Sun Server X2-4
(formerly Sun Fire X4470 M2)

Installation Guide for VMware ESXi

Part No.: E48436-01
October 2013

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Using This Documentation

This installation guide contains procedures for installing the VMware ESXi software on the Sun Server X2-4 (formerly Sun Fire X4470 M2) from Oracle.

This document is written for technicians, system administrators, authorized service providers, and users who have experience with installing operating systems.

This section describes how to get the latest software and firmware, documentation and feedback, and support and accessibility information.

- "Getting the Latest Software and Firmware" on page vii
- "Related Documentation" on page viii
- "Feedback" on page viii
- "Support and Accessibility" on page ix

Getting the Latest Software and Firmware

Firmware, drivers, and other hardware-related software for each Oracle x86 server, server module (blade), and blade chassis are updated periodically.

You can obtain the latest version from:

- My Oracle Support: `http://support.oracle.com`
- Requesting physical media

For more information, see Chapter 6.

Related Documentation

Documentation	Link
All Oracle documentation	http://www.oracle.com/documentation
Sun Server X2-4 (formerly Sun Fire X4470 M2)	http://docs.oracle.com/cd/E20781_01/index.html
Oracle x86 Servers Diagnostics, Applications, and Utilities Guide for Servers with Oracle ILOM 3.1	http://www.oracle.com/goto/x86AdminDiag/docs
Oracle Integrated Lights Out Manager (ILOM) 3.1	http://www.oracle.com/goto/ILOM/docs
Oracle Hardware Management Pack 2.2	http://www.oracle.com/goto/OHMP/docs

Feedback

You can provide feedback on this documentation at:

http://www.oracle.com/goto/docfeedback

Support and Accessibility

Description	Links
Access electronic support through My Oracle Support	http://support.oracle.com For hearing impaired: http://www.oracle.com/accessibility/support.html
Learn about Oracle's commitment to accessibility	http://www.oracle.com/us/corporate/accessibility/index.html

CHAPTER 1

About VMware ESXi Installs

This chapter contains an overview for installing VMware ESXi on your Sun Server X2-4 (formerly Sun Fire X4470 M2). Topics discussed in this chapter include:

- "VMware ESXi Installation Task Map" on page 1
- "Supported VMware ESXi Software" on page 2
- "Selecting the Console Display Option" on page 3
- "Selecting the Boot Media Option" on page 5
- "Selecting the Installation Target Option" on page 7
- "VMware ESXi Installation Options" on page 8

VMware ESXi Installation Task Map

The following table describes the steps for installing the VMware ESXi software.

Step	Description	Links
1.	Install your server hardware and configure the Oracle ILOM service processor.	• *Sun Server X2-4 Installation Guide*
2.	Obtain the VMware ESXi installation media and documentation. The documentation should be used in conjunction with the install procedures and post install procedures referenced below in Step 7.	• An ISO image of the VMware ESXi installation program is available as a download at: `http://www.vmware.com/download` • The VMware ESXi release notes can be found at: `http://www.vmware.com/support/pubs/` Select a version of VMware ESXi in the Support Resources column to navigate to the release notes.
3.	Review the server product notes.	*Sun Server X2-4 Product Notes* at: `http://docs.oracle.com/cd/E20781_01/index.html`
4.	Set up the console, the media, and the installation target that you will use to perform the installation.	• "Selecting the Console Display Option" on page 3 • "Selecting the Boot Media Option" on page 5 • "Selecting the Installation Target Option" on page 7
5.	Verify BIOS settings for new VMware ESXi installations.	"Verify the BIOS Factory Defaults" on page 11
6.	Install the VMware ESXi software.	"Installing VMware ESXi on a Single System Using Media" on page 16
7.	Perform the post installation tasks, if applicable.	• "Configuring Network Adapter Settings" on page 19 • "Determining the MAC Address of a Connected Server Network Port" on page 21 • "Updating the VMware ESXi Software" on page 22 • "VMware ESXi Resources" on page 23

Supported VMware ESXi Software

The Sun Server X2-4 supports the following VMware ESXi software.

VMware Software	Edition
VMware ESXi 4.1	4.1 Update 1 4.1 Update 2
VMware ESXi 5.0	5.0 5.0 Update 1
VMware ESXi 5.1	5.1

Additionally, you can install any other supported operating system or virtual machine software on your server. For an updated list of operating systems supported by the server, see the latest version of the *Sun Server X2-4 Product Notes* at http://docs.oracle.com/cd/E20781_01. You can also view the list of supported operating systems at http://wikis.oracle.com/display/SystemsComm/Sun+Server+X2-4#tab:Operating-Systems.

Selecting the Console Display Option

This section describes the options for connecting a console to perform the installation.

- "Console Display Options" on page 3
- "Set Up the Local Console" on page 4
- "Set Up the Remote Console" on page 4

Console Display Options

You can install the VMware ESXi software and administer the server by attaching a local console directly to the server's service processor (SP). See "Set Up the Local Console" on page 4 for details about connecting a local console to the server.

You can also install the software and administer the server from a remote console by establishing a network connection to the server SP. There are two types of remote consoles:

- Web-based client connection using the Oracle ILOM Remote Console application
- Secure Shell (SSH) client connection to the network management port (NET MGT)

See "Set Up the Remote Console" on page 4 for instructions for setting up a remote console session.

▼ Set Up the Local Console

To connect a local console to the server, do the following:

1. **Connect a VGA monitor to the video port (VGA) at the rear of the server.**
2. **Connect a keyboard and mouse to the USB ports at the rear of the server.**

Related Information

- Oracle Integrated Lights Out Manager (ILOM) 3.1 Documentation Library at: `http://www.oracle.com/goto/ILOM/docs`

▼ Set Up the Remote Console

1. **View or establish an IP address for the server SP.**

   To log in to Oracle ILOM remotely using either the command-line interface or the web interface, you must know the IP address of the server's service processor (SP). For instructions, see the *Sun Server X2-4 Installation Guide*.

2. **If you are using a web-based client connection, perform these steps; otherwise, go to the next step.**

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

   b. **Log in to the Oracle ILOM web interface.**

   c. **Redirect the video output from the server to the web client by launching the Oracle ILOM Remote Console.**

   d. **If necessary, enable device redirection (mouse, keyboard, etc.) in the Devices menu.**

3. **If you are using an SSH client connection, perform these steps.**

   a. **From a command-line interface, establish an SSH connection to the server SP (**`ssh root@`*hostname*, **where** *hostname* **can be the DNS name or the IP address for the server SP).**

   b. **Log in to Oracle ILOM.**

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

      -> **`start /HOST/console`**

Related Information

- Oracle Integrated Lights Out Manager (ILOM) 3.1 Documentation Library at: http://www.oracle.com/goto/ILOM/docs

Selecting the Boot Media Option

You can start the software installation to a server by booting a local or remote installation media source. This section identifies the supported media sources and the setup requirements for each source.

- "Boot Media Options Requirements" on page 5
- "Set Up the Local Boot Media Option" on page 6
- "Set Up the Remote Boot Media Option" on page 6

Boot Media Options Requirements

This section describes the requirements for using local and remote media.

- "Local Boot Media Requirements" on page 5
- "Remote Boot Media Requirements" on page 5

Local Boot Media Requirements

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.

Remote Boot Media Requirements

Remote media requires you to boot the install over the network. You can start the network install from a redirected boot storage device or another networked system that exports the installation over the network using a Pre-Boot eXecution environment (PXE).

Supported OS remote boot media sources can include:

- CD/DVD-ROM installation media
- CD/DVD-ROM ISO installation image media

- Automated installation image (requires PXE boot). For detailed instructions for automating the installation setup process, consult the VMware ESXi 5 installation documentation available at:

  http://www.vmware.com/support/pubs/vsphere-esxi-vcenter-server-pubs.html

  Alternatively, review the VMware ESXi 4 installation documentation at:

  http://www.vmware.com/support/pubs/vs_pubs.html

▼ Set Up the Local Boot Media Option

To set up the local boot media, you must insert a storage device that contains the ESXi software installation media into the server using one of the following options:

1. **If the server is equipped with an optional DVD drive, insert the ESXi software installation DVD into the DVD drive located on the front of the server; otherwise, proceed to the next step.**
2. **If your server does not contain a DVD drive, attach the appropriate storage device to the front or rear of the server.**

Note – For information about how to attach local devices to the server, see the *Sun Server X2-4 Service Manual*.

▼ Set Up the Remote Boot Media Option

To redirect the boot media from a remote storage device, perform the following steps:

1. **Insert the boot media into the storage device, for example:**
   - **For CD/DVD-ROM**, insert media into the built-in or external CD/DVD-ROM drive on a remote workstation.
   - **For CD/DVD-ROM ISO image**, ensure that the ISO image(s) are readily available on a network shared location.
2. **Establish a web-based client connection to the server Oracle ILOM SP and launch the Oracle ILOM Remote Console application.**

   For more details, see the Setup Requirements for web-based client connection in "Selecting the Console Display Option" on page 3.
3. **In the Devices menu of the Oracle ILOM Remote Console application, specify the location of the boot media, for example:**

- **For CD/DVD-ROM boot media**, select CD-ROM.
- **For CD/DVD-ROM ISO image boot media**, select CD-ROM Image.

Selecting the Installation Target Option

This section describes how to set up the installation target.

- "Installation Target Options" on page 7
- "Set Up a Local Storage Drive (HDD or SSD) as the Installation Target" on page 7
- "Set Up a Fibre Channel Storage Area Network Device as the Installation Target" on page 8

Installation Target Options

You can install the software on any of the storage drives installed in the server. These include hard disk drives (HDDs) and solid state drives (SSDs).

Note – SSDs are supported only on Oracle Engineered Systems.

For servers equipped with Fibre Channel (FC) PCIe host bus adapters (HBAs), you can choose to install the operating system to an external FC storage device.

▼ Set Up a Local Storage Drive (HDD or SSD) as the Installation Target

- **Ensure that the hardware disk drive (HDD) or solid state drive (SSD) is properly installed and powered on.**

  For information about installing and powering on an HDD or SSD, refer to the *Sun Server X2-4 Service Manual*.

▼ Set Up a Fibre Channel Storage Area Network Device as the Installation Target

1. **Ensure that the PCIe host bus adapter (HBA) is properly installed in the server.**

   For information about installing a PCIe HBA option, refer to the *Sun Server X2-4 Service Manual*.

2. **Ensure that the storage area network (SAN) is installed and configured to make the storage device visible to the server's host.**

   For instructions, refer to the documentation supplied with the Fibre Channel HBA.

VMware ESXi Installation Options

The table below provides some information about single server installation options.

Option	Description
Single server	Install ESXi software to a single server using one of the following methods: • Locally: ESXi installation is performed locally at the server. This option is recommended if you have just completed the physical installation of the server in the rack. • Remotely: ESXi installation is performed from a remote location. The Oracle ILOM Remote Console application is used to perform a manual ESXi installation.

Single-Server Installation Methods

Select a method for providing the ESXi installation media. Use the following information to determine whether local or remote ESXi installation best serves your needs.

Media Delivery Method	Additional Requirements
Local using a CD/DVD drive – Uses a physical CD/DVD drive connected to the server.	A monitor, USB keyboard and mouse, a USB CD/DVD drive, and ESXi distribution media. For local installations, you deliver the installation media using a local CD/DVD drive attached directly to the server.
Remote using a redirected CD/DVD drive or ISO image – Uses a redirected physical CD/DVD drive or CD/DVD ISO image on a remote system running the Oracle ILOM Remote Console application.	A remote system with a browser, an attached physical CD/DVD drive, ESXi distribution media, and network access to the server's management port. For remote installations, you deliver the installation media by means of the remote CD/DVD USB device, or CD/DVD image.

CHAPTER 2

Preparing to Install VMware ESXi

This chapter describes how to prepare the server for installing VMware ESXi.

- "Setting Up BIOS" on page 11
- "Configuring RAID" on page 14

Setting Up BIOS

Before you install the VMware ESXi software, you should ensure that BIOS settings are configured to support the type of installation you plan to perform. The following section provides specific instructions on how to configure BIOS to support the installation:

- "Verify the BIOS Factory Defaults" on page 11

▼ Verify the BIOS Factory Defaults

Note – If the server is newly installed and this is the first time that an operating system has been installed, then BIOS is probably configured to its default settings and you do not have to perform this task.

In the BIOS Setup Utility, you can set defaults, as well as view and edit BIOS settings as needed. Any changes you make in the BIOS Setup Utility (through F2) are permanent until the next time you change them.

In addition to using F2 to view or edit the system's BIOS settings, you can use F8 during the BIOS start-up to specify a temporary boot device. If you use F8 to set a temporary boot device, this change is only in effect for the current system boot. The permanent boot device specified through F2 will be in effect after booting from the temporary boot device.

Ensure that the following requirements are met:

- The server is equipped with a hard disk drive (HDD) or solid state drive (SDD).
- The HDD or SDD is properly installed in the server. For instructions, see the *Sun Server X2-4 Service Manual*.
- A console connection is established to the server. For details, see "Selecting the Console Display Option" on page 3.

1. **Reset or power on the server.**

   For example, to reset the server:

   - **From the local server**, press the Power button (approximately 1 second) on the front panel of the server to power off the server, and then press the Power button again to power on the server.
   - **From the Oracle ILOM web interface**, click Host Management > Power Control, and then select Reset from the Select Action drop-down list.
   - **From the Oracle ILOM CLI**, type the following command from the prompt:

     ```
     -> reset /System
     ```

   The BIOS screen appears.

2. **When prompted in the BIOS screen, press F2 to access the BIOS Setup Utility.**

   After a few moments, the BIOS Setup Utility appears.

3. **To ensure that the factory defaults are set, do the following:**

   a. **Press F9 to automatically load the factory default settings.**

      A message appears prompting you to continue this operation by selecting `OK` or to cancel this operation by selecting `CANCEL`.

b. In the message, highlight `OK` and then press Enter.

The BIOS Setup Utility screen appears with the cursor highlighting the first value in the system time field.

4. In the BIOS Setup Utility, do the following to edit the values associated with the system time or date.

a. Highlight the values you want to change.

Use the up or down arrow key to change between the system time and date selection.

b. To change the values in the highlighted fields use these keys:

- PLUS (+) to increment the current value shown
- MINUS (-) to decrement the current value shown
- ENTER to move the cursor to the next value field

5. To access the boot settings, select the Boot menu.

The Boot menu appears.

6. In the Boot menu, use the down arrow key to select `Boot Device Priority`, and then press Enter.

The Boot Device Priority list appears showing the order of the known bootable devices. The first device in the list has the highest boot priority.

7. In the Boot Device Priority menu, do the following to edit the first boot device entry in the list:

a. Use the up or down arrow key to select the first entry in the list, and then press Enter.

b. In the Options menu, use the up or down arrow key to select the default permanent boot device, and then press Enter.

Note – You can change the boot order for other devices in the list by repeating Steps 7a and 7b for each device entry you want to change.

---

8. To save changes and exit the BIOS Setup Utility, press F10.

Alternatively, you can save the changes and exit the BIOS Setup Utility by selecting `Save and Reset` in the Save & Exit menu. A message appears prompting you to save changes and exit the utility. In the message dialog, select `OK`, and then press Enter.

Note – When using the Oracle ILOM Remote Console, F10 is trapped by the local OS. You must use the F10 option listed in the Keyboard drop-down list that is available at the top of the Remote Console application.

Configuring RAID

If you want to use redundant array of independent disks (RAID), you must configure RAID on your server before you install VMware ESXi. You can use Oracle Hardware Installation Assistant or Oracle Hardware Management Pack to configure RAID on your server. For instructions for configuring RAID, see the *Sun Server X2-4 Installation Guide*.

CHAPTER 3

Installing VMware ESXi

This section provides prerequisites and instructions for installing VMware ESXi on the Sun Server X2-4 (formerly Sun Fire X4470 M2).

- "Before You Begin" on page 15
- "Installing VMware ESXi on a Single System Using Media" on page 16

Before You Begin

Ensure that the following requirements are met:

- If you want to configure RAID (redundant array of independent disks) on the server's storage drives, you must do so before you install VMware ESXi. For instructions for configuring RAID, see the *Sun Server X2-4 Installation Guide*.

Note – If the server is equipped with the Sun Storage 6 Gb SAS PCIe RAID, Internal HBA (SGX-SAS6-R-INT-Z), you must create a RAID volume and make it bootable before installing VMware ESXi; otherwise, the HBA will not be able to identify the server's storage drives.

- The console display options should have been selected and set up prior to performing the installation. For more information about this option and setup instructions, see "Selecting the Console Display Option" on page 3.
- The boot media option should have been selected and set up prior to performing the installation. For more information about this option and setup instructions, see "Selecting the Boot Media Option" on page 5.
- The installation target option should have been selected and set up prior to performing the installation. For more information about this option and setup instructions, see "Selecting the Installation Target Option" on page 7.

- Verify that the BIOS settings are set to the defaults. For instructions on how to verify and, if necessary, set the BIOS settings, see "Verify the BIOS Factory Defaults" on page 11.
- For local installation, have the ESXi installation media available to insert into the attached physical CD/DVD-ROM drive when prompted.
- For remote installation, insert the ESXi installation media into the Oracle ILOM Remote Console system's CD/DVD-ROM drive. Ensure that you have selected CD-ROM from the Oracle ILOM Remote Console system's Devices menu.
- If you are using an ESXi image, ensure that the ESXi ISO image is accessible from the Oracle ILOM Remote Console system. Ensure that you have selected CD-ROM Image from the Oracle ILOM Remote Console system's Devices menu.
- For VMware ESXi installations, determine the network management interface you will use for the VM service console.

  The VM service console and management interface require a network interface. The service console does not automatically use the first interface with a live connection. Therefore, you will need to select a network interface for the service console during installation since the network interface defaults to vmnic0.
- Gather the VMware ESXi documentation so that you can use it in conjunction with the instructions provided in this section. VMware ESXi 5 documentation is available at `http://www.vmware.com/support/pubs/vsphere-esxi-vcenter-server-pubs.html`. VMware ESXi 4 documentation is available at `http://www.vmware.com/support/pubs/vs_pubs.html`.

Installing VMware ESXi on a Single System Using Media

This section provides information about installing VMware ESXi 4.1 Update 1, 4.1 Update 2, 5.0, 5.0 Update 1, and 5.1 for x86 (64-bit) software.

- "Install VMware ESXi Using Local or Remote Media" on page 16

▼ Install VMware ESXi Using Local or Remote Media

The following procedure describes how to install the VMware ESXi software from local or remote media. It assumes that you are booting the VMware installation media from one of the following sources:

- VMware ESXi CD or DVD (internal or external CD or DVD)

- VMware ESXi ISO image (network repository)

Note – The VMware ISO image can be used for remote installations or for creating an installation CD or DVD.

---

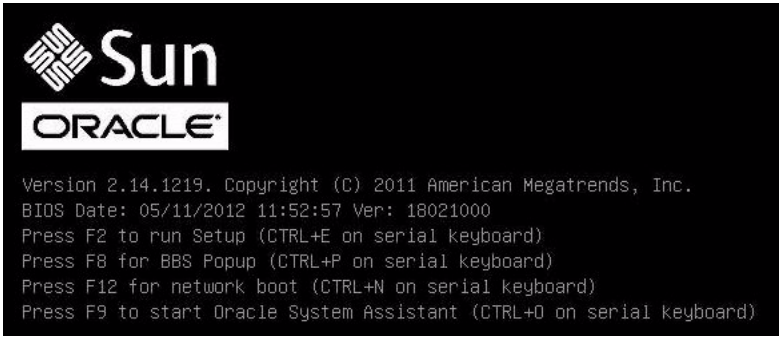
1. **Ensure that the install media is available to boot.**
   - **For Distribution CD/DVD**. Insert the VMware ESXi Distribution media boot disc (CD labeled number 1 or the single DVD) into the local or external CD/DVD-ROM drive.
   - **For ISO images**. Ensure that the ISO images are available and that the boot disc image (CD labeled number 1 or DVD) has been selected in the Oracle ILOM Remote Console application (Devices menu > CD-ROM Image).

   For additional information about how to set up the installation media, see "Selecting the Boot Media Option" on page 5.

2. **Reset or power on the server.**

   For example, to reset the server:
   - **From the local server**, press the Power button (approximately 1 second) on the front panel of the server to power off the server, and then press the Power button again to power on the server.
   - **From the Oracle ILOM web interface**, select Host Management > Power Control, and then select Reset from the Select Action drop-down list.
   - **From the Oracle ILOM CLI**, type: **`reset /System`**

     The BIOS screen appears.



Note – The next events occur very quickly; therefore, focused attention is needed for the following steps. Watch carefully for these messages as they appear on the screen for a brief time.

---

3. **In the BIOS screen, press F8 to specify a temporary boot device for the VMware ESXi installation.**

   The Please Select Boot Device menu appears.

4. **In the Boot Device menu, select either the external or virtual CD/DVD device as the first boot device, and then press Enter.**

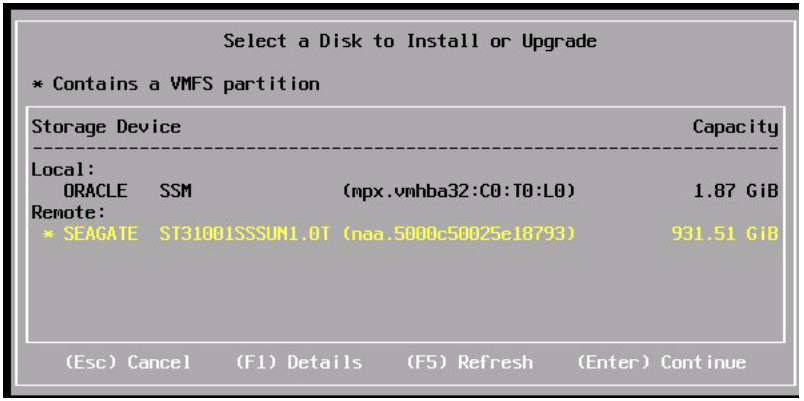
   The device strings listed in the Boot Device menu are in the following format: *device type*, *slot indicator*, and *product ID string*.

   After a few seconds, the splash screen for the VMware installation program appears.

5. **To complete the installation, refer to the VMware ESXi installation documentation.**

   VMware ESXi 5 documentation is available at `http://www.vmware.com/support/pubs/vsphere-esxi-vcenter-server-pubs.html`. VMware ESXi 4 documentation is available at `http://www.vmware.com/support/pubs/vs_pubs.html`.

6. **When the following screen appears, select the storage drive on which to install the VMware ESXi software.**



7. **After completing the VMware ESXi installation, proceed to** Chapter 4**.**

CHAPTER 4

Post Installation Tasks for VMware ESXi

After completing the installation of VMware ESXi software, review the information in the following sections and, if necessary, perform the tasks that are applicable to your system.

- "Configuring Network Adapter Settings" on page 19
- "Determining the MAC Address of a Connected Server Network Port" on page 21
- "Updating the VMware ESXi Software" on page 22
- "VMware ESXi Resources" on page 23

Configuring Network Adapter Settings

Note – This task is necessary only if you are using static IP addressing. If you are using Dynamic Host Configuration Protocol (DHCP), this task is not necessary.

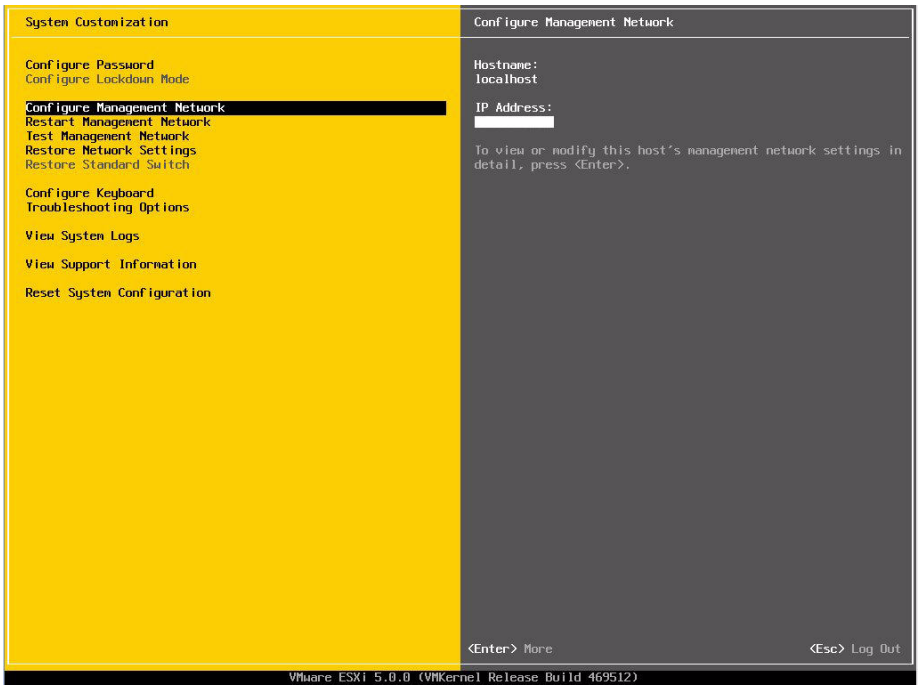
The following procedure describes how to configure the VMware ESXi settings for the network adapter(s) installed on your server. These instructions also include steps for discovering the physical port location of each network adapter installed on your server.

▼ Configure Network Adapter Settings

Note – The screens on your system might differ from the ones shown in this procedure if you installed a different version of VMware ESXi.

1. **After completing the VMware ESXi software installation and rebooting the server, the following screen appears:**

2. **To select Customize System/View Logs, press F2.**
3. **Log in to the VMware ESXi Server.**
4. **Access the System Customization dialog and select** `Configure Management Network`**.**



5. **To complete this task, refer to the VMware ESXi documentation.**

   VMware ESXi 5 documentation is available at http://www.vmware.com/support/pubs/vsphere-esxi-vcenter-server-pubs.html. VMware ESXi 4 documentation is available at http://www.vmware.com/support/pubs/vs_pubs.html.

Determining the MAC Address of a Connected Server Network Port

The server has four network ports, NET0, NET1, NET2, and NET3. When any of these ports are connected to the network, VMware ESXi assigns a MAC address to the port. The following procedure describes how to use the Oracle ILOM command-line interface (CLI) to determine the MAC address assigned by VMware ESXi.

▼ Determine the MAC Address of a Connected Server Network Port

- **To determine the MAC address for each server network port, enter the following command in the Oracle ILOM command-line interface (CLI) for each server network port:**

  -> **show /System/Networking/Ethernet_NICs/Ethernet_NIC_***n*

  Where *n* is 0, 1, 2, or 3

  For example, if server network port `NET0` is connected, then the above CLI command produces the following output, where the `mac_addresses` field lists the MAC address.

```
-> show /System/Networking/Ethernet_NICs/Ethernet_NIC_0
/System/Networking/Ethernet_NICs/Ethernet_NIC_0
  Targets:
  Properties:
    health = OK
    health_details = -
    location = NET0 (Ethernet NIC 0)
    manufacturer = INTEL
    part_number = X540
    serial_number = Not Available
    mac_addresses = 00:21:28:3D:B7:96
  Commands:
    cd
    show
->
```

Note – If you are unsure of which network adapter to select, contact your network administrator.

Updating the VMware ESXi Software

The VMware ESXi installation media might not contain the most up-to-date versions of the software. If necessary, update the VMware ESXi software with the latest updates and patches.

To obtain download instructions, see this web site:

`http://support.vmware.com/selfsupport/download/`

VMware ESXi Resources

VMware provides documentation about ESXi. To learn more about configuring and managing VMware ESXi resources, refer to the VMware ESXi documentation.

VMware ESXi 5 documentation is available at http://www.vmware.com/support/pubs/vsphere-esxi-vcenter-server-pubs.html. VMware ESXi 4 documentation is available at http://www.vmware.com/support/pubs/vs_pubs.html.

CHAPTER 5

Configuring Network Interfaces

This section contains information about:

- "NIC Connectors" on page 25

NIC Connectors

The network interface connectors are labeled physically on the server as follows. Depending on the option cards installed in your system, the VMware ESXi software might renumber the network ports.

TABLE 5-1 NIC Connector Label

NIC Connector Label	Interface Type
NET0	First NIC interface (vmnic*n*)
NET1	Second NIC interface (vmnic*n*)
NET2	Third NIC interface (vmnic*n*)
NET3	Fourth NIC interface (vmnic*n*)

CHAPTER 6

Getting Server Firmware and Software

This section explains the options for accessing server firmware and software.

- "Firmware and Software Updates" on page 27
- "Firmware and Software Access Options" on page 28
- "Software Releases" on page 28
- "Accessing Firmware and Software" on page 29
- "Installing Updates Using Other Methods" on page 33

Firmware and Software Updates

Firmware and software, such as hardware drivers and tools for the server, are updated periodically. These are made available as a software release. The software release is a set of downloads (patches) that includes all available firmware, hardware drivers, and utilities for the server. All these have been tested together. The ReadMe document that is included with the download explains what has changed and what has not changed from the prior software release.

You should update your server firmware and software as soon as possible after the software release becomes available. Software releases often include bug fixes, and updating your server ensures that your server has the latest firmware and software.

The ReadMe file in the download package contains information about the updated files in the download package, as well as bugs that are fixed with the current release. The product notes also provide information about which server software versions are supported.

Firmware and Software Access Options

Use one of the following options to obtain the latest set of firmware and software for your server:

- **My Oracle Support** – All system firmware and software are available from My Oracle Support at `http://support.oracle.com`.

  For more information about what is available on the My Oracle Support web site, see "Software Releases" on page 28.

  For instructions on how to download software releases from My Oracle Support, see "Download Firmware and Software Using My Oracle Support" on page 30.

- **Physical Media Request (PMR)** – You can request a DVD that contains any of the downloads (patches) that are available from My Oracle Support.

  For information see, "Software Releases" on page 28.

Software Releases

Software releases on My Oracle Support are grouped by product family, then product, then software release version. The version contains one or more downloads (patches).

For servers and blades, the pattern is similar. The product is the server. Each server contains a set of releases. These releases are not true software product releases, but rather are releases of updates for the server. These updates are called software releases and comprise several downloads, all tested together. Each download contains firmware, drivers, or utilities.

My Oracle Support provides the set of software releases for this server family as shown in the following table. These can also be requested through a physical media request (PMR).

Package Name	Description	When to Download This Package
Sun Server X2-4 SW*version* – Firmware Pack	All the system firmware, including Oracle ILOM, BIOS, and option card firmware.	You need the latest firmware.
Sun Server X2-4 SW*version* – OS Pack	An OS Pack is available for each supported operating system version. Each OS Pack includes a package of all tools, drivers, and utilities for that version of the OS. Software includes Oracle Hardware Management Pack and LSI MegaRAID software. For the Windows OS, this OS Pack also includes Intel Network Teaming and Install Pack.	You need to update OS-specific drivers, tools, or utilities.
Sun Server X2-4 SW*version* – All Packs	Includes the Firmware Pack, all OS Packs, and all documents. This pack does not include the Oracle VTS image.	You need to update a combination of system firmware and OS-specific software.
Sun Server X2-4 SW*version* – Diagnostics	Oracle VTS diagnostics image.	You need the Oracle VTS diagnostics image.

Each of the downloads is a zip file that contains a ReadMe file and a set of subdirectories containing firmware or software files. The ReadMe file contains details on the components that have changed since the prior software release and the bugs that have been fixed.

Accessing Firmware and Software

This section covers instructions for downloading or requesting software release files.

There are two methods for obtaining updated firmware and software: by using My Oracle Support or by requesting physical media. See:

- "Download Firmware and Software Using My Oracle Support" on page 30
- "Requesting Physical Media" on page 30

▼ Download Firmware and Software Using My Oracle Support

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

   The Patch search pane appears at the right of the screen.
4. **Within the Search tab area, click Product or Family (Advanced Search).**

   The Search tab area 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 until a match appears. For example, Sun Server X2-4 (formerly Sun Fire X4470 M2).
6. **In the Release field, select a software release from the drop-down list.**
7. **Click Search.**

   The Patch Advanced Search Results screen appears, listing the patches for the software release.

   See "Software Releases" on page 28 for a description of the available downloads.
8. **To select a patch for a software release, click the patch number next to the software release version (you can use the shift key to select more than one patch).**

   A pop-up action panel appears. The pop-up panel contains several action options, including the ReadMe, Add to Plan, and Download options. For information about the Add to Plan option, click on the associated drop-down button and select "Why use a plan?"
9. **To review the ReadMe file for the patch, click ReadMe.**
10. **To download the patch(es), click Download.**

    The File Download dialog box appears.
11. **In the File Download dialog box, click the patch zip file name.**

    The patch for the software release downloads.

Requesting Physical Media

If your processes do not allow downloads from Oracle web sites, you can access the latest software release through a physical media request (PMR).

The following table describes the high-level tasks for making a physical media request and provides links for further information.

Description	Link
Gather information you will need to provide for the request.	"Gathering Information for the Physical Media Request" on page 31
Make the physical media request either online or by calling Oracle Support.	"Request Physical Media (Online)" on page 31 "Request Physical Media (By Phone)" on page 33

Gathering Information for the Physical Media Request

You must have a warranty or support contract for your server in order to make a physical media request (PMR).

Before you make the PMR, gather the following information:

- **Obtain product name, software release version, and patches required.** It will be easier to make the request if you know the latest software release and the name of the download packages (patches) that you are requesting.
  - *If you have access to My Oracle Support* – Follow the instructions in "Download Firmware and Software Using My Oracle Support" on page 30 to determine the latest software release and view available downloads (patches). After viewing the list of patches, you can navigate away from the Patch Search Results page, if you do not want to continue with the download steps.
  - *If you do not have access to My Oracle Support* – Use the information in "Software Releases" on page 28 to determine which packages you want, then request those packages for the latest software release.
- **Have the shipping information ready.** You will need to provide a contact, phone number, email address, company name, and shipping address as part of the request.

▼ Request Physical Media (Online)

Gather the information described in "Gathering Information for the Physical Media Request" on page 31 before making the request.

1. **Go to the following web site:** `http://support.oracle.com`**.**
2. **Sign in to My Oracle Support.**

3. **Click the Contact Us link in the upper right corner of the page.**

   The Create Service Request: Problem screen appears.

4. **In the Request Description section, fill in the following:**

   a. **In the Problem Summary field, type: `PMR for latest software release for Sun Server X2-4`.**

   b. **In the Problem Type drop-down menu, select the following:**

      Software & OS Media Request

   c. **In the Support Identifier field, type the Customer Support Identifier associated with your support contract.**

5. **Skip the Create Service Request: Selections screen by clicking the Next button in the upper right corner of the screen twice.**

   The Create Service Request: More Details screen appears.

6. **In the Additional Information section, answer the questions shown in the following table.**

Question	Your Answer
Is this a physical software media shipment request?	Yes
Which product line does the media request involve?	Sun Products
Are you requesting a required password for a patch download?	No
Are you requesting a patch on CD/DVD?	Yes
If requesting a patch on CD/DVD, please provide the patch number.	Enter the patch number for each download that you want from the software release.
List the product name and version requested for the physical media shipment?	*Product Name:* Sun Server X2-4. *Version:* Latest software release number.
What is the OS/platform for the requested media?	If you are requesting OS-specific downloads, specify the OS here. If you are requesting system firmware only, enter Generic.
Are any languages required for this shipment?	No

7. **Fill in the Ship-To contact information, which includes a contact name, phone number, email address, company name, and shipping address.**

8. **Click Next.**

   The Create Service Request: Severity/Contact screen appears.

9. **Enter your contact phone number and preferred method of contact.**

10. **Click Submit.**

    This concludes the physical media request. It can take up to seven business days to receive the physical media.

▼ Request Physical Media (By Phone)

Gather the information described in "Gathering Information for the Physical Media Request" on page 31 before making the request.

1. **Call Oracle support, using the appropriate number from the Oracle Global Customer Support Contacts Directory at:**

   `http://www.oracle.com/us/support/contact-068555.html`

2. **Tell Oracle support that you want to make a physical media request (PMR) for the Sun Server X2-4.**

   - If you are able to access the specific software release and patch number information from My Oracle Support, provide this information to the support representative.
   - If you are unable to access the software release information, request the latest software release for the Sun Server X2-4.

Installing Updates Using Other Methods

In addition to using My Oracle Support, you can install updated firmware and software using one of the following methods:

- **Oracle Enterprise Manager Ops Center** – Ops Center Enterprise Controller can automatically download the latest firmware from Oracle, or firmware can be loaded manually into the Enterprise Controller. In either case, Ops Center can install the firmware onto one or more servers, blades, or blade chassis.

  For more information, go to:
  `http://www.oracle.com/technetwork/oem/ops-center/index.html`.

- **Oracle Hardware Management Pack** – The `fwupdate` CLI Tool within the Oracle Hardware Management Pack can be used to update firmware within the system.

  For more information, refer to the Oracle Hardware Management Pack Documentation Library at: `http://www.oracle.com/goto/OHMP/docs`.

- **Oracle ILOM** – Oracle ILOM and BIOS firmware are the only firmware that can be updated using either the Oracle ILOM web interface or the command-line interface.

  For more information, refer to the Oracle Integrated Lights Out Manager (ILOM) 3.1 Documentation Library at:

  http://www.oracle.com/goto/ILOM/docs.

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