Sun Fire X4470 Server

Installation Guide

Part No.: E20844-01
April 2011

Please
Recycle

Adobe PostScript

Contents

Using This Documentation

This installation guide contains hardware installation procedures and configuration procedures for the preinstalled Oracle Solaris Operating System. You perform these procedures to bring the server to a configurable and usable state.

This document is intended for system administrators, network administrators, and service technicians who have an understanding of server systems.

Product Downloads

You can find downloads for all Oracle x86 servers and server modules (blades) on My Oracle Support (MOS). On MOS, you can find two types of downloads:

- Software release bundles that are specific to a rackmount server, server module, modular system (blade chassis), or network express module (NEM). These software release bundles include Oracle Integrated Lights Out Manager (ILOM), Oracle Hardware Installation Assistant, and other platform software and firmware.
- Standalone software that is common across multiple types of hardware. This software includes the Hardware Management Pack and Hardware Management Connectors.

▼ Get Software and Firmware Downloads

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.**
4. **In the Patches Search box, select Product or Family (Advanced Search).**
5. **In the Product? Is field, type a full or partial product name, for example Sun Fire X4470, until a list of matches appears, then select the product of interest.**
6. **In the Release? Is pull down list, click the Down arrow.**
7. **In the window that appears, click the triangle (>) by the product folder icon to display the choices, then select the release of interest.**
8. **In the Patches Search box, click Search.**

   A list of product downloads (listed as patches) appears.
9. **Select the patch name of interest, for example Patch 10266805 for the Sun Fire X4470 SW 1.2.1 release.**
10. **In the right-side pane that appears, click Download.**

Documentation and Feedback

Documentation	Link
All Oracle documentation	(http://www.oracle.com/documentation)
Sun Fire X4470 Server	(http://www.oracle.com/pls/topic/lookup?ctx=E19694-01&id=homepage)
Oracle Integrated Lights Out Manager (ILOM) 3.0	(http://www.oracle.com/pls/topic/lookup?ctx=E19860-01&id=homepage)

You can provide feedback on this documentation at:

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

Support and Training

These web sites provide additional resources:

- Support (https://support.oracle.com)
- Training (https://education.oracle.com)

CHAPTER 1

Preparing to Install the Server

This chapter describes Oracle's Sun Fire X4470 Server hardware and the information you need to know before you begin to install the server into a rack. It includes the following topics:

Tools and Equipment Needed

To install the system, you need the following tools:

- No. 2 Phillips screwdriver
- ESD mat and grounding strap
- Pencil, stylus, or other pointed device, for pushing front panel buttons

You also need a system console device, such as one of the following:

- Sun workstation
- ASCII terminal
- Terminal server
- Patch panel connected to a terminal server

Server Installation Task Checklist

TABLE 1-1 summarizes an ordered list of tasks that you must perform to properly install the server.

TABLE 1-1 Installation Task Checklist

Step	Task Description	For Instructions, See:
1	Unpack the server and any optional components ordered for the server from the shipping containers.	"Opening the Box" on page 3
2	If applicable, install optional server components prior to installing the server into the rack.	*Sun Fire X4470 Server Service Manual*
3	Install the server into a rack.	Chapter 2
4	Connect cables and power cords to the server.	Chapter 3
5	Connect to Oracle ILOM and apply main power to the server.	Chapter 4
6	Get information about supported operating systems and available preinstalled operating system.	Chapter 5
	If applicable, install one of the following operating systems: • Oracle Linux • Red Hat Enterprise Linux (RHEL) • SUSE Linux Enterprise Server (SLES)	*Sun Fire X4470 Server Installation Guide for Linux Operating Systems*
	• Oracle Solaris 10 Operating System	*Sun Fire X4470 Server Installation Guide for Oracle Solaris Operating System*
	• Oracle VM • VMware ESX/ESXi	*Sun Fire X4470 Server Installation Guide for Virtual Machine Software*
	• Microsoft Windows Server 2008 SP2 Operating System • Microsoft Windows Server 2008 R2 Operating System	*Sun Fire X4470 Server Installation Guide for Windows Operating Systems*

Opening the Box

Carefully open the shipping box. Unpack all server components from the packing cartons.

Server Box Contents

The following items should be packaged with the Sun Fire X4470 Server:

- Sun Fire X4470 Server
- Power cord, packaged separately with country kit
- (Optional) Sun Fire X4470 Server Documentation and Media Kit, including the following:
  - *Sun Fire X4470 Server Installation Guide* (this document)
  - License and safety documentation
  - Tools and Drivers DVD (includes drivers and additional software), Oracle Hardware Installation Assistant CD, and SunVTS CD

Note – Oracle Hardware Installation Assistant was formerly referred to as Sun Installation Assistant (SIA).

- (Optional) Rackmount kit containing rack rails and installation instructions

Options

Power cables are packaged separately from the other items.

Required server components and most options are installed at the factory. However, some ordered options might be packaged separately. If possible, install optional components before installing the server in a rack. For instructions for installing server options, see the *Sun Fire X4470 Server Service Manual*.

ESD Precautions

Electronic equipment is susceptible to damage by static electricity. Use a grounded antistatic wrist strap, foot strap, or equivalent safety equipment to prevent electrostatic damage (ESD) when you install or service the server.

Caution – To protect electronic components from electrostatic damage, which can permanently disable the system or require repair by authorized service technicians, place components on an antistatic surface, such as an antistatic discharge mat, an antistatic bag, or a disposable antistatic mat. Wear an antistatic grounding strap connected to a metal surface on the chassis when you work on system components.

Server Description

This section shows the front and back of the Sun Fire X4470 Server.

Front Panel Features

FIGURE 1-1 shows the Sun Fire X4470 Server front panel and describes its components.

FIGURE 1-1 Sun Fire X4470 Server Front Panel

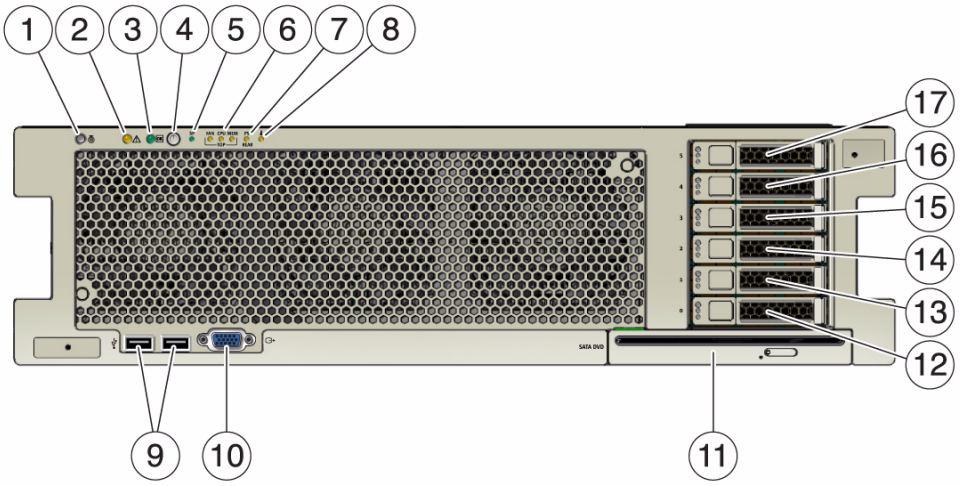


Figure Legend

1	Locator LED/Locator button: white	**10**	DB-15 video connector
2	Service Action Required LED: amber	**11**	SATA DVD drive (optional)
3	Main Power/OK LED: green	**12**	Hard disk drive 0 (optional)
4	Power button	**13**	Hard disk drive 1 (optional)
5	SP OK/Fault LED: green/amber	**14**	Hard disk drive 2 (optional)
6	Service Action Required LEDs (3) for Fan Module (FAN), Processor (CPU) and Memory: amber	**15**	Hard disk drive 3 (optional)
7	Power Supply (PS) Fault (Service Action Required) LED: amber	**16**	Hard disk drive 4 (optional)
8	Over Temperature Warning LED: amber	**17**	Hard disk drive 5 (optional)
9	USB 2.0 connectors (2)		

Back Panel Features

FIGURE 1-2 shows the Sun Fire X4470 Server back panel and describes its components.

FIGURE 1-2 Sun Fire X4470 Server Back Panel

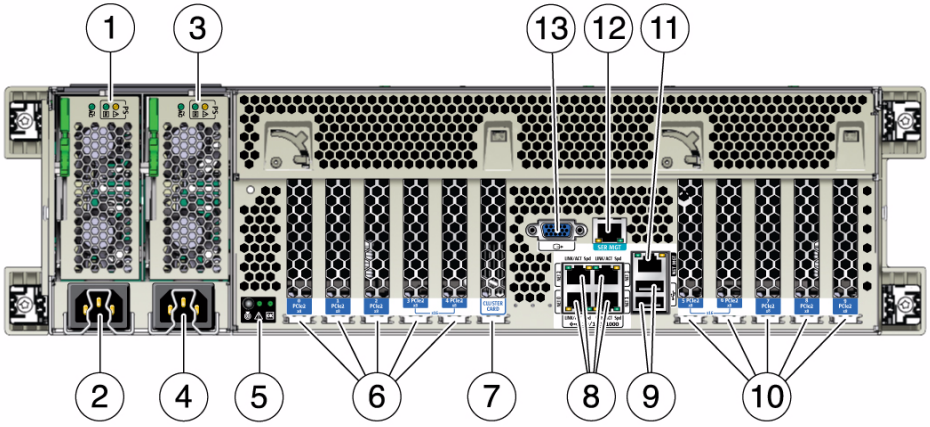


Figure Legend

1	Power supply unit 0 status indicator LEDs: Service Action Required: amber DC OK: green AC OK: green or amber	**8**	Network (NET) 10/100/1000 ports: NET0–NET3
2	Power supply unit 0 AC inlet	**9**	USB 2.0 connectors (2)
3	Power supply unit 1 status indicator LEDs: Service Action Required: amber DC OK: green AC OK: green or amber	**10**	PCIe card slots 5–9
4	Power supply unit 1 AC inlet	**11**	Service processor (SP) network management (NET MGT) port
5	System status LEDs: Power/OK: green Attention: amber Locate: white	**12**	Serial management (SER MGT)/RJ-45 serial port
6	PCIe card slots 0–4	**13**	DB-15 video connector
7	Cluster card slot		

Server Supported Components

This section describes the components that are supported in the Sun Fire X4470 Server.

Sun Fire X4470 Server Supported Components and Capabilities

The following table describes the components and capabilities of the Sun Fire X4470 Server.

TABLE 1-2 Sun Fire X4470 Server Components and Capabilities

Component	X4470 Server
CPU	Supported configurations: • Two processors installed in socket 0 and socket 2 • Four processors installed in sockets 0 through 3 For the latest information on CPU specifications, go to the following web site and navigate to the appropriate page: (http://www.oracle.com/technetwork/server-storage/sun-x86/overview/index.html)
Memory	Up to eight memory riser modules are supported (two risers per CPU) in the server chassis. Each riser module supports eight RDIMMs, allowing up to sixteen RDIMMs per processor. • A 2-socket system using four riser modules populated with 8-GB RDIMMs supports a maximum of 256 GB of system memory. • A 4-socket system using eight riser modules populated with 8-GB RDIMMs supports a maximum of 512 GB of system memory.
Storage devices	For internal storage, the server chassis provides: • Six 2.5-inch drive bays, accessible through the front panel. The supported drive interfaces for each bay depend on the host bus adapter (HBA) chosen. • An optional slot-loading DVD+/-RW drive on front of the server, below the drive bays. This SATA DVD connects to a USB-SATA bridge, so that is appears to the system software as a USB storage device. • One internal high-speed USB port on the motherboard. This port can hold a USB flash device for system booting.
USB 2.0 ports	Two front, two rear, and one internal
VGA ports	One front and one rear high-density DB-15 video port **Note -** The rear VGA port supports VESA Device Data Channel for monitor identification.
PCI Express 2.0 I/O slots	Ten PCI Express 2.0 slots that accommodate low-profile PCIe cards. All slots support x8 PCIe connectors. Two slots are also capable of supporting x16 PCIe connectors. • Slots 0 and 9: x4 electrical interface • Slots 1, 2, 4, 6, 7, and 8: x8 electrical interface • Slots 3 and 5: x8 or x16 electrical interface (x16 connector) **Note -** PCI Express slots 3 and 5 will operate as x16 interfaces only when an x16 capable card is installed and the adjacent slot (4 or 6) is unpopulated.

TABLE 1-2 Sun Fire X4470 Server Components and Capabilities *(Continued)*

Component	X4470 Server
Cluster card slot	One specialized slot dedicated for use in Sun Storage appliances. The Sun Fire X4470 does not support populating this slot with standard PCIe cards.
PCI Express I/O cards	For a list of I/O cards that are customer-orderable options, go to the following web site and navigate to the appropriate page: (http://www.oracle.com/technetwork/server-storage/sun-x86/overview/index.html)
Ethernet ports	Four 10/100/1000 RJ-45 GbE ports on rear panel Each Network Interface Controller (NIC) supports Intel QuickData Technology, Intel I/OAT, VMDq, PCI-SIG SR-IOV, IPSec offload, and LinkSec.
Service processor	Integrated Baseboard Management Controller (BMC), which supports the industry-standard IPMI feature set Supports remote KVMS, DVD and floppy over IP (optional license required) Includes serial port Supports Ethernet access to SP through a dedicated 10/100BaseT management port and optionally through one of the host GbE ports (sideband management)
Power supplies	Two hot-swappable power supplies, each with 2000 Watts capacity (from 200 Volts to 240 Volts), auto-ranging, light load efficiency mode and redundant over-subscription
Cooling fans	Six hot-swappable, redundant fans at chassis front (top-loading); redundant fans in each power supply
Management software	Oracle Integrated Lights Out Manager (ILOM)

Server Specifications

Physical Specifications

TABLE 1-3 lists the physical specifications for the Sun Fire X4470 Server.

TABLE 1-3 Server Physical Specifications

Parameter	Sun Fire X4470 Server
Height	5.11 inches/129.85 mm

TABLE 1-3 Server Physical Specifications

Parameter	Sun Fire X4470 Server
Width	17.19 inches/436.5 mm
Depth	28.82 inches/732 mm
Weight	83 lbs max, 58 lbs min/37.65 kg max, 26.31 kg min

Electrical Specifications

TABLE 1-4 lists the electrical specifications for the Sun Fire X4470 Server.

Note – For up to date information on power consumption, go to the following web site and navigate to the appropriate page: (http://www.oracle.com/technetwork/server-storage/sun-x86/overview/index.html).

TABLE 1-4 Server Electrical Specifications

Parameter	Value
Input	
Nominal frequencies	50/60 Hz
AC operating voltage range	100-127 VAC for 2 CPUs 200-240 VAC for 2 or 4 CPUs
Maximum current AC RMS	12A @ 100 VAC / 12A @ 200 VAC
Power dissipation	
Max power consumption	1800 W
Max heat output	6143 BTU/hr
Volt-Ampere rating	1837 VA @ 240 VAC, 0.98 P.F.

Environmental Requirements

TABLE 1-5 lists the environmental requirements for the Sun Fire X4470 Server.

TABLE 1-5 Server Environmental Requirements

Parameter	Value
Operating temperature (single, non-rack system)	5° C to 35° C (41° F to 95° F)
Non-operating temperature (single, non-rack system)	-40° C to 70° C (-40° F to 158° F)
Operating humidity (single, non-rack system)	10% to 90% relative humidity, non-condensing
Non-operating humidity (single, non-rack system)	Up to 93% relative humidity, non-condensing
Operating altitude (single, non-rack system)	Up to 3048 m, maximum ambient temperature is derated by 1 degree C per 300 m above 900 m
Non-operating altitude (single, non-rack system)	Up to 12,000 m

Managing Your Server

After you have installed your server, you have several different options for managing it depending on your situation.

- Managing many servers

  Your server can be managed with a wide variety of system management tools. For more information on the system management tools, see the information at (http://www.oracle.com/goto/system-management)

  Here is a sampling of some of these tools:

  - If your server is one of many x86 and SPARC servers that you want to manage from a single interface, you can use the Oracle Enterprise Manager Ops Center. For more details, see (http://www.oracle.com/us/products/enterprise-manager/opscenter/index.html)

- If you want to monitor your enterprise servers, you can take advantage of Sun Management Center. For more details, see (http://www.oracle.com/technetwork/systems/patches/sysmgmt/smc-jsp-138444.html)
- If you already have third-party system management tools, the servers can integrate with many third-party tools. For more details, see (http://www.oracle.com/goto/system-management)

- Managing a single server
  - Oracle Hardware Installation Assistant is an application that you can use for initial server configuration. This application helps you to update firmware (Oracle ILOM firmware, BIOS, and RAID controller software) and to automate installation of a Linux or Windows operating system. For more details, see the *Sun Installation Assistant 2.3 through 2.4 User's Guide for x64 Servers* at: (http://www.oracle.com/pls/topic/lookup?ctx=E19593-01&id=homepage)

Note – Oracle Hardware Installation Assistant was formerly referred to as *Sun Installation Assistant (SIA)*.

  - Oracle Integrated Lights Out Manager (ILOM) is built-in software and hardware that you can use to monitor the status and configuration of your server. For more information, see the Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection at:

    (http://www.oracle.com/pls/topic/lookup?ctx=E19860-01&id=homepage)

CHAPTER 2

Installing the Server Into a Rack With Slide-Rails

This chapter describes how to place the server into a rack using the rail assembly in the rackmount kit. Perform these procedures if the rail assembly is purchased.

This chapter includes the following topics:

Note – In this guide, the term rack means either an open rack or a closed cabinet.

Before You Begin

Read the following overview and see the service label on the top cover before you begin to install the server into a rack.

Server Installation Process Overview

To install your server into a four-post rack using the slide-rail and cable management arm options, perform the following tasks in the order listed.

1. "Rack Compatibility" on page 14
2. "Disassembling Slide-Rails" on page 16
3. "Installing the Mounting Brackets Onto the Server" on page 17
4. "Installing the Cable Management Arm" on page 24
5. "Verifying Operation of the Slide-Rails and CMA" on page 29
6. "Back Panel Connectors and Ports" on page 31

Rack Compatibility

Check that your rack is compatible with the slide-rail and cable management arm (CMA) options. The optional slide-rails are compatible with a wide range of equipment racks that meet the following standards.

TABLE 2-1 Rack Compatibility

Item	Requirement
Structure	Four-post rack (mounting at both front and rear). Two-post racks are not compatible.
Rack horizontal opening and unit vertical pitch	Conforms to ANSI/EIA 310-D-1992 or IEC 60927 standards. Only M6 tapped or 9.5 mm square are supported.
Distance between front and rear mounting planes	Minimum 610 mm and maximum 915 mm (24 inches to 36 inches).
Clearance depth in front of front mounting plane	Distance to front cabinet door is at least 25.4 mm (1 inch).

TABLE 2-1 Rack Compatibility *(Continued)*

Item	Requirement
Clearance depth behind front mounting plane	Distance to rear cabinet door is at least 900 mm (35.5 inches) with the cable management arm, or 770 mm (30.4 inches) without the cable management arm.
Clearance width between front and rear mounting planes	Distance between structural supports and cable troughs is at least 456 mm (18 inches).
Server dimensions	Depth: (not including PSU handle): 732 mm (28.82 inches) Width: (not including ears): 436.5 mm (17.19 inches) Height: 129.85 mm (5.11 inches)

Caution – Equipment Loading: Always load equipment into a rack from the bottom up so that the rack will not become top-heavy and tip over. Deploy your rack's anti-tip bar to prevent the rack from tipping during equipment installation.

Caution – Elevated Operating Ambient Temperature: If the server is installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment might be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified for the server. For server environmental requirements, see "Environmental Requirements" on page 10.

Caution – Reduced Air Flow: Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

Caution – Mechanical Loading: Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Caution – Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over-current protection and supply wiring. Appropriate consideration of equipment nameplate power ratings should be used when addressing this concern.

Caution – Reliable Earthing: Reliable earthing of rackmounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (for example, use of power strips).

Caution – Slide-rail mounted equipment is not to be used as a shelf or a work space.

Disassembling Slide-Rails

Complete the following procedures to disassemble the slide-rails before installation.

▼ Disassemble Slide-Rails

To remove the mounting brackets from the slide-rail assemblies:

1. **Unpack the slide-rails.**
2. **Locate the slide-rail lock at the front of one of the slide-rail assemblies (**FIGURE 2-1**).**
3. **Press and hold the slide-rail lock toward the direction of the arrow, while you pull the mounting bracket out of the slide-rail assembly until it reaches the stop (**FIGURE 2-1**).**
4. **Push the mounting bracket release button toward the front of the mounting bracket (**FIGURE 2-1**), and simultaneously withdraw the mounting bracket from the slide-rail assembly.**
5. **Repeat for the remaining slide-rail assembly.**

FIGURE 2-1 Disassembling the Slide-Rail Before Installation

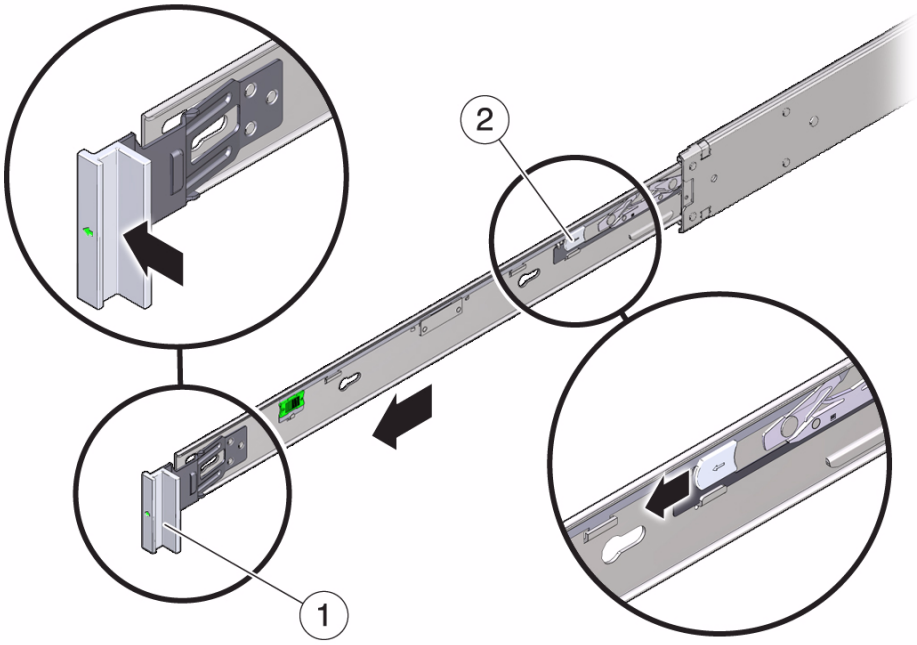


Figure Legend

1	Slide-rail lock
2	Mounting bracket release button

Installing the Mounting Brackets Onto the Server

You must install the mounting brackets onto the server before you can rackmount the server.

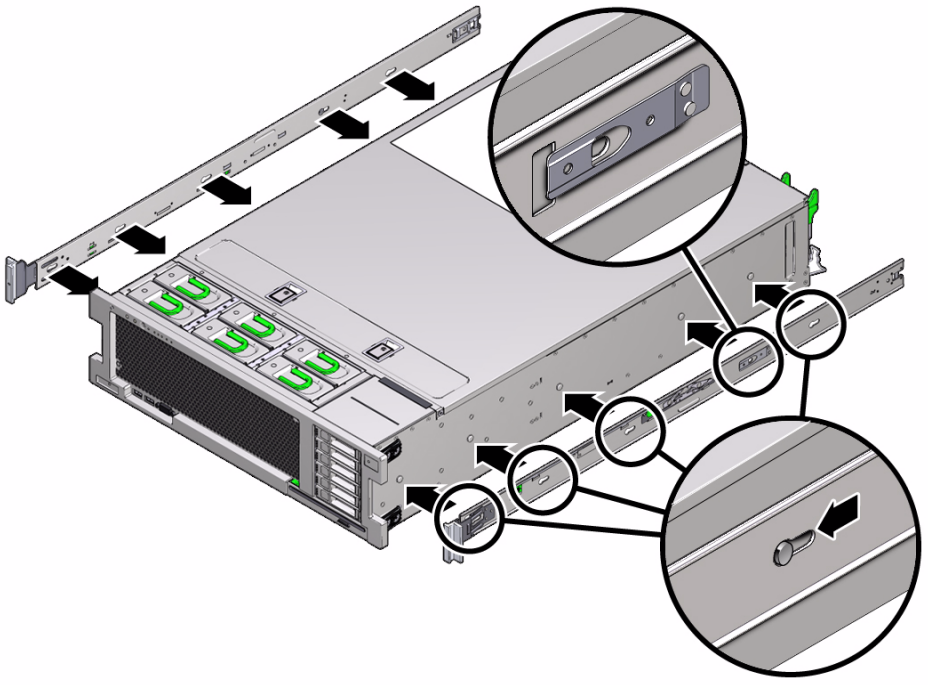
▼ Install Mounting Brackets

To install the mounting brackets onto the sides of the server:

1. **Position a mounting bracket against the chassis so that the slide-rail lock is at the server front, and the five keyhole openings on the mounting bracket are aligned with the five locating pins on the side of the chassis (**FIGURE 2-2**).**

Note – The mounting brackets are identical and can be installed on either side of the chassis.

FIGURE 2-2 Aligning the Mounting Bracket With the Server Chassis



2. **With the heads of the five chassis locating pins protruding though the five keyhole openings in the mounting bracket, pull the mounting bracket toward the front of the chassis until the mounting bracket clip locks into place with an audible click (**FIGURE 2-2**).**
3. **Verify that the rear locating pin has engaged the mounting bracket clip.**
4. **Repeat to install the remaining mounting bracket on the other side of the server.**

Attaching the Slide-Rail Assemblies to the Rack

Complete the following procedures to attach the slide-rail assemblies to the rack.

Note – The slide rail assemblies support only racks with 9.5-mm square holes and M6 round holes. All other racks, including those racks with 7.2-mm, M5, or 10-32 mounting holes, are *not* supported. Refer to your rack documentation for information about the size of its rail holes.

▼ Attach Slide-Rail Assemblies

To attach slide-rail assemblies to the rack:

1. **(Optional) If you need to move the rack with the server installed, it is recommended that you attach the slide-rail assembly with mounting screws and cage nuts.**

   Insert the cage nuts prior to performing Step 2. Refer to the *Rail Rackmount Kit Overview and Information* card for instructions on inserting these cage nuts. This card is included with the rack kit.

2. **Position a slide-rail assembly in your rack so that the slide-rail assembly front bracket is on the outside of the front rack post and the slide-rail assembly rear bracket is on the inside of the rear rack post (**FIGURE 2-3**).**

3. **Align the slide-rail assembly mounting pins with the front and rear rack post mounting holes. Then lock the assembly into place by pushing the assembly toward the rear of the rack until the mounting pins engage the rack (**FIGURE 2-3 **and** FIGURE 2-4**).**

   You will hear an audible click when the mounting pins engage the rack.

Note – The slide assembly mounting pins accommodate either 9.5 mm square mounting holes or M6 round mounting holes. No other mounting hole sizes are supported.

FIGURE 2-3 Installing Slide-Rail Assemblies Onto Rack

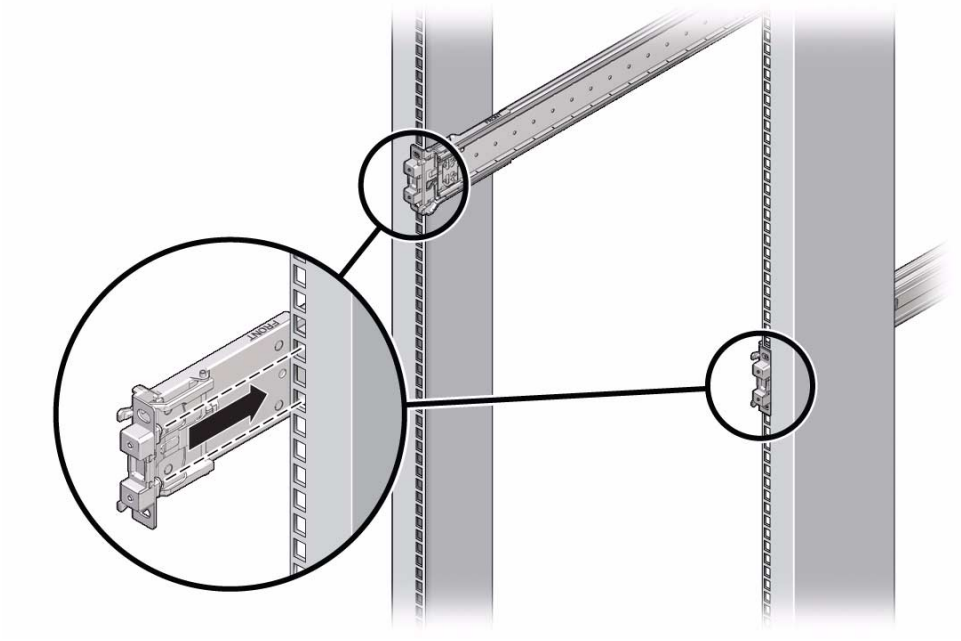
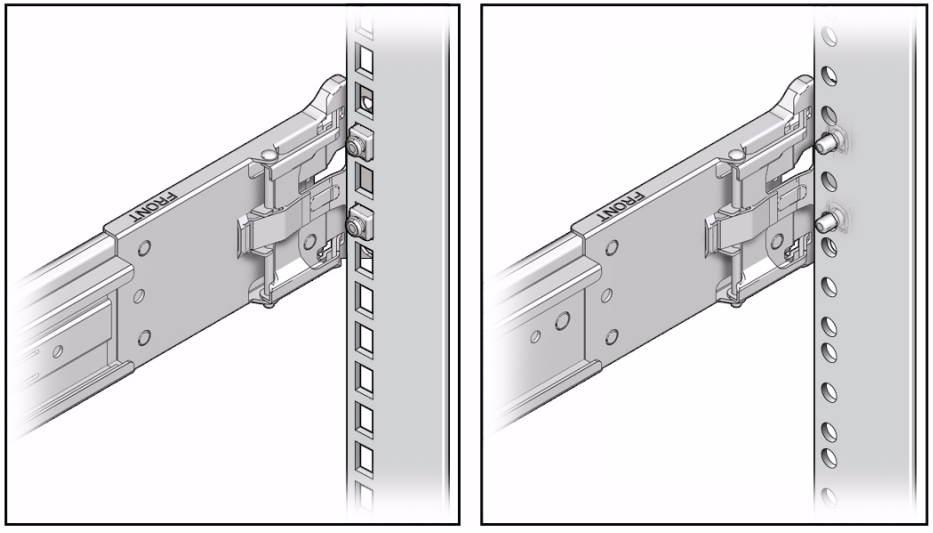
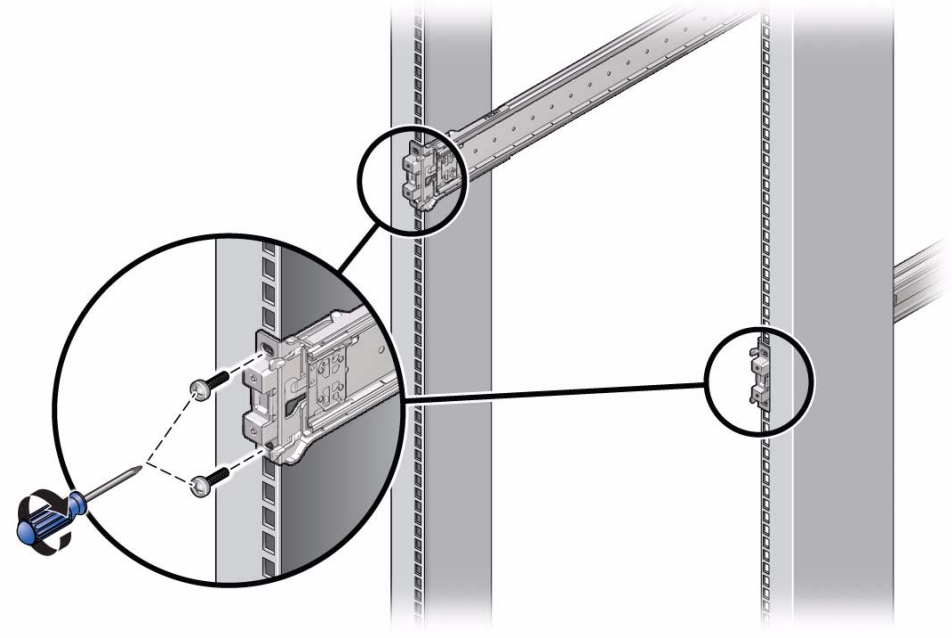


FIGURE 2-4 Slide-Rail Mounting Pins



4. **(Optional) If you choose to attach the slide-rail assembly with mounting screws and cage nuts, insert the M6 mounting screws through both front and rear slide-rail brackets and rack posts, then secure them with the caged nuts. (**FIGURE 2-5**).**

FIGURE 2-5 Attaching Slide-Rail Assembly to Rack

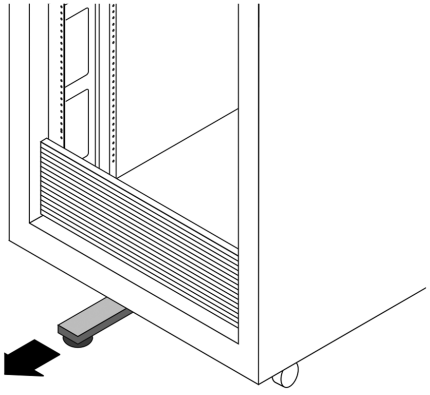


5. **Repeat** Step 2 **through** Step 4 **for the remaining slide-rail assembly.**

6. **If available, extend the anti-tip bar at the bottom of the rack (**FIGURE 2-6**).**

   Refer to your rack documentation for instructions.

FIGURE 2-6 Extending the Anti-tip Bar



Caution – If your rack does not have an anti-tip bar, the rack could tip over.

Installing the Server Into the Slide-Rail Assemblies

Use this procedure to install the server chassis, with mounting brackets, into the slide-rail assemblies that are mounted to the rack.

Caution – This procedure requires a minimum of two people because of the weight of the server. Attempting this procedure alone could result in equipment damage or personal injury.

Caution – Always load equipment into a rack from the bottom up so that the rack will not become top-heavy and tip over. Extend your rack's anti-tip bar to prevent the rack from tipping during equipment installation.

▼ Install Server Into the Slide-Rail Assemblies

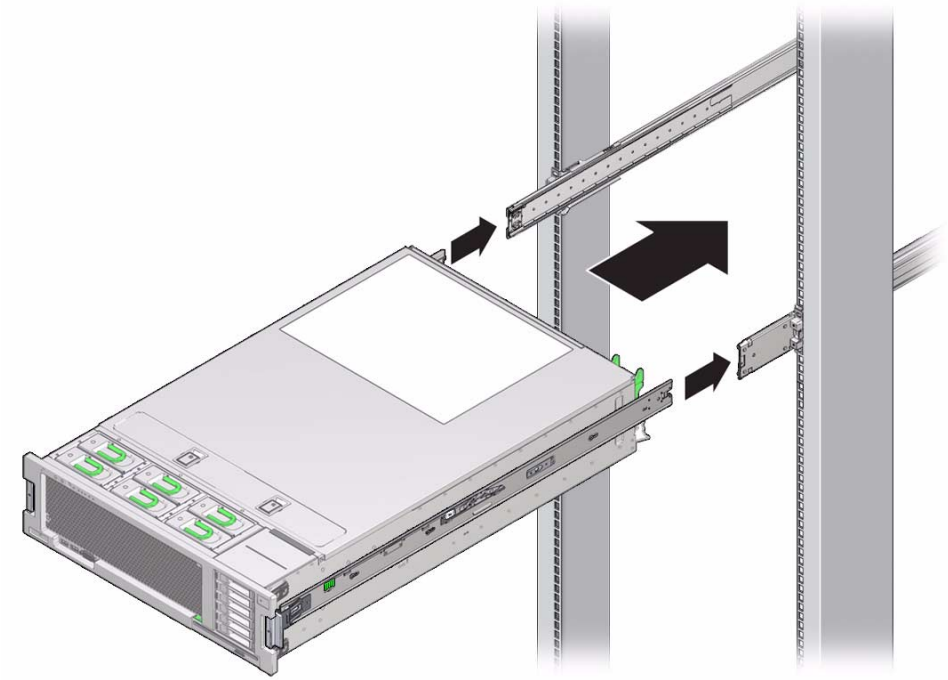
1. **Push the slide-rails into the slide-rail assemblies on the rack as far as possible.**

2. **Raise the server so that the rear ends of the mounting brackets are aligned with the slide-rail assemblies that are mounted in the rack (**FIGURE 2-7**).**

3. **Insert the mounting brackets into the slide-rails, then push the server into the rack until the mounting brackets encounter the slide-rail stops (approximately 12 inches, or 30 cm).**

Caution – When inserting the server into the slide-rail, ensure that both the top and bottom mounting lips of the mounting brackets are inserted into the slide-rail. The server should slide forward and backward easily if correctly installed. If the unit does not slide easily, ensure that each mounting lip is inserted properly. If the mounting brackets are not inserted properly, the unit may fall when removing it from the rack.

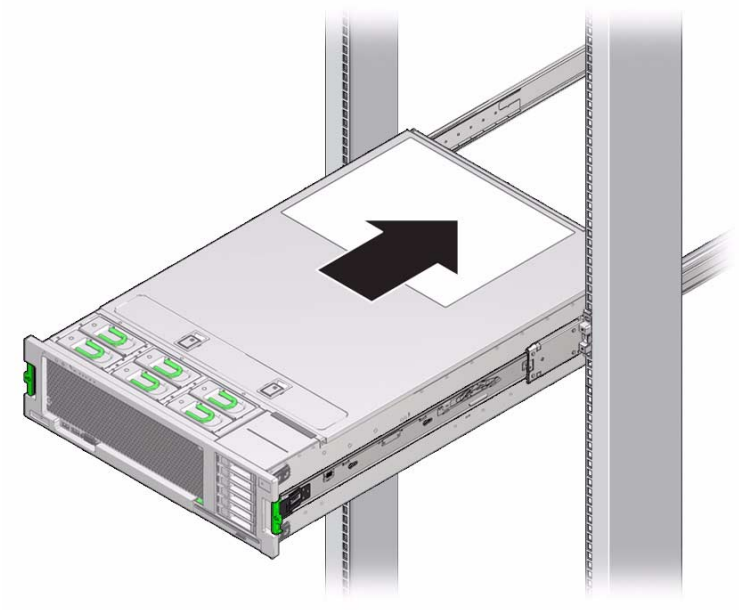
FIGURE 2-7 Inserting the Server With Mounting Brackets Into the Slide-Rails



4. **Simultaneously push and hold the green slide-rail release buttons (**FIGURE 2-1**) on each mounting bracket while you push the server into the rack (**FIGURE 2-8**). Continue pushing until the slide-rail locks (on the front of the mounting brackets) engage the slide-rail assemblies.**

   You will hear an audible click.

FIGURE 2-8 Sliding the Server Into Rack



Caution – Verify that the server is securely mounted in the rack and that the slide-rail locks are engaged with the mounting brackets before continuing.

Installing the Cable Management Arm

The cable management arm (CMA) is an optional assembly that you can use to route the server cables in the rack.

▼ Install Cable Management Arm

Use this procedure to install the optional CMA.

1. **Unpack the CMA parts.**
2. **Take the CMA to the back of the equipment rack and ensure that you have adequate room to work around the back of the server.**

Note – References to “left” or “right” in this procedure assume that you are facing the back of the equipment rack.

3. **Remove tape to separate the parts of the CMA.**

4. **Insert the CMA’s mounting bracket connector into the right slide-rail until the connector locks into place with an audible click (**FIGURE 2-9**).**

FIGURE 2-9 Inserting the CMA Mounting Bracket Into the Back of the Right Slide-Rail

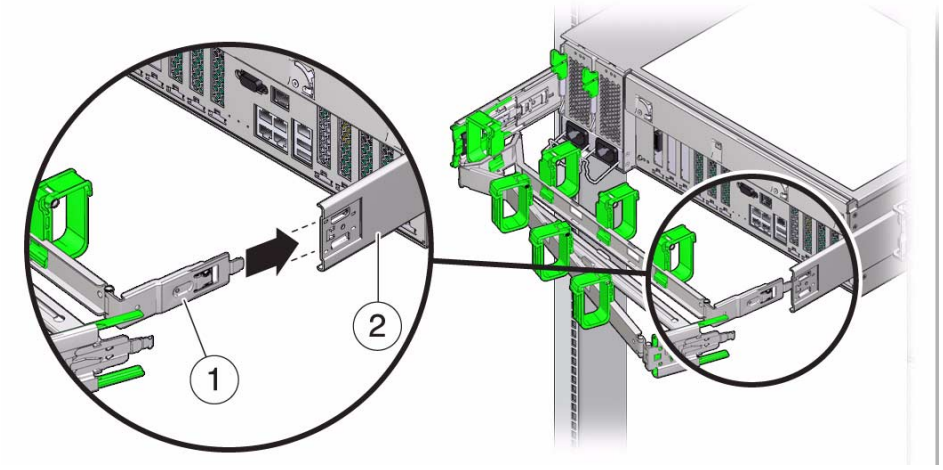


Figure Legend

1	CMA mounting bracket
2	Right slide-rail

5. **Insert the right CMA slide-rail connector into the right slide-rail assembly until the connector locks into place with an audible click (**FIGURE 2-10**).**

FIGURE 2-10 Inserting CMA Slide-Rail Connector Into the Back of the Right Slide-Rail

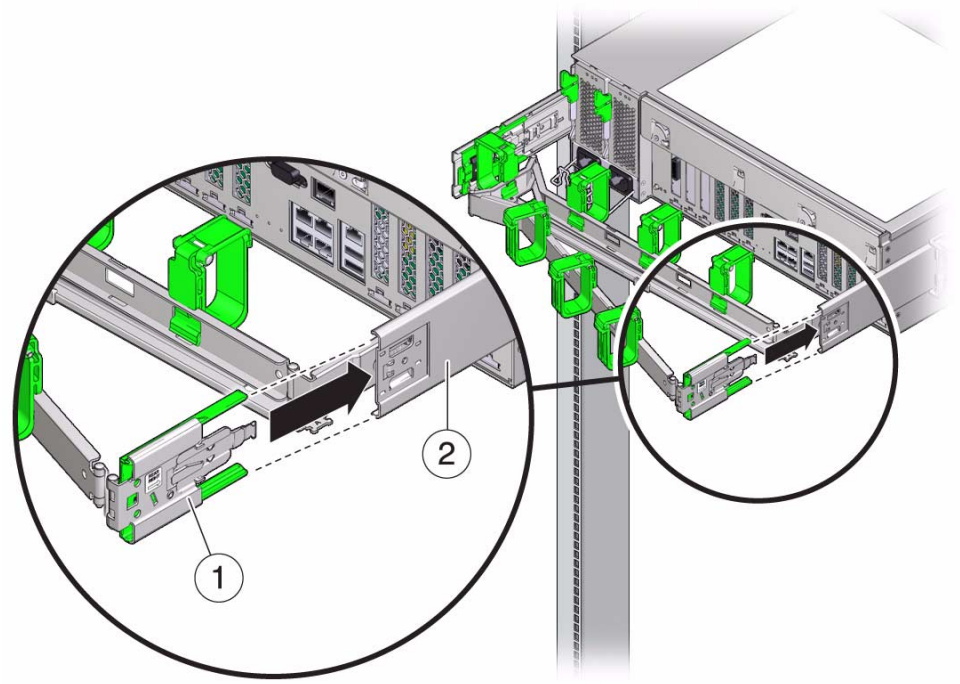


Figure Legend

1	CMA slide-rail connector
2	Right slide-rail

6. **Insert the left CMA slide-rail connector into the left slide-rail assembly until the connector locks into place with an audible click (**FIGURE 2-11**).**

FIGURE 2-11 Inserting the CMA Slide-Rail Connector Into the Back of the Left Slide-Rail

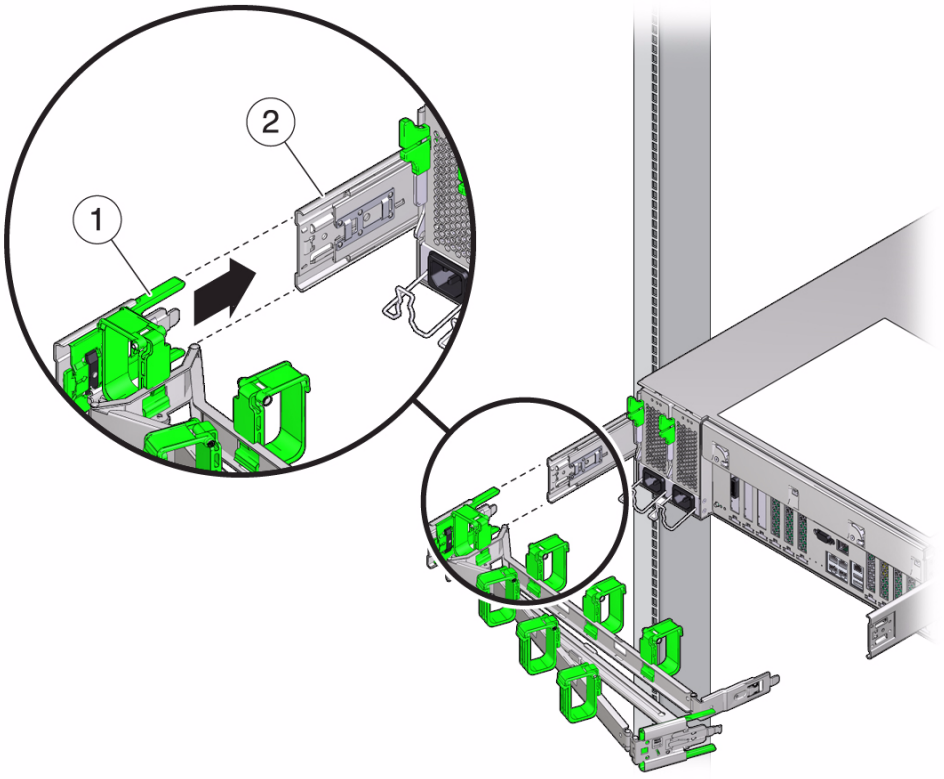


Figure Legend

1	CMA slide-rail connector
2	Left slide-rail

7. Install and route cables to your server, as required.

Note – Instructions for installing the server cables are provided in "Back Panel Connectors and Ports" on page 31.

8. If required, attach the cable hook and loop straps to the CMA, and press them into place to secure the cables (FIGURE 2-12**).**

Note – Cable hooks and loop straps are preinstalled on the CMA. Perform the procedure in this step if you need to reinstall cable hooks and straps on the CMA.

For best results, place three cable straps, evenly spaced, on the rear-facing side of the CMA and three cable straps on the side of the CMA nearest the server.

FIGURE 2-12 Installing CMA Cable Straps

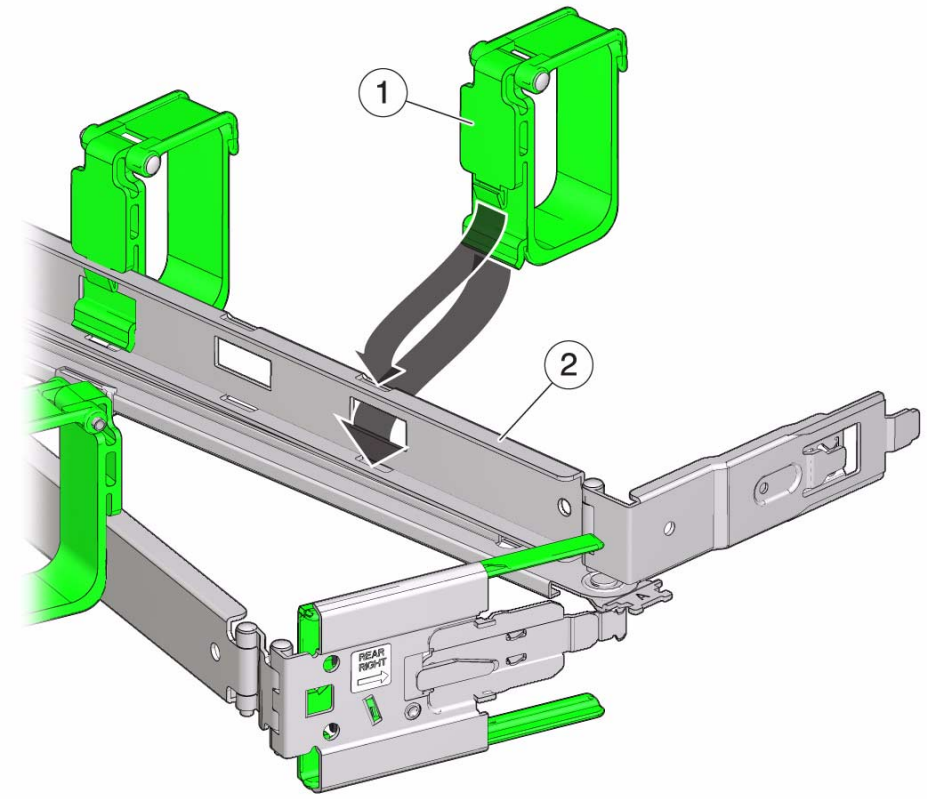


Figure Legend

1	CMA cable strap
2	CMA arm

Verifying Operation of the Slide-Rails and CMA

Use the following procedure to ensure that the slide-rails and CMA are operating correctly.

▼ Verify Operation of Slide-Rails and CMA

Note – Two people are recommended for this procedure: one to move the server in and out of the rack, and one to observe the cables and CMA.

---

1. **Slowly pull the server out of the rack until the slide-rails reach their stops.**
2. **Inspect the attached cables for any binding or kinks.**
3. **Verify that the CMA extends fully from the slide-rails.**
4. **Push the server back into the rack, as described in the following sub-steps.**

   When the server is fully extended, you must release two sets of slide-rail stops to return the server to the rack:

   a. **The first set of stops are levers, located on the inside of each slide-rail, just behind the back panel of the server. Push in both green levers simultaneously and slide the server toward the rack.**

      The server will slide in approximately 18 inches (46 cm) and stop.

      Verify that the cables and the CMA retract without binding before you continue.

   b. **The second set of stops are the slide-rail release buttons, located near the front of each mounting bracket (**FIGURE 2-1**). Simultaneously push both of the green slide-rail release buttons, and push the server completely into the rack until both slide-rail locks engage.**

5. **Adjust the cable straps and CMA, as required.**

CHAPTER 3

Attaching Cables and Power Cords

This chapter describes how to connect cables and power on the server for the first time. It includes the following topics:

Back Panel Connectors and Ports

FIGURE 3-1 shows and describes the locations of the server back panel connectors and ports.

FIGURE 3-1 Back Panel Connectors and Ports

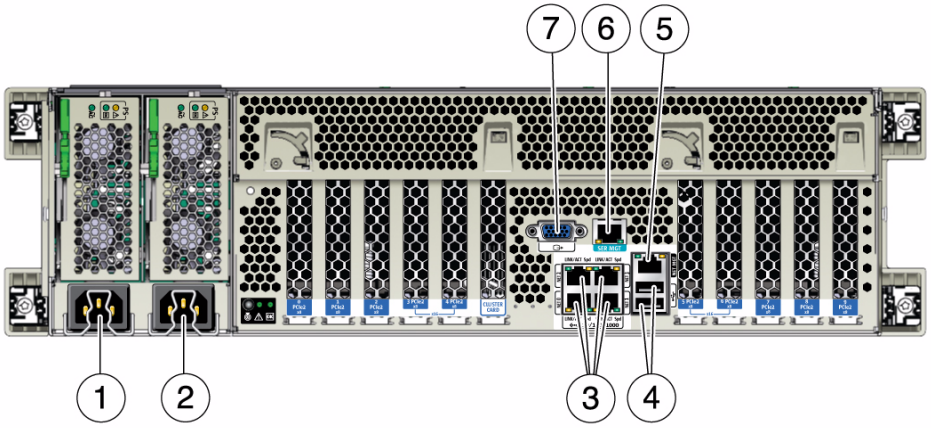


Figure Legend

1	Power supply unit 0 AC inlet	**5**	Service processor (SP) network management (NET MGT) Ethernet port
2	Power supply unit 1 AC inlet	**6**	Serial management (SER MGT)/RJ-45 serial port
3	Network (NET) 10/100/1000 ports: NET0–NET3	**7**	DB-15 video connector
4	USB 2.0 connectors (2)		

Attaching Cables to the Server

Use the following procedure to attach cables to the sever.

▼ Cable the Server

Connect external cables to the server in the following order. Refer to FIGURE 3-1.

1. **Connect an Ethernet cable to the Gigabit Ethernet (NET) connectors as needed for OS support [3].**
2. **(Optional) If you plan to interact with the system console directly, connect any external devices, such as mouse and keyboard, to the server's USB connectors [4], and/or a monitor to the DB-15 video connector [7].**

3. **If you plan to connect to the Oracle Integrated Lights Out Manager (ILOM) software over the network, connect an Ethernet cable to the Ethernet port labeled NET MGT [5].**

Note – The service processor (SP) uses the NET MGT (out-of-band) port by default. You can configure the SP to share one of the server's four 10/100/1000 Ethernet ports instead. The SP uses only the configured Ethernet port.

---

4. **If you plan to access the Oracle ILOM command-line interface (CLI) using the serial management port, connect a serial null modem cable to the RJ-45 serial port labeled SER MGT [6].**

   See "Log In to Oracle ILOM Using a Serial Connection" on page 36 for more information about viewing system output from a serial console.

Connecting Power Cords to the Server

Use this procedure to connect power cords to the server. When the power cords are connected, the server will be in standby power mode.

Note – By default, only a two-CPU system will operate from low-line (100 to 127 Volt) AC sources. The system requires high-line (200 to 240 Volt) AC sources to turn on main power of a four-CPU system.

▼ Connect the Power Cords

1. **Connect two grounded server power cords to grounded electrical outlets.**

2. **Connect the two server power cords to the AC connectors on the back panel of the server (**FIGURE 3-1 **[1, 2]).**

   When power is connected, the server boots into standby power mode. The SP OK/Fault LED flashes while Oracle ILOM is starting, and the main Power/OK LED remains off until Oracle ILOM is ready for system log in (FIGURE 3-2). After a few minutes, the main Power/OK LED slowly flashes the standby pattern, indicating the service processor (SP) is working. Note that the server is not initialized or powered on yet.

FIGURE 3-2 Front Panel Indicators and Power Button

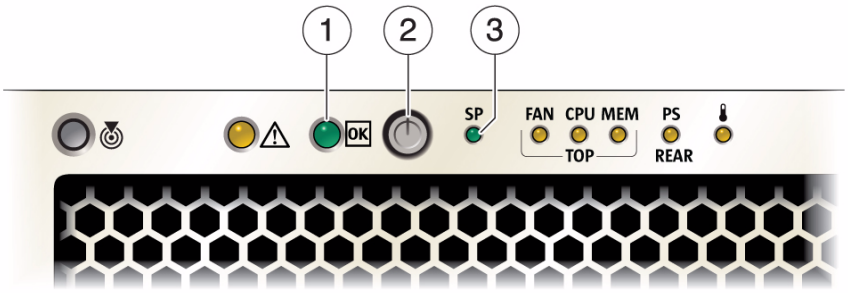


Figure Legend

1	Main Power/OK LED
2	Power Button
3	SP OK/Fault LED

CHAPTER 4

Connecting to Oracle ILOM and Applying Main Power to the Server

This chapter describes how to access the Oracle Integrated Lights Out Manager (ILOM) command-line interface (CLI) to manage the server. It also describes how to apply main power to the server.

This chapter contains the following topics:

Note – This chapter describes how to connect to the Oracle ILOM command-line interface (CLI). Oracle ILOM is also available as a web interface (BUI). For instructions on using the web interface, and for complete instructions on using Oracle ILOM, refer to the Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection.

Connecting to Oracle ILOM

This section describes how to configure the IP address for the server using Oracle Integrated Lights Out Manager (ILOM). It contains the following topics:

Network Defaults

The Sun Fire X4470 supports dual-stack IPv4 and IPv6 settings, which enable Oracle ILOM to fully operate in an IPv4 and IPv6 network environment. For IPv4 configurations, DHCP is enabled by default, allowing a DHCP server on the network to automatically assign network settings to the server. For IPv6 configurations, IPv6 stateless auto-configuration is enabled by default, allowing an IPv6 router on the network to assign the network settings. In a typical configuration, you will accept these settings assigned by the DHCP server or IPv6 router.

Note – To determine the IP address or host name assigned by the DHCP server, use the network tools provided with the DHCP server or IPv6 router.

The procedures in this section enable you to test that the assigned settings are working correctly and to establish a connection to Oracle ILOM locally and remotely. To log in locally, see "Log In to Oracle ILOM Using a Serial Connection" on page 36. To log in remotely, use the IP address, hostname, or IPv6 local link name assigned to the server SP and follow the instructions in "Log In to Oracle ILOM Using an Ethernet Connection" on page 37.

▼ Log In to Oracle ILOM Using a Serial Connection

This procedure does not require that you know the IP address of the sever SP. It does require that you have an Oracle ILOM Administrator account.

Note – The default Oracle ILOM Administrator account shipped with the server is `root` and its password is `changeme`. If this default Administrator account has since been changed, contact your system administrator for an Oracle ILOM user account with Administrator privileges.

---

1. **Verify that your serial console connection to the server is secure and operational.**
2. **Ensure that the following serial communication settings are configured:**
   - 8N1: eight data bits, no parity, one stop bit
   - 9600 baud
   - Disable hardware flow control (CTS/RTS)

3. **Press Enter to establish a connection between your serial console and Oracle ILOM.**

   A login prompt to Oracle ILOM appears.

4. **Log in to the Oracle ILOM command-line interface (CLI) using an Administrator account.**

   Oracle ILOM displays a default command prompt (->), indicating that you have successfully logged in to Oracle ILOM.

▼ Log In to Oracle ILOM Using an Ethernet Connection

This procedure requires that you have an Oracle ILOM Administrator account and that you know the IP address or hostname of the server SP.

Note – The default Oracle ILOM Administrator account shipped with the server is `root` and its password is `changeme`. If this default Administrator account has since been changed, contact your system administrator for an Oracle ILOM user account with Administrator privileges.

---

1. **Using a secure shell (SSH) session, log in to Oracle ILOM by specifying your Administrator account user name and the IP address of the server SP.**

   For example:

   `ssh -1` *username host*

   or

   `ssh` *username***`@`***host*

   Where host is either an IP address or a hostname (when using DNS).

   The Oracle ILOM password prompt appears.

2. **Type a password for the Administrator account.**

   For example:

   ```
   ssh root@192.168.25.25
   root@192.168.25.25's password: changeme
   ```

   Oracle ILOM displays a default command prompt (->), indicating that you have successfully logged in to Oracle ILOM.

▼ Modify Network Settings

If you want to modify the network settings currently configured for the server, use the following procedure.

Note – You can also change network settings using the BIOS Setup Utility. For instructions, see the *Sun Fire X4470 Service Manual*.

---

1. **Log in to Oracle ILOM using one of the methods in** "Log In to Oracle ILOM Using a Serial Connection" on page 36 **or** "Log In to Oracle ILOM Using an Ethernet Connection" on page 37**.**

Note – If you log in to Oracle ILOM using an Ethernet connection, after you modify the network settings, your connection will be terminated, and you will have to log back in using the new settings.

---

2. **Perform the network configuration instructions that apply to your network environment, then test the network settings:**
   - To view or configure IPv4 network settings, perform Step 3 to Step 4.
   - To view or configure IPv6 network settings, perform Step 5 to Step 8.
   - To test the IPv4 or IPv6 network settings, see "Test IPv4 or IPv6 Network Configuration" on page 42.
3. **For IPv4 network configurations, use the** `cd` **command to navigate to the** `/network` **directory:**

   -> **`cd /SP/network`**
4. **Do one of the following:**
   - If you have a DHCP server on the network, type the following command to view the settings assigned to the server by the DHCP server:

     -> **`show /SP/network`**
   - If there is no DHCP server, or if you want to assign settings, use the `set` command to assign values for the properties listed in the following table. For example:

     -> **`set /SP/network/ pendingipdiscovery=static`**

     -> **`set /SP/network/ pendingipaddress=`**10.8.183.106

     -> **`set /SP/network/ pendingipnetmask=`**255.255.255.0

     -> **`set /SP/network/ pendingipgateway=`**10.8.183.254

```
-> set /SP/network/ commitpending=true
```

Property	Set Property Value	Description
state	set state=enabled	The network state is enabled by default.
pendingipdiscovery	set pendingipdiscovery=static	To enable a static network configuration, set pendingipdiscovery to static. By default, pendingipdiscovery is set to dhcp.
pendingipaddress pendingipnetmask pendingipgateway	set pendingipaddress=<*ip_address*> pendingipnetmask=<*netmask*> pendingipgateway=<*gateway*>	To assign multiple static network settings, type the set command followed by the pending command for each property value (IP address, netmask, and gateway), then type the static value that you want to assign.
commitpending	set commitpending=true	Type set commitpending=true to commit changes.

Note – If you are logged in to Oracle ILOM using an Ethernet connection, when you set commitpending to true to commit the changes to the network settings, your Oracle ILOM connection will be terminated and you will have to log back in using the new settings.

5. **For IPv6 network configurations, use the** cd **command to navigate to the** /network/ipv6 **directory:**

   -> **cd SP/network/ipv6**

6. **Type the** show **command to view the IPv6 network settings configured on the device.**

   For example, see the following sample output values for the IPv6 properties on a server SP device.

```
-> show
/SP/network/ipv6
Targets:

Properties:
```

```
  state = enabled
  autoconfig = stateless
  dhcpv6_server_duid = (none)
  link_local_ipaddress = fe80::214:4fff:feca:5f7e/64
  static_ipaddress = ::/128
  ipgateway = fe80::211:5dff:febe:5000/128
  pending_static_ipaddress = ::/128
  dynamic_ipaddress_1 fec0:a:8:b7:214:4fff:feca:5f7e/64

 Commands:
  cd
  show
```

7. To configure an IPv6 auto-configuration option, use the `set` command to specify the following auto-configuration property values:

Property	Set Property Value	Description
`state`	`set state=enabled`	The IPv6 network state is enabled by default. To enable an IPv6 auto-configuration option this state must be set to enabled.
`autoconfig`	`set autoconfig=<`*value*`>`	Specify this command followed by the autoconfig value you want to set. Options include: • `stateless` (default setting) Automatically assigns IP address learned from IPv6 network router. • `dhcpv6_stateless` Automatically assigns DNS information learned from the DHCPv6 server. The dhcpv6_stateless property value is available in Oracle ILOM as of 3.0.14. • `dhcpv6_stateful` Automatically assigns the IPv6 address learned from the DHCPv6 server. The dhcpv6_stateful property value is available in Oracle ILOM as of 3.0.14 • `disable` Disables all auto-configuration property values and sets the read-only property value for link local address

Note – The IPv6 configuration options take affect after they are set. You do not need to commit these changes under the `/network` target.

Note – You can enable the `stateless` auto-configuration option to run at the same time as when the option for `dhcpv6_stateless` is enabled or as when the option for `dhcpv6_stateful` is enabled. However, the auto-configuration options for `dhcpv6_stateless` and `dhcpv6_stateful` should not be enabled to run at the same time

8. **To set a static IPv6 address, complete these steps:**

   a. **Specify the following property types:**

Property	Set Property Value	Description
`state`	`set state=enabled`	The IPv6 network state is enabled by default. To enable a static IP address this state must be set to enabled.
`pendingipaddress`	`set pending_static_ipaddress =`*<ip6_address>*`/`*<subnet mask length in bits>*	Type this command followed by the property value for the static IPv6 address and netmask that you want to assign to the device. IPv6 address example:`fec0:a:8:b7:214:4fff:feca:5f7e/64`

   b. **Commit the pending IPv6 static network parameters by typing the following command:**

      -> **`set commitpending=true`**

Note – Network settings are considered pending until you commit them. Assigning a new static IP address to the device will end all active Oracle ILOM sessions to the device. To log back in to Oracle ILOM, you will need to create a new session using the newly assigned IP address.

9. **Test the IPv4 or IPv6 network configuration from Oracle ILOM using the Network Test Tools (Ping and Ping6).**

   For details, see "Test IPv4 or IPv6 Network Configuration" on page 42.

▼ Test IPv4 or IPv6 Network Configuration

1. **At the CLI prompt, type the** `show` **command to view the network** `test` **targets and properties.**

   For example, see the following output the shows the test target properties on a CMM device.

```
-> show
/SP/network/test
Targets:

Properties:
 ping = (Cannot show property)
 ping6 = (Cannot show property)

Commands:
 cd
 set
 show
```

2. **Use the** `set ping` **or** `set ping6` **command to send a network test from the device to a specified network destination:**

Property	Set Property Value	Description

`ping`	`set ping=`<*IPv4_address*>	Type the `set ping=` command at the command prompt followed by the IPv4 test destination address.
		For example:
		`-> set ping=10.8.183.106`
		`Ping of 10.8.183.106 succeeded`

`ping6`	`set ping6=`<*IPv6_address*>	Type the `set ping6=` command followed by the IPv6 test destination address. For example:`-> set ping6= fe80::211:5dff:febe:5000` `Ping of fe80::211:5dff:febe:5000 succeeded`

▼ Exit Oracle ILOM

- **To end an Oracle ILOM session, at the CLI prompt, type** `exit`**.**

Applying Main Power to the Server

After you have verified that you can connect to Oracle ILOM and are ready to install or configure an operating system, apply main power to the server.

▼ Apply Main Power to the Server

1. **Verify that the Power/OK LED on the front panel of the server is in the standby power mode.**

   In standby power mode, the OK/Power LED illuminates in a standby blink pattern (0.1 seconds on, 2.9 seconds off), indicating that the SP is working.

2. **Press the recessed Power button on the server's front panel to apply main power to the server.**

▼ Power Off From Main Power

- **To remove main power from the server, use one of the following two methods:**
  - **Graceful shutdown** – Momentarily press and release the Power button on the front panel. This causes Advanced Configuration and Power Interface (ACPI)-enabled operating systems to perform an orderly shutdown. Servers not running ACPI-enabled operating systems will shut down to standby power mode immediately.
  - **Emergency shutdown** – Press and hold the Power button for at least four seconds until the main power is off and the server enters standby power mode. When the main power is off, the Power/OK LED on the front panel flashes, indicating that the server is in standby power mode.

Caution – To completely power off the server, you must disconnect the AC power cords from the AC inlets of the power supplies on the back panel of the server.

CHAPTER 5

Installing or Configuring the Operating System

You can either install an operating system or, if the server was shipped with a preinstalled operating system, you can configure that preinstalled system.

This chapter includes the following topics:

Installing an Operating System

TABLE 5-1 lists the operating systems supported for installation and use on the Sun Fire X4470 Server at the time of publication of this document, along with information about where to get instructions for installing each operating system.

Note – For an up-to-date list of the operating systems supported on the Sun Fire X4470 Server, go to the following web site and navigate to the appropriate page: (http://www.oracle.com/technetwork/server-storage/sun-x86/overview/index.html).

TABLE 5-1 Supported Operating Systems

Operating System	Supported Version	For More Information, See:
Oracle Solaris	• Oracle Solaris 10 10/09 and later • Oracle Solaris 10 9/10	• *Sun Fire X4470 Server Installation Guide for Oracle Solaris Operating System*.
Linux	• Oracle Linux 5.5 • SUSE Linux Enterprise Server (SLES) 10 SP3 • SLES 11 • SLES 11 SP1 • Red Hat Enterprise Linux (RHEL) 5.5 64-bit	• If you want to use the Oracle Hardware Installation Assistant to install the Linux OS, see the *Sun Installation Assistant 2.3 through 2.4 User's Guide for x64 Servers*. • If you want to install the Linux OS from installation media, see the *Sun Fire X4470 Server Installation Guide for Linux Operating Systems*.
Virtual Machine Software	• Oracle VM 2.2.1 • VMware ESX 4.0 Updates 1 and 2 • VMware ESXi 4.0 Updates 1 and 2 • VMware ESX 4.1 • VMware ESXi 4.1	• *Sun Fire X4470 Server Installation Guide for Virtual Machine Software*.
Windows	• Microsoft Windows Server 2008 SP2, Standard Edition, 64-bit • Microsoft Windows Server 2008 SP2, Enterprise Edition, 64-bit • Microsoft Windows Server 2008 SP2, Datacenter Edition, 64-bit • Microsoft Windows Server 2008 R2, Standard Edition, 64-bit • Microsoft Windows Server 2008 R2, Enterprise Edition, 64-bit • Microsoft Windows Server 2008 R2, Datacenter Edition, 64-bit	• If you want to use the Oracle Hardware Installation Assistant to install the Windows OS, see the *Sun Installation Assistant 2.3 through 2.4 User's Guide for x64 Servers*. • If you want to install the Windows OS from installation media, see the *Sun Fire X4470 Server Installation Guide for Windows Operating Systems*.

Configuring a Preinstalled Operating System

If your server was shipped with an operating system preinstalled, you must configure that operating system before you can use it on the server. TABLE 5-2 lists the preinstalled operating system available for the Sun Fire X4470 at the time of publication of this document, along with information about where to get instructions for configuring the preinstalled operating system.

Note – For an up-to-date list of the preinstalled operating systems available on the Sun Fire X4470 Server, go to the following web site and navigate to the appropriate page: (http://www.oracle.com/technetwork/server-storage/sun-x86/overview/index.html).

TABLE 5-2 Preinstalled Operating System Available for the Sun Fire X4470

Operating System	Supported Version	For Configuration Information, See:
Oracle Solaris	Oracle Solaris 10 10/09 and later	Chapter 6 of this guide

CHAPTER 6

Configuring the Preinstalled Solaris 10 Operating System

This chapter explains the steps for configuring the Oracle Solaris 10 Operating System (OS) that is preinstalled on server, if ordered. The preinstalled Solaris version is Solaris 10 10/09 or later.

Note – Unlike with SPARC systems, you will *not* see the output of the preinstalled Solaris 10 image through a monitor when you power on the server. You will see the BIOS power-on self-test (POST) and other boot information output.

This chapter includes the following topics:

Configuration Worksheet

Before you begin configuring the operating system, use the configuration worksheet in TABLE 6-1 to gather the information that you will need. You need to collect only the information that applies to your application of the system.

TABLE 6-1 Worksheet for Operating System Configuration

Information for Installation		Description or Example	Your Answers: Defaults (*)
Language		Select from the list of available languages for the OS.	English*
Locale		Select your geographic region from the list of available locales.	
Terminal		Select the type of terminal that you are using from the list of available terminal types.	
Network connection		Is the system connected to a network?	• Networked • Non-networked*
DHCP		Can the system use Dynamic Host Configuration Protocol (DHCP) to configure its network interfaces?	• Yes • No*
If you are not using DHCP, note the network address:	IP address	If you are not using DHCP, supply the IP address for the system. Example: `192.168.100.1`	
	Subnet	If you are not using DHCP, is the system part of a subnet? If yes, what is the netmask of the subnet? Example: `255.255.0.0`	255.255.0.0*
	IPv6	Do you want to enable IPv6 on this machine?	• Yes • No*
Host name		Choose a host name for the system.	
Kerberos		Do you want to configure Kerberos security on this machine? If yes, gather this information: Default realm: Administration server: First KDC: (Optional) Additional KDCs:	• Yes • No*

TABLE 6-1 Worksheet for Operating System Configuration *(Continued)*

Information for Installation		Description or Example	Your Answers: Defaults (*)
Name service	Name service	If applicable, which name service should this system use?	• NIS+ • NIS • DNS • LDAP • None*
	Domain name	Provide the name of the domain in which the system resides.	
	NIS+ and NIS	*If you chose NIS+ or NIS*, do you want to specify a name server, or let the installation program find one?	• Specify One • Find One*
	DNS	*If you chose DNS*, provide IP addresses for the DNS server. You must enter at least one IP address, but you can enter up to three addresses. You can also enter a list of domains to search when a DNS query is made. Search domain: Search domain: Search domain:	
	LDAP	*If you chose LDAP*, provide the following information about your LDAP profile: Profile name: Profile server: If you specify a proxy credential level in your LDAP profile, gather the following information: Proxy-bind distinguished name: Proxy-bind password:	

TABLE 6-1 Worksheet for Operating System Configuration *(Continued)*

Information for Installation	Description or Example	Your Answers: Defaults (*)
Default route	Do you want to specify a default route IP address, or let the OS installation program find one? The default route provides a bridge that forwards traffic between two physical networks. An IP address is a unique number that identifies each host on a network. You have the following choices: • You can specify the IP address. An `/etc/defaultrouter` file is created with the specified IP address. When the system is rebooted, the specified IP address becomes the default route. • You can let the OS installation program detect an IP address. However, the system must be on a subnet that has a router that advertises itself by using the Internet Control Message Protocol (ICMP) for router discovery. If you are using the command-line interface, the software detects an IP address when the system is booted. • You can select None if you do not have a router or do not want the software to detect an IP address at this time. The software automatically tries to detect an IP address on reboot.	• Specify One • Detect One • None*
Time zone	How do you want to specify your default time zone?	• Geographic region* • Offset from GM • Time zone file
Root password	Choose a root password for the system.	

Configuring Server RAID Drives

Configuring server RAID drives is not a supported feature of the preinstalled version of the Solaris 10 OS, as the preinstalled OS will be erased during RAID configuration. If you want to configure your server drives in a RAID, refer to the following documents for instructions on configuring RAID and installing the Solaris 10 OS.

- *LSI MegaRAID SAS Software User's Guide*, which is available at: (http://www.lsi.com/support/sun)

- *Sun Fire X4470 Server Installation Guide for Linux Operating Systems*, which is available at: (http://www.oracle.com/pls/topic/lookup?ctx=E19694-01&id=homepage)

Configuring the Preinstalled Solaris 10 Operating System

After you have completed the configuration worksheet, use the following procedure to configure the preinstalled Oracle Solaris Operating System.

▼ Configure Solaris 10 OS

1. **If you are not already logged in to Oracle ILOM, log in either locally from a serial connection, or remotely from an Ethernet connection.**

   See "Log In to Oracle ILOM Using a Serial Connection" on page 36 or "Log In to Oracle ILOM Using an Ethernet Connection" on page 37.

2. **If main power has not yet been applied to the server, apply main power.**

   See "Apply Main Power to the Server" on page 43.

3. **From the Oracle ILOM prompt, type the following command and answer the prompt:**

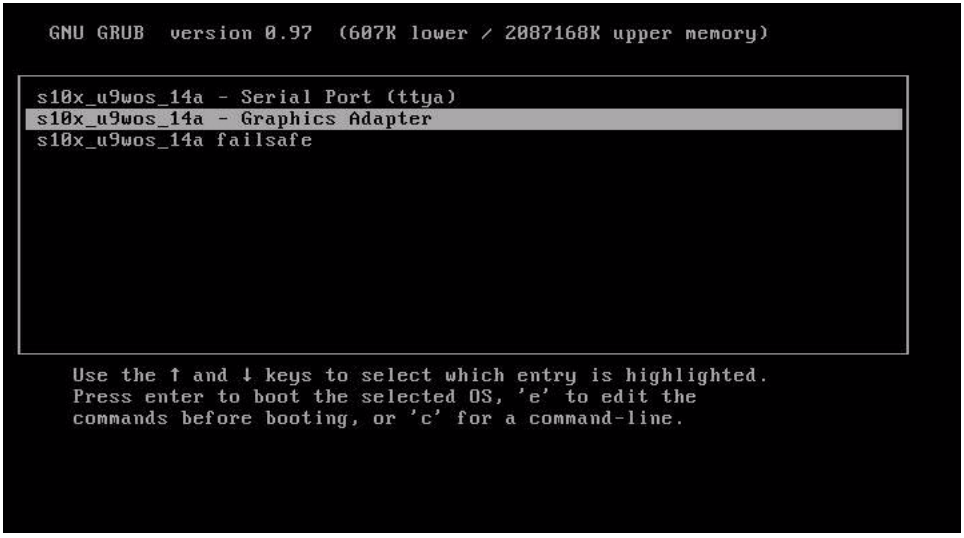
   -> **start /SP/console**

   ```
   Are you sure you want to start /SP/console (y/n)? y
   Serial console started.
   ```

   The GRUB menu appears.

   From the GRUB menu (FIGURE 6-1), you can choose whether you want to continue to direct the display to the serial port, or whether you want to direct the display to a device connected to the video port.

FIGURE 6-1 GRUB Menu Screen for Preinstalled Solaris



4. **Use the up and down arrow keys to select the display option.**
   - To display output to the serial port, choose the following option:

     `Solaris 10 10/09 s10x_u8wos_u08a X86 - Serial Port (tty)`
   - To display output to the video port, choose the following option:

     `Solaris 10 10/09 s10x_u8wos_u08a X86 - Graphics Adapter`

     If you choose to display output to the video port, you must connect a device to the VGA connector on the server and then complete the configuration from that device. See Chapter 3 for information about attaching devices to the server.

Note – By default, the system displays the output to the serial port. If you do not select an option on the GRUB menu, after 10 seconds, the GRUB menu is no longer available, and the system continues with the output directed to the serial port.

---

5. **Follow the Solaris 10 on-screen prompts to configure the software.**

   Use the information gathered in "Configuration Worksheet" on page 50 to help you enter the system and network information as you are prompted.

   The screens that are displayed will vary, depending on the method that you chose for assigning network information to the server (DHCP or static IP address).

   After you have entered the system configuration information, the server completes the boot process and displays the Solaris login prompt.

Solaris 10 Operating System User Information

This section provides pointers to information about the Solaris 10 Operating System.

Solaris 10 User Documentation

Solaris 10 OS documentation is available from the web at: (http://www.oracle.com/technetwork/server-storage/solaris/documentation/index-jsp-135724.html).

Select `Solaris 10` to display the list of documents in the Solaris 10 Documentation Collection. Follow instructions specific to x86 systems, where they are specified.

- For the Solaris 10 installation guides, see the *Solaris 10 09/10 Installation Guide: Planning for Installation and Upgrade*, *Solaris 10 09/10 Installation Guide: Basic Installations*, and *Solaris 10 09/10 Installation Guide: Network-Based Installations*.
- For information about upgrading your system, see *Solaris 10 09/10 Installation Guide: Solaris Live Upgrade and Upgrade Planning*.
- For troubleshooting information, see Appendix A in *Solaris 10 09/10 Installation Guide: Custom JumpStart and Advanced Installations*.
- See the *Sun Fire X4470 Server Product Notes* for patch and other late-breaking information. For patches and instructions, go to the following web site and navigate to the appropriate page: (http://support.oracle.com)

Solaris 10 documentation is also available on the Solaris Documentation DVD included with your Solaris OS software.

Using the Solaris Installation Program

The Solaris Installation Program on the Solaris 10 OS DVD can be run with a graphical user interface (GUI) or as an interactive text installer in a remote console. The Solaris Device Configuration Assistant is included in the Solaris Installation Program.

Follow the instructions for *x86-based* systems, not *SPARC-based* systems. For more information, see the Solaris 10 Release and Installation Collection for the version of the Solaris 10 Operating System you have installed. Documentation is available at:

(http://www.oracle.com/technetwork/server-storage/solaris/documentation/index-jsp-135724.html)

After you configure the preinstalled Solaris OS, the Solaris Installation Program reboots the system and prompts you to log in.

Reinstalling the Solaris Operating System

If you want to reinstall the Solaris OS or install a different version of the Solaris OS, refer to the *Solaris 10 Installation Guide: Basic Installations*.

Download the Solaris Operating System

You can download software for the Solaris OS from the following sites:

- To download the Solaris 10 Operating System, go to:

  (http://www.oracle.com/technetwork/server-storage/solaris/downloads/index.html)

- To download Solaris patches, go to:

  (http://support.oracle.com)

Index

U