optional. Click **Next** if you do not want to set a password.
19. In the Ready to Go window, click **Start using Red Hat Enterprise Linux Server**.

    Note: By default, the local account is used to log in to the operating system for the first time. Log out and use the root account to log in to the operating system again.

Installing the Red Hat Enterprise Linux 7.4 operating system

To install the Red Hat Enterprise Linux 7.4 (x64) operating system, see “Installing the Red Hat Enterprise Linux 7.4 operating system” on page 31.

Installing the Red Hat Enterprise Linux 7.5 operating system

To install the Red Hat Enterprise Linux 7.5 (x64) operating system, see “Installing the Red Hat Enterprise Linux 7.5 operating system” on page 33.

Installing the Red Hat Enterprise Linux 7.6 operating system

To install the Red Hat Enterprise Linux 7.6 (x64) operating system, see “Installing the Red Hat Enterprise Linux 7.6 operating system” on page 34.

Installing the VMware hypervisor

This topic provides instructions on how to install the following operating systems:

- VMware ESXi 5.5 p07
- VMware ESXi 6.0 p02
- VMware ESXi 6.0 Update 2
- VMware ESXi 6.0 Update 3
- VMware ESXi 6.5
- VMware ESXi 6.5a
- VMware ESXi 6.5 Update 1
- VMware ESXi 6.5 Update 2
- VMware ESXi 6.7

Note: If the operating system is to be installed on SAN, download the instructional file *How to Create a Customized VMWare ESXi ISO Image* from http://support.lenovo.com/us/en/products/servers/thinkserver-rack-servers/thinkserver-rd650/documents/HT100820?tabName=Solutions. Then, follow the instructions to prepare the ISO file.

To install the VMware ESXi operating system, do the following:

1. Insert the operating system installation disc into the optical drive that you have set as the first startup device. Then, start the server from the optical drive. Wait several minutes for the system to load the files.
2. When the “Welcome to the VMware ESXi ... Installation” window is displayed, press Enter.
3. When the “End User License Agreement (EULA)” window is displayed, press F11.
4. When the “Select a Disk to Install or Upgrade” window is displayed, press Enter.
5. Select a keyboard layout and then press Enter.
6. Set the root password and then press Enter.

   Notes:

   - For VMware ESXi 5.1 P5, the password must contain at least seven characters. If you do not want to set the password, press Enter.
   - For VMware ESXi 6.7, the password must contain at least seven characters with numbers, upper-case and lower-case letters, and symbols.

7. When the Confirm Install window is displayed, press F11. The installation process starts.
8. When the Installation Complete window is displayed, press Enter. The server restarts. The operating system is installed successfully.

Chapter 4. Installing drivers

This chapter provides information about installing drivers for different operating systems.

Note: Follow the instructions on the screen to restart your server.

Installing drivers for Windows operating systems

This topic provides instructions on installing the following drivers for Windows operating systems:

- "Installing the driver for the chipset" on page 63
- "Installing the driver for an onboard graphics card" on page 63
- "Installing the driver for the Intel Ethernet card" on page 64
- "Installing the driver for USB 3.0" on page 64

Installing the driver for the chipset

To install the driver for the chipset, do the following:

1. Download the driver for the chipset from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at:
   http://www.lenovo.com/drivers
2. Copy the folder that contains the driver to your USB storage device and connect the USB storage device to your server.
3. Open the folder that contains the driver and double-click the setup file. The Welcome to the Setup Program window will be displayed.

   Note: If Windows 10 is installed, click **Yes** in the User account control window.
4. Click **Next**. The License Agreement window is displayed.
5. Click **Accept**. The Readme File Information window is displayed.
6. Click **Install**. The Intel® Chipset Device Software Completion window is displayed.
7. Click **Restart Now**. The installation is completed.

Installing the driver for an onboard graphics card

Note: For Windows Server 2012/2012 R2 operating systems, the driver for the onboard graphics card has been installed during the operating system installation for machine types 70UA, 70UB, 70UC, and 70UD.

To install the driver for an onboard graphics card, do the following:

1. Download the driver for an onboard graphics card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at:
   http://www.lenovo.com/drivers
2. Copy the folder that contains the driver to your USB storage device and connect the USB storage device to your server.
3. Open the folder that contains the driver and double-click the Setup file.

   Note: If Windows 10 is installed, click **Yes** in the window.
4. In the NVIDA software license agreement window, click **Agree and Continue**.

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5. In the installation options window, select the option of your choice and then click **Next** .
6. In the NVIDA installer has finished window, click **Close** to finish the installation. It is recommended to restart your server after the installation is completed.

Installing the driver for the Intel Ethernet card

To install the driver for an Ethernet card, do the following:

1. Download the driver for the Ethernet card or a CNA card from the Lenovo Web site to your server. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available on the Lenovo Web site at:
   http://www.lenovo.com/drivers
2. Copy the driver for the Ethernet card to a USB storage device. Connect the USB storage device to your server.
3. Open the folder that contains the driver and double-click the Setup file.

   Note: If Windows 10 is installed, click **Yes** in the window.
4. In the Intel Network Connections window, select **Install Drivers and Software**.
5. In the Welcome to the install wizard for Intel Network Connections window, click **Next**.
6. In the License Agreement window, select **I agree the terms in the license agreement**. Then click **Next**.
7. In the Setup Options window, click **Next**.
8. In the Ready to Install the Program window, click **Install** to begin the installation.
9. In the Install wizard Completed window, click **Finish**. It is recommended to restart your server after the installation is completed.

Installing the driver for USB 3.0

For the Windows operating system, the driver for USB 3.0 is installed during the operating system installation.

Installing the driver for the SATA AHCI

To install the driver for the SATA AHCI, do the following:

1. Download the driver for the SATA AHCI from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at:
   http://www.lenovo.com/drivers
2. Copy the folder that contains the driver to your USB storage device and connect the USB storage device to your server.
3. Open the Device Manager window. Under the IDE ATA/ATAPI controller, right-click on the SATA AHCI Controller that requires drivers, and then select **Update Driver Software...**.
4. In the Update Driver Software window, click **Browse my computer for driver software**.
5. In the Browse for driver software on your computer window, click **Browse...** to locate the driver you want to install.
6. Click **OK → Next**.

   Note: If the **Windows Security** dialogue box is displayed, select the option to trust the software and click **Install**.
7. When the Windows has successfully updated your driver software window is displayed, click **Close**.

Installing drivers for Hyper-V operating systems

This topic provides instructions on installing the following drivers for Hyper-V operating systems:

- “Installing the driver for the chipset” on page 65
- “Installing drivers for an onboard graphics card” on page 65
- “Installing the driver for the Intel Ethernet card” on page 65

Installing the driver for the chipset

To install the driver for the chipset, do the following:

1. Download the driver for the chipset from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at:
   http://www.lenovo.com/drivers
2. Copy the folder that contains the driver to your USB storage device and connect the USB storage device to your server.
3. Enter the driver directory by using the command prompt to start the setup program.
4. In the Welcome to the Setup Program window, click **Next**.
5. In the License Agreement window, click **Accept**.
6. The Readme File Information window, click **Install**.
7. In the Intel® Chipset Device Software Completion window, click **Restart Now** to finish installation.

Installing drivers for an onboard graphics card

To install the driver for an onboard graphics card, do the following:

1. Download the driver for an onboard graphics card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at:
   http://www.lenovo.com/drivers.
2. Copy the driver to a USB storage device and then connect the USB storage device to your server.
3. Enter the driver directory by using the command prompt to start the setup program.
4. Finish the driver installation according to the Install Wizard.
5. Restart your server after the installation is completed.

Installing the driver for the Intel Ethernet card

To install the driver for an Ethernet card, do the following:

1. Download the driver for the Ethernet card from the Lenovo Web site to your server. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available on the Lenovo Web site at:
   http://www.lenovo.com/drivers
2. Copy the driver for the Ethernet card to a USB storage device. Connect the USB storage device to your server.
3. Enter the driver directory by using the command prompt to start the setup program.
4. In the Intel Network Connections window, select **Install Drivers and Software**.
5. In the Welcome to the install wizard for Intel Network Connections window, click **Next**.
6. In the License Agreement window, select **I agree the terms in the license agreement**. Then click **Next**.

7. In the Setup Options window, click **Next**.
8. In the Ready to Install the Program window, click **Install** to begin the installation.
9. In the Install wizard Completed window, click **Finish**. It is recommended to restart the server after installation.

Installing drivers for the SUSE Linux Enterprise Server operating system

To install drivers for the SUSE Linux Enterprise Server operating system with Service Pack 4, refer to the related topics.

- "Installing the driver for the chipset" on page 66
- "Installing the driver for an onboard graphics card" on page 66
- "Installing the driver for the Intel Ethernet card" on page 66

Installing the driver for the chipset

For the SUSE Linux Enterprise Server operating system, the driver for chipset is installed during the operating system installation.

Installing the driver for an onboard graphics card

To install the driver for an onboard graphics card, do the following:

1. Download the driver for an onboard graphics card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at: http://www.lenovo.com/drivers. Then, copy the folder to your USB storage device and connect the USB storage device to your server.
2. Log in to the operating system and copy the folder from your USB storage device to the `/tmp` directory on your server.
3. Add the following kemel parameter to the `/etc/grub2.cfg` configuration file and restart the operating system.
   ```
   vga=0 rdblacklist=nouveau nouveau.modeset=0
   ```
4. Open the Terminal, and input `init 3` to enter the command-line window.
5. Type the user name and password.
6. Go to the driver path, and enter command `sh NVIDIA-Linux-x86_64-346.47.run`. Then follow the install wizard to complete the driver installation.

   Note: In the command lines, `NVIDIA-Linux-x86_64-346.47.run` represents the driver name. Use the corresponding file name on your server.
7. Restart your server.

Installing the driver for the Intel Ethernet card

To install the driver, do the following:

1. Download the driver for an onboard graphics card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at: http://www.lenovo.com/drivers. Then, copy the folder to your USB storage device and connect the USB storage device to your server.
2. Log in to the operating system and copy the folder from your USB storage device to the `/tmp` directory on your server.

3. If the NIC inbox driver is already installed, uninstall the driver first and then type `mmod e1000e` in Terminal.
4. Enter the following commands to install the driver:
```
#unzip DD_Intel_NIC_1.3.29_Linux.zip
#cd DD_Intel_NIC_1.3.29_Linux
#tar xvf e1000e-3.2.4.2.tar.gz
#cd e1000e-3.2.4.2/src
#make install
#modprobe e1000e
```

   Notes:

   - If the file extension is not .tar.gz, skip the third command.
   - In the command lines, `cd e1000e-3.2.4.2` represents the driver name. Use the corresponding file name on your server.
5. Restart your server.
6. Configure network settings.
   a. Click **Applications** in the upper-left corner. Then, click **System Tools → Settings → Network**.
   b. In the Network window, select the Ethernet card you want to configure.
   c. Click **Add profile → IPv4**.
   d. In the Addresses area, select a network address configuration method.

Installing drivers for the Red Hat Enterprise Linux operating system

To install drivers for the Red Hat Enterprise Linux operating system, refer to the related topics.

- “Installing the driver for the chipset” on page 67
- “Installing the driver for an onboard graphics card” on page 67
- “Installing the driver for the Intel Ethernet card” on page 68

Installing the driver for the chipset

For the Redhat Enterprise Linux operating system, the driver for chipset is installed during the operating system installation.

Installing the driver for an onboard graphics card

To install the driver for an onboard graphics card, do the following:

1. Download the driver for an onboard graphics card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at: http://www.lenovo.com/drivers. Then, copy the folder to your USB storage device and connect the USB storage device to your server.
2. Log in to the operating system and copy the folder from your USB storage device to the `/tmp` directory on your server.
3. Add the following kemel parameter to the `/etc/grub2.cfg` configuration file and restart the operating system.
```
vga=0 rdblacklist=nouveau nouveau.modeset=0
```
4. Open the Terminal, and input `init 3` to enter the command-line window.
5. Type the user name and password.
6. Enter the following commands to install the driver:

```
echo "blacklist nouveau" >> /etc/modprobe.d/blacklist.conf
mv /boot/initramfs-$(uname -r).img /boot/initramfs-$(uname -r)-nouveau.img
dracut /boot/initramfs-$(uname -r).img $(uname -r)
```

7. Go to the driver path, and enter command `sh NVIDIA-Linux-x86_64-346.47.run`. Then follow the install wizard to complete the driver installation.

   Note: In the command lines, `NVIDIA-Linux-x86_64-346.47.run` represents the driver name. Use the corresponding file name on your server.

8. Restart your server.

Installing the driver for the Intel Ethernet card

To install the driver, do the following:

1. Download the driver for an onboard graphics card from the Lenovo Web site. If the driver is a compressed file, unzip it to a folder. The most up-to-date device drivers for various server models are always available for download on the Lenovo Web site at: http://www.lenovo.com/drivers. Then, copy the folder to your USB storage device and connect the USB storage device to your server.
2. Log in to the operating system and copy the folder from your USB storage device to the `/tmp` directory on your server.
3. If the NIC inbox driver is already installed, uninstall the driver first and then type `mmod e1000e` in Terminal.
4. Enter the following commands to install the driver:

   ```
   #unzip DD_Intel_NIC_1.3.29_Linux.zip
   #cd DD_Intel_NIC_1.3.29_Linux
   #tar xvf e1000e-3.2.4.2.tar.gz
   #cd e1000e-3.2.4.2/src
   #make install
   #modprobe e1000e
   ```

   Notes:

   - If the file extension is not .tar.gz, skip the third command.
   - In the command lines, `cd e1000e-3.2.4.2` represents the driver name. Use the corresponding file name on your server.

5. Restart your server.
6. Configure network settings.
   a. Click **Applications** in the upper-left corner. Then, click **System Tools → Settings → Network**.
   b. In the Network window, select the Ethernet card you want to configure.
   c. Click **Add profile → IPv4**.
   d. In the Addresses area, select a network address configuration method.

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