Sun Fire X2270 M2 Server Installation Guide for ESX Software

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Contents

Preface

This preface describes related documentation, available documentation formats, and the process for submitting feedback to Oracle. It also includes a document change history.

Related Books

The following is a list of documents related to Oracle's Sun Fire X2270 M2 server. These and additional support documents are available on the library page at: http://www.oracle.com/pls/topic/lookup?ctx=sfx2270m2&id=homepage.

Document Group	Document	Description
Sun Fire X2270 M2 Server-Specific Documentation	Sun Fire X2270 M2 Server Product Documentation	Integrated HTML version of all starred (*) documents, including Search and Index.
	Sun Fire X2270 M2 Server Getting Started Guide	Pictorial setup quick reference.
	*Sun Fire X2270 M2 Server Installation Guide**	How to install, rack, and configure the server up to initial power-on.
	*Sun Fire X2270 M2 Server Product Notes**	Important late-breaking information about the server.
	*Sun Installation Assistant 2.3 through 2.4 User's Guide for x64 Servers**	An Oracle tool used to perform an assisted installation of a supported Windows or Linux OS, upgrade firmware (regardless of OS), and other tasks.
	*Sun Fire X2270 M2 Server Installation Guide for Oracle Solaris Operating Systems**	How to install the Oracle Solaris OS on your server.

Document Group	Document	Description
	*Sun Fire X2270 M2 Server Installation Guide for Oracle VM**	How to install Oracle VM on your server.
	*Sun Fire X2270 M2 Server Installation Guide for Linux Operating Systems**	How to install a supported Linux OS on your server.
	*Sun Fire X2270 M2 Server Installation Guide for Windows Operating Systems**	How to install supported versions of Microsoft Windows on your server.
	*Sun Fire X2270 M2 Server Installation Guide for ESX Software**	How to install supported versions of the ESX OS on your server.
	*Integrated Lights Out Manager Supplement for the Sun Fire X2270 M2 Server**	Version-specific supplemental information for your server's Integrated Lights Out Manager.
	*Sun Fire X2270 M2 Server Diagnostics Guide**	How to diagnose problems with your server.
	*Sun Fire X2270 M2 Server Service Manual**	How to service and maintain your server.
	Sun Fire X2270 M2 Server Safety and Compliance Guide	Safety and compliance information about your server.
Oracle Integrated Controller Disk Management	*Sun x64 Server Disk Management Overview*	Information about managing your server storage.
x64 Servers Applications and Utilities Reference Documentation	*Sun x64 Server Utilities Reference Manual*	How to use the available utilities included with your server.
Integrated Lights Out Manager (ILOM) 3.0 Documentation	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Feature Updates and Release Notes*	Information about new ILOM features.
	Oracle Integrated Lights Out Manager (ILOM) 3.0 Getting Started Guide	Overview of ILOM 3.0.
	Oracle Integrated Lights Out Manager (ILOM) 3.0 Concepts Guide	Conceptual information about ILOM 3.0.
	Oracle Integrated Lights Out Manager (ILOM) 3.0 Web Interface Procedures Guide	How to use ILOM through the web interface.
	Oracle Integrated Lights Out Manager (ILOM) 3.0 CLI Procedures Guide	How to use ILOM through commands.

Document Group	Document	Description
	Oracle Integrated Lights Out Manager (ILOM) 3.0 SNMP and IPMI Procedures Guide	How to use SNMP and IPMI commands.
	Oracle Integrated Lights Out Manager (ILOM) 3.0 Management Protocols Reference Guide	Information about management protocols.

About This Documentation (PDF and HTML)

This documentation set is available in both portable document format (PDF) and HTML. The information is presented in topic-based format (similar to online help) and therefore does not include chapters, appendices, or section numbering.

Documentation Comments

Oracle is interested in improving product documentation and welcomes your comments and suggestions. You can submit comments by going to this link:

`http://www.oraclesurveys.com/se.ashx?s=25113745587BE578`

▼ Download Server System Tools and Drivers

Patches and the Tools and Drivers CD/DVD ISO image file for your server are now available by from My Oracle Support (MOS). Use this procedure to access server-specific downloads on MOS.

1. **Go to `http://support.oracle.com`.**
2. **Sign in to My Oracle Support.**
3. **At the top of the page, click the Patches and Updates tab.**

   The Patches and Updates screen appears.
4. **In the Search screen, click Product or Family (Advanced Search).**

   The screen appears with search fields.
5. **In the Product field, select the product from the drop-down list.**

   Alternatively, type a full or partial product name (for example, Sun Fire X2270 M2) until a match appears.

6. **In the Release field, select the release from the drop-down list.**

   Expand the folders to see the component offerings.

7. **Click Search.**

   A list of updates (patches) appears.

8. **To select a patch, click the check boxes next to the patch name (you can select more than one patch).**

   A popup action panel appears. The panel contains several action options.

9. **To download the update, click Download in the popup panel.**

   The download begins automatically.

Documents History

- May 2010, initial publication
- June 2010, collection refresh, revisions to –11
- March 2011, *Product Notes* document updated for document errata and SW v1.1.0 and SW v1.2.0 releases. *Windows Operating System Installation Guide* revised for document errata. *Oracle Solaris Operating System Installation Guide* revised for document errata. Service Manual revised for document errata.
- September 2011, *Product Notes* and *OS Installation Guides* updated for SW v1.3.0 release.

Sun Fire X2270 M2 Server Installation Guide for ESX Software

This guide describes the process for installing supported versions of VMware's ESX software on a Sun Fire X2270 M2 server.

Section	Link
Installation setup information and instructions.	"Preparing to Install VMware ESX 4.0 and ESXi 4.0" on page 11
ESX 4.0 installation instructions	"Installing VMware ESX 4.0" on page 19
ESXi 4.0 installation instructions	"Installing VMware ESXi 4.0" on page 25
Installation boot instructions	"Booting Installation Media" on page 27

Preparing to Install VMware ESX 4.0 and ESXi 4.0

This section contains information about preparing to install VMware ESX software on the Sun Fire X2270 M2 server:

Task Map for the VMware Installation

Use the following task map table to preview the installation process. The table lists the required tasks and provides a description and pointer to the relevant topics.

Note – The information in this guide assumes that you have performed the server setup as described in the *Sun Fire X2270 M2 Server Installation Guide*.

Step	Task	Relevant Topic(s)
1	Review the list of supported operating systems and the latest information about the server.	*Sun Fire X2270 M2 Server Product Notes*
2	Gather the VMware installation documentation and software.	■ "How to Obtain VMware Installation and Administration Documentation" on page 12 ■ "How to Obtain an Image of the Installation File" on page 12
3	Choose a console connection and installation method.	"Selecting a Console Option" on page 13
4	Choose an OS delivery method.	"Selecting a Boot Media and OS Delivery Option" on page 15

Step	Task	Relevant Topic(s)
5	Perform the VMware ESX or ESXi OS installation.	■ "Installing VMware ESX 4.0" on page 19 *-or-* ■ "Installing VMware ESXi 4.0" on page 25
6	Update the VMware operating system, if necessary.	■ "How to Update the ESX or ESXi Operating System" on page 17

Supported Operating Systems

For the most up-to-date information about the server, including a listing of supported versions of operating systems, refer to *Sun Fire X2270 M2 Server Product Notes*.

▼ How to Obtain VMware Installation and Administration Documentation

This task describes how to obtain the required VMware installation documentation.

1. **Navigate to the VMware documentation site at:**

   `http://www.vmware.com/support/pubs/vs_pages/vsp_pubs_esxi40_i_vc40.html`

2. **Use the information from these documents to plan your installation before proceeding.**

Next Steps "How to Obtain an Image of the Installation File" on page 12

▼ How to Obtain an Image of the Installation File

This task describes how to obtain an ESX 4.0 or ESXi 4.0 installation image.

- **Download a the ISO file from the VMware web site:**

  `http://www.vmware.com/download/`

  If you are going to perform the installation using the remote console, you can either burn it to a DVD or copy the ISO file to the server that is hosting the remote console session.

Next Steps "Selecting a Console Option" on page 13

Selecting a Console Option

The console allows you to see and respond to system prompts during the OS installation process. The two console options are local console and remote console. The following table describes both options and the setup requirements. Use this table to select the best option for your environment.

Console	Description	Setup Requirement
Local Console	You can install the OS and administer the server by attaching a local console directly to the server SP.	1. Attach a local console to the server. For more information, refer to the *Sun Fire X2270 M2 Server Installation Guide*. 2. At the ILOM prompt, type your ILOM user name and password. 3. Establish a connection to the host serial port by typing: **`start /SP/console`** The video output is automatically routed to the local console.

Console	Description	Setup Requirement
Remote Console	You can install the OS and administer the server from a remote console by establishing a network connection to the server SP. Examples of remote consoles include: ■ Web-based client connection using the Sun ILOM Remote Console application ■ SSH client connection using a serial console	1. Determine the IP address for the server SP. For more information, refer to the *Sun Fire X2270 M2 Server Installation Guide*. 2. Establish a connection between a remote console and the server SP: ■ For a web-based client connection, see "How to Connect to the SP Using a Web-Based Client" on page 14. ■ For SSH client connection, see "How to Connect to the SP Using an SSH Client" on page 15. For additional information about establishing a remote connection to the ILOM SP or using the Sun ILOM Remote Console, see Sun Integrated Lights Out Manager 3.0 Documentation Collection.

▼ How to Connect to the SP Using a Web-Based Client

Use this task to connect to the service processor (SP) with the ILOM web interface when using the Remote Console option. For more information about using the ILOM web interface, refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Web Interface Procedures Guide*, which is included with the Sun Fire X2270 M2 server documentation collection.

Before You Begin This task assumes you have performed the hardware setup procedures described in the *Sun Fire X2270 M2 Server Installation Guide*.

1 In a web browser, type the IP address for the SP.

The ILOM login screen appears.

2 Log in to the ILOM web interface.

3. **Redirect the video output from the server to the web client by launching the Remote Console application.**

4. **Enable device redirection (mouse, keyboard, etc.) in the Device menu.**

Next Steps "Selecting a Boot Media and OS Delivery Option" on page 15

▼ How to Connect to the SP Using an SSH Client

Use this task to connect to the service processor (SP) with SSH and the ILOM command–line interface (CLI). For more information about using the ILOM CLI, refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 CLI Procedures Guide*, which is included with the Sun Fire X2270 M2 server documentation collection.

Before You Begin This task assumes you have performed the hardware setup procedures described in the *Sun Fire X2270 M2 Server Installation Guide*.

1. **From a serial console, establish an SSH connection to the SP.**

   For example: ssh root@*sp_ipaddress*

   where *sp_ipaddress* is the IP address of the server SP.

2. **Log in to the ILOM CLI.**

   The CLI prompt appears:

   ->

3. **Redirect the video output from the server to the SSH client by typing:**

   -> **`start /SP/console`**

Next Steps "Selecting a Boot Media and OS Delivery Option" on page 15

Selecting a Boot Media and OS Delivery Option

Once you've decided on a console method, choose the best boot media and OS delivery option (local or remote) for your infrastructure. The OS is not available on a CD/DVD, so you will need to use an ISO image or a physical CD/DVD. If you would like to use a physical CD/DVD, use the ISO image to burn a CD/DVD. The following table identifies the supported media options and the setup requirements for each.

Note – To use a physical CD/DVD to install the OS, download the ISO image and burn a CD/DVD.

Installation Media	Description	Setup Requirement
Local Boot Media	Local boot media requires a built-in storage device on the server, or an external storage device attached to the server. Supported OS local boot media sources can include: CD/DVD-ROM installation media, and, if applicable, floppy device driver media.	If your server does not contain a built-in storage device, attach the appropriate storage device to the server using a USB connector. **Note –** Refer to Connecting the Cables in the *Sun Fire X2270 M2 Server Installation Guide*.
Remote Boot Media	Remote media requires you to boot the installation media over the network. You can start the network installation from a redirected boot storage device. Supported OS remote media sources can include: ■ CD/DVD-ROM installation media, and, if applicable, floppy device driver media ■ CD/DVD-ROM ISO installation image and, if applicable, floppy ISO device driver media)	1. Insert the boot media into the storage device. 2. Establish a web-based client connection to the ILOM server SP and launch the Sun ILOM Remote Console application. 3. In the Device menu of the Sun ILOM Remote Console application, specify the location of the boot media.
PXE Installation	Automated installations use a Preboot eXecution Environment (PXE) technology to enable the clients without an operating system to boot remotely to the automated installation server that performs the installation of the operating system.	1. Configure the network server to export the installation using a PXE boot. 2. Make the OS installation media available for PXE boot. 3. To boot the installation media, select the PXE boot interface card as the temporary boot device.

▼ How to Update the ESX or ESXi Operating System

After installing the OS, check to see if updates are available from VMware.

1. **Check the VMware web site to see if any updates are available.**

   `http://www.vmware.com/support/`

2. **Download and install any updates as described on the VMware web site. For download instructions, go to:**

   `http://www.vmware.com/mysupport/download`.

Installing VMware ESX 4.0

This section contains the steps for booting and installing VMware ESX 4.0 from local or remote installation media.

▼ How to Determine the NIC MAC Address Using the ILOM CLI

During the ESX 4.0 installation process, you must choose a live network adapter port (NET 0 or NET 1) for the VMware service console. The network adapters are identified by the MAC address of the NIC. Use this procedure to determine the MAC address of the NICs.

1 Access the ILOM CLI.

For information about accessing the ILOM CLI , refer to *Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for the Sun Fire X2270 M2 Server* or the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Getting Started Guide*.

2 At the CLI prompt (–>), enter the following command for *each* server network port:

-> **show /SYS/MB/NET***n*

where is *n* is 0 or 1.

For example:

The CLI command `show /SYS/MB/NET0`, would produce the following output, where the `fru_serial_number` field lists the MAC address:

```
->show /SYS/MB/NET0
  /SYS/MB/NET0

  Targets:

  Properties:

    type = Network Interface
```

```
ipmi_name = MB/NET0
fru_name = GIGABIT ETHERNET CONTROLLERS
fru_manufacturer = INTEL
fru_part_number = 82575EB
fru_serial_number = 00:21:28:3d:ec:04
fault_state = OK
clear_fault_action = (none)
```

Note – For more information about the ILOM CLI commands, refer to *Oracle Integrated Lights Out Manager (ILOM) 3.0 CLI Procedures Guide*.

3 **Make note of the MAC addresses of the NICs.**

4 **Log out of the CLI:**

–> **exit**

Next Steps "How to Install Vmware ESX 4.0" on page 20

▼ How to Install Vmware ESX 4.0

Use this task in conjunction with the VMware installation documentation to boot and install ESX 4.0.

Before You Begin

- This task requires that the installation media boots from one of the following sources:
  - CD or DVD (internal or external CD/DVD)
  - ISO software image (network repository)

  Note – If you want to use a CD/DVD for installation, you must create it. The OS software is only available as a download.

- This task requires that you know the MAC addresses of the network ports (NET 0 and NET 1). To determine the MAC addresses, see "How to Determine the NIC MAC Address Using the ILOM CLI" on page 19.

1 **Ensure that your console setup is ready.**

2 **Ensure that the installation media is available to boot.**

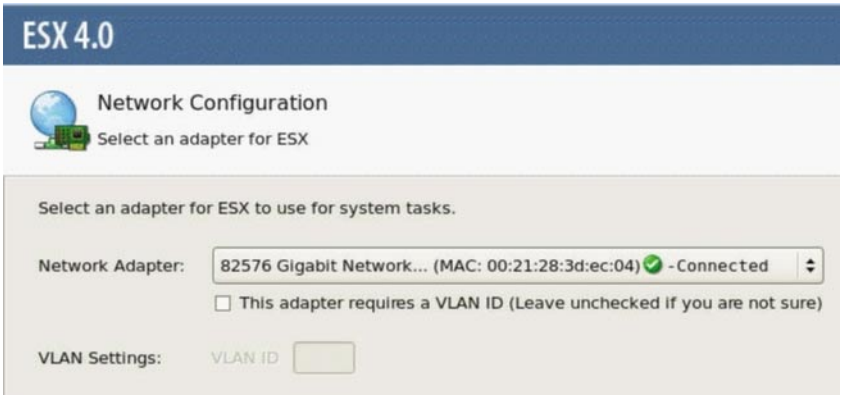
- For CD/DVD distribution media. Insert the VMware ESX media boot disk into the local or remote USB CD/DVD-ROM drive.
- For ISO images. Ensure that the ISO images are available and that the boot disk image has been selected in the ILOM Remote Console application's Device menu (Device > CD-ROM Image).

3 **To boot the server from the OS installation media, use one of the following methods.**

- Locally using a physical CD/DVD, see "How to Boot From OS Media Locally" on page 27.
- Remotely using an ISO image or a CD/DVD, see "How to Boot From OS Distribution Media or ISO File Remotely" on page 28.

4 **Refer to the ESX 4.0 installation documentation to assist you through the installation process.**

During the installation process, a Network Configuration dialog appears.

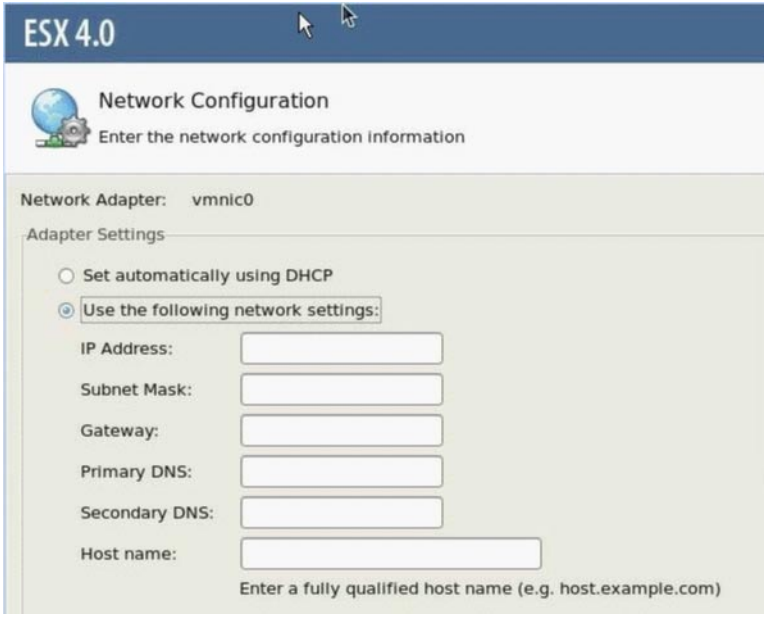


5 **In the Network Adapter field, click the drop-down menu and select the network adapter, and click Next.**

A live network adapter (an adapter connected to the network) must be specified for the VMware service console (vmnic0). Each network adapter that is live has a green check mark next to it as shown in the above dialog. Also, notice that the MAC address that is associated with the server's physical network port (NET0 or NET1) is displayed. Therefore, you can use the MAC address to determine which of the server's physical network ports is being displayed.

Note – If you are not sure which network adapter to select, contact your network administrator.

A second ESX 4.0 Network Configuration dialog appears.



6 **Select a network adapter configuration method.**

Do one of the following:

- To auto-configure the network adapter, select Set automatically using DHCP, and click Next.

  Or

- To manually configure the network adapter, select Use the following network settings, enter the network settings, and click Next.

7 **Refer to the VMware installation documentation for ESX and complete the installation.**

Next Steps "How to Update the ESX or ESXi Operating System" on page 17

Translating Network Interface Card PCI Bus Numbers to Physical Network Ports

This section identifies the appropriate network card to configure for the VMware service console. To translate the PCI bus numbering or network interface cards populated in a Sun Fire X2270 M2 server, refer to the following table:

PCI Bus:Device:Function	Port label
1:0:0	Net 0
1:0:1	Net 1

Installing VMware ESXi 4.0

This section contains steps for booting and installing VMware ESXi 4.0 from local or remote installation media.

▼ How to Install VMware ESXi 4.0

This topic describes how to install VMware ESXi 4.0 locally from a DVD/CD-ROM drive and remotely from a DVD/CD-ROM drive or an equivalent ISO image.

Note – If you are going to install your OS on a disk that is part of a RAID array, you must configure the RAID array before installing your OS. See your disk management documentation for details.

---

1. **Ensure that your console setup is ready.**

2. **Ensure that the installation media is available to boot.**

   - For CD/DVD distribution media. Insert the VMware ESX media boot disk into the local or remote USB CD/DVD drive.
   - For ISO images. Ensure that the ISO images are available and that the boot disk image has been selected in the ILOM Remote Console application's Device menu (Device > CD-ROM Image).

3. **Boot the server from the OS installation media using one of the following methods.**

   - Locally using a physical CD/DVD, see "How to Boot From OS Media Locally" on page 27.
   - Remotely using an ISO image or a CD/DVD, see "How to Boot From OS Distribution Media or ISO File Remotely" on page 28.

4. **Refer to the VMware installation document for ESXi to assist you through the installation process.**

Next Steps "How to Update the ESX or ESXi Operating System" on page 17

Booting Installation Media

This topic describes how to boot from an OS distribution media (CD or DVD) or an equivalent ISO file. It contains the following topics.

When you are done, control passes from the BIOS to the OS installation procedures. Follow the steps in your OS installation guide.

▼ How to Boot From OS Media Locally

1 **Connect to the console.**

For more information, see "Connecting to the System Console" in *Sun Fire X2270 M2 Server Installation Guide*.

2 **Insert the distribution media.**

3 **Reset the server .**

Do one of the following:

- From the ILOM web interface, select Remote Control > Remote Power Control, then select the Power Cycle option from the Host action list box.
- From the local server, press the Power button (approximately 1 second) on the front panel of the server to power off the server, then press the Power button again to power on the server.

Note – The next events occur very quickly; therefore, focus your attention on the following steps. Watch carefully for these messages as they appear on the screen for a brief time. You might want to enlarge the size of your screen to eliminate scroll bars.

---

4 **When you see a message offering a series of selections, press F8.**

```
Initializing USB Controllers .. Done.
Press F2 to run Setup (CTRL+E on Remote Keyboard)
Press F8 for BBS POPUP (CTRL+P on Remote Keyboard)
Press F12 to boot from the network (CTRL+N on Remote Keyboard)
```

After a delay, a menu offers a selection of boot devices.

```
    Please select boot device:
------------------------------
USB CD/DVD
PXE:IBA GE Slot 1000 v1331
PXE:IBA GE Slot 1001 v1331
PXE:IBA GE Slot 4100 v1331
PXE:IBA GE Slot 4101 v1331
PXE:IBA GE Slot 8100 v1331
PXE:IBA GE Slot 8101 v1331
PXE:IBA GE Slot C100 v1331
PXE:IBA GE Slot C101 v1331

------------------------------
```

5 **Select CD/DVD from the list.**

Control passes to the OS installation program on the media.

Next Steps Return to one of the following:

- "How to Install Vmware ESX 4.0" on page 20
- "How to Install VMware ESXi 4.0" on page 25

▼ How to Boot From OS Distribution Media or ISO File Remotely

You can boot from the physical media (CD or DVD) or from an equivalent ISO image.

1 **If you are using a CD or DVD, insert it in the CD/DVD drive.**

2 **Start and configure a remote console session.**

For more information, see "Communicating With the ILOM and the System Console" in *Sun Fire X2270 M2 Server Installation Guide*.

a. **Connect to the console.**

b. **When the Remote Console window appears, open the Devices menu and select:**

- **CD-ROM if you are using physical media.**
- **CD-ROM Image if you are using an ISO file.**

c. **If Keyboard and Mouse are not selected, select them as well.**

Your remote console session is configured.

3. **Power on or reset the server.**

   BIOS messages appear on the console.

4. **When you see a message offering a series of selections, press F8.**

```
Initializing USB Controllers .. Done.
Press F2 to run Setup (CTRL+E on Remote Keyboard)
Press F8 for BBS POPUP (CTRL+P on Remote Keyboard)
Press F12 to boot from the network (CTRL+N on Remote Keyboard)
```

   After a delay, a menu offers a selection of boot devices.

```
    Please select boot device:
------------------------------
Virtual CD/DVD
PXE:IBA GE Slot 1000 v1331
PXE:IBA GE Slot 1001 v1331
PXE:IBA GE Slot 4100 v1331
PXE:IBA GE Slot 4101 v1331
PXE:IBA GE Slot 8100 v1331
PXE:IBA GE Slot 8101 v1331
PXE:IBA GE Slot C100 v1331
PXE:IBA GE Slot C101 v1331

------------------------------
```

5. **Select a boot device from the list.**

   To boot from a physical CD/DVD or from an ISO image, select CD/DVD.

   Control passes to the OS installation program on the media.

Next Steps Return to one of the following:

- "How to Install Vmware ESX 4.0" on page 20
- "How to Install VMware ESXi 4.0" on page 25

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