

# Sun Netra X6270 M2 Server Module

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## Installation Guide



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# Using This Documentation

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This installation guide contains procedures for installing Oracle's Sun Netra X6270 M2 server module into Oracle's Sun Netra 6000 modular system chassis.

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## Product Information

For information about the Sun Netra X6270 M2 server module, go to the following web site.

<http://www.oracle.com/goto/netrax6270m2>

At that site, you can find links and navigate to the following information and downloads:

- Product information and specifications
- Supported operating systems
- Software and firmware downloads
- Supported option cards
- Supported Network Express Modules
- External storage options
- Systems Handbook

# Related Documentation

The documents listed in the following table are available online at:

<http://docs.sun.com/app/docs/prod/nt6270.m2.srvrmod?l=en#hic>

Title and Part Number	Content	Format
<i>Sun Netra X6270 M2 Server Module Product Notes, 821-0936</i>	Late-breaking information about the server module	PDF HTML
<i>Sun Netra X6270 M2 Server Module Getting Started Guide, 821-2123</i>	Basic installation information for setting up the server module	PDF Print
<i>Sun Netra X6270 M2 Server Module Installation Guide, 821-0937</i>	Detailed installation information for setting up the server module	PDF HTML Print option
<i>Sun Netra X6270 M2 Server Module Installation Guide for Linux, Virtual Machine Software, and Oracle Solaris Operating Systems, 821-0940</i>	Installation instructions for the Linux, Oracle VM, VMware, and Oracle Solaris operating systems	PDF HTML
<i>Sun Netra X6270 M2 Server Module Installation Guide for Windows Operating Systems, 821-0941</i>	Installation instructions for the Windows Server operating systems	PDF HTML
<i>Sun Installation Assistant 2.3 Through 2.4 User's Guide for x64 Systems, 821-0694</i>	Instructions for using the Sun Installation Assistant (SIA) when installing a Windows or Linux operating system	PDF HTML
<i>Sun Netra X6270 M2 Server Module Service Manual, 821-0939</i>	Information and procedures for maintaining and upgrading the server module	PDF HTML
<i>Sun Server CLI Tools and IPMI Tool 2.0 User's Guide, 821-1600</i>	Information about how to install, configure, and work with CLI tools and IPMItool	PDF HTML
<i>Oracle x86 Servers Diagnostics Guide, 820-6750</i>	Information about how to use the diagnostic software tools provided with Oracle's x86 servers	PDF HTML
<i>Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection, 820-5523, 820-6410, 820-6411, 820-6412, 820-6413</i> (Formerly titled <i>Sun Integrated Lights Out Manager Documentation Collection</i> )	Documents covering ILOM features and tasks that are common to servers and server modules that support ILOM 3.0	PDF HTML

Title and Part Number	Content	Format
<i>Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Netra X6270 M2 Server Module, 821-0943</i>	ILOM information that is specific to the Sun Netra X6270 M2 server module	PDF HTML
<i>Important Safety Information for Sun Hardware Systems, 821-1590</i>	Multilingual hardware safety and compliance information for all Sun hardware systems	Print
<i>Sun Netra X6270 M2 Server Module Safety and Compliance Guide, 821-0938</i>	Safety and compliance information for this server module.	PDF

Translated versions of some of these documents are available at the web site listed above this table. English documentation is revised more frequently and might be more up-to-date than the translated documentation.

## Documentation, Support, and Training

Function	URL
Documentation	<a href="http://docs.sun.com">http://docs.sun.com</a>
Support	<a href="http://www.sun.com/support/">http://www.sun.com/support/</a>
Training	<a href="http://www.sun.com/training/">http://www.sun.com/training/</a>

## Documentation Feedback

Submit comments about this document by clicking the Feedback[+] link at:

<http://docs.sun.com>

Include the title and part number of your document with your feedback:

*Sun Netra X6270 M2 Server Module Installation Guide, 821-0937-10*

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# Product Downloads

To download the latest product software, go to the following web site:

<http://www.oracle.com/goto/netrax6270m2>

At that site, you can find links and navigate to the following items:

- Tools and Drivers DVD image
- Sun Installation Assistant DVD image
- Sun Validation Test Suite (SunVTS) update

# Preparing to Install the Sun Netra X6270 M2 Server Module

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This chapter contains the following topics:

- [“About Your Server Module Shipment” on page 1](#)
  - [“Server Module Specifications” on page 5](#)
  - [“Server Module Installation Task Checklist” on page 6](#)
  - [“Commonly Used Terms” on page 9](#)
- 

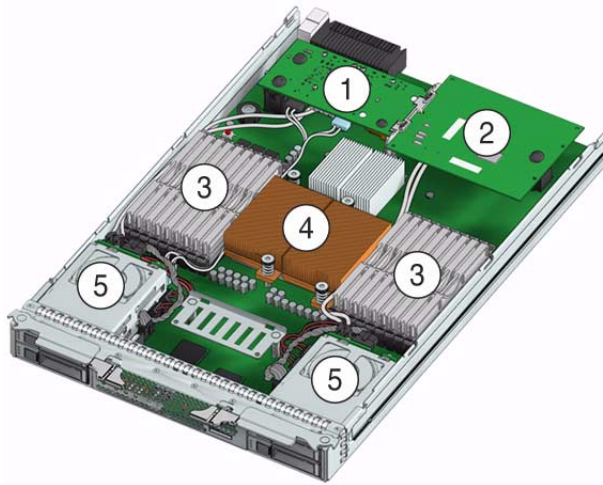
## About Your Server Module Shipment

Standard configurations for Oracle’s Sun Netra X6270 M2 server module are assembled at the factory and shipped ready for installation in a Sun Netra 6000 modular system chassis. Optional server module components that you purchase independent of the standard configuration are shipped separately and, in most cases, should be installed prior to installing the server module into the chassis.

## Locations of Server Module Optional Components

[FIGURE 1-1](#) shows the locations of the optional components that are documented in this chapter.

**FIGURE 1-1** Optional Component Locations in the Server Module



**Figure Legend** Server Module Optional Components

- 
- |   |  |
|---|--|
| 1 | Fabric Expansion Module (FEM) (optional component)<br><b>Note</b> - Inset shows motherboard-facing connections and replaceable components. |
| 2 | Raid Expansion Module (REM) (optional component)   |
| 3 | DIMMs (optional components)<br><b>Note</b> - The DIMMs in <a href="#">FIGURE 1-1</a> are shown populated with filler panels.               |
| 4 | CPUs with heatsinks  |
| 5 | Storage devices (hard drives or solid state drives)  |
- 

A summary of the standard and optional components available for the Sun Netra X6270 M2 server module follows in [TABLE 1-1](#).

**TABLE 1-1** Server Module Components

<b>X6270 M2 Server Module</b>	<b>Description</b>
Standard Server Components	<p>The following standard components are shipped on the Sun Netra X6270 M2 server module:</p> <ul style="list-style-type: none"><li>• Service Processor (SP) – One SP per server module. SP provides remote keyboard, mouse, and video functionality, IPMI baseboard management controller (BMC) functionality, and interfaces to the chassis monitoring module (CMM). The SPs and CMM work together to form a complete server module and chassis management system.</li><li>• Indicators and Buttons – The Sun Netra X6270 M2 server module includes standard service indicator LEDs and buttons.</li><li>• Flexible I/O Network Connectivity – Supported I/O network connectivity can include these optional components: fabric expansion module, chassis network express modules, and chassis PCI express modules.</li><li>• Front Panel I/O Device Connection – The Sun Netra X6270 M2 server module front panel provides a universal connection port for attaching devices directly to the server module using a dongle cable.</li></ul>
Preinstalled CPU and Memory Configurations	<p>Server modules are typically ordered and shipped with preinstalled memory and CPU configurations. The preinstalled memory and CPU assemblies offered (and shipped) for the Sun Netra X6270 M2 server module include:</p> <ul style="list-style-type: none"><li>• 1 Intel Xeon Six-Core X5680, 3.33GHz, 12MB Cache, 6.40 GT/s QPI, HT, Turbo Boost, 130W with Heatsink</li><li>• 1 Intel Xeon Six-Core X5670, 2.93GHz, 12MB Cache, 6.40 GT/s QPI, HT, Turbo Boost, 95W with Heatsink</li><li>• 1 Intel Xeon Four-Core E5620, 2.40GHz, 12MB Cache, 5.86 GT/s QPI, HT, Turbo Boost, 80W with Heatsink</li></ul>

**TABLE 1-1** Server Module Components (*Continued*)

<b>X6270 M2 Server Module</b>	<b>Description</b>
Optional Components	<p>The following optional server module components can be ordered and shipped separately:</p> <ul style="list-style-type: none"><li>• CPU assembly options</li><li>• DDR3 memory kits</li><li>• SATA and SAS storage drives</li><li>• Dongle cable option</li><li>• Fabric Expansion Module (FEM) options</li><li>• RAID Expansion Module (REM) options</li><li>• Operating system software</li><li>• Printed documentation - <i>Sun Netra X6270 M2 Server Module Installation Guide</i>, 821-0937</li></ul> <p><b>Note</b> - Server module components and their part numbers are subject to change over time. For the most up-to-date list of replaceable components, go to the following URL: <a href="http://www.oracle.com/goto/netrax6270m2">http://www.oracle.com/goto/netrax6270m2</a></p> <ol style="list-style-type: none"><li>1. Click the name and model of your server module.</li><li>2. In the product page, click <b>Full Components List</b> for the list of components.</li></ol>
Supported Operating Systems	<p>The following operating systems are supported on the Sun Netra X6270 M2 server module.</p> <ul style="list-style-type: none"><li>• Oracle Enterprise Linux 5.4 (64-bit)</li><li>• Oracle VM 2.2.1</li><li>• Oracle Solaris 10 10/09 and later</li><li>• Microsoft Windows Server 2008 SP2 Datacenter (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 SP2 Enterprise (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 SP2 Standard (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 R2 Datacenter (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 R2 Enterprise (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 R2 Standard (64-bit) with Hyper-V</li><li>• Red Hat Enterprise Linux (RHEL) 5.4 (64-bit)</li><li>• SUSE Linux Enterprise Server (SLES) 10 SP3 (64-bit)</li><li>• SUSE Linux Enterprise Server (SLES) 11 (64-bit)</li><li>• VMware ESX and ESXi 4.0 Update 1</li></ul>

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# Server Module Specifications

## Physical Specifications

The Sun Netra X6270 M2 server module is 12.9 x 20.1 x 1.7 inches in a 1U form factor. The server module is designed to be installed in a Sun Netra 6000 modular system chassis.

TABLE 1-2 gives the physical specifications for the Sun Netra X6270 M2 server module.

**TABLE 1-2** Physical Specifications for the Sun Netra X6270 M2 Server Module

	English	Metric
Height	12.87 inches	327 mm
Width	1.7 inches	44 mm
Depth	20.16 inches	512 mm
Weight	17 pounds	7.71 kg

## Electrical Specifications

The Sun Netra X6270 M2 server module connects to a Sun Netra 6000 modular system, or *chassis*, which provides 12V main power to each server module, as well as cooling through fans. In addition to the 12V main power, the chassis provides 3.3V AUX power to each server module to power the local FRU ID EEPROM. This 3.3V AUX power enables the chassis monitoring module (CMM) to query each server module slot prior to 12V main power and 12V fan power application to validate that there is sufficient power and cooling to support the server modules installed in the chassis.

# Environmental Requirements

TABLE 1-3 gives the environmental requirements for the Sun Netra X6270 M2 server module.

**TABLE 1-3** Environmental Requirements for the Sun Netra X6270 M2 Server Module

Condition	Requirement
Operating temperature	5 °C to 35 °C noncondensing
Nonoperating temperature	-40 °C to 65 °C
Operating humidity	10% to 90% noncondensing (27 °C max. wet bulb)
Nonoperating humidity	93% noncondensing (38 °C max. wet bulb)
Operating altitude	3048 meters at 35 °C
Nonoperating altitude	12,000 meters

## Server Module Installation Task Checklist

TABLE 1-4 summarizes an ordered list of tasks that you must perform to properly install the server module into the Sun Netra 6000 modular system chassis.

**Note** – If the server module is inserted into a chassis that has SAS-1 Network Express Modules (NEMs), or SAS-1 NEMs and a Sun Blade 6000 Disk Module, the server module’s SAS-2 REM might hang. To prevent this problem, you need to upgrade the firmware of your SAS-1 components (SAS-NEMs and disk modules) to a firmware version that supports SAS-1/SAS-2 coexistence. This upgrade must be done before you insert the Sun Netra X6270 M2 server module into the chassis. At a minimum, all SAS expanders for SAS-1 NEMs and Sun Blade 6000 Disk Modules must be upgraded to firmware revision 5.04.03 to allow SAS-1/SAS-2 device coexistence in the chassis. Refer to the *SAS-1/SAS-2 Compatibility Upgrade Guide*, 821-1800 for details on obtaining the firmware and performing the upgrade.

**TABLE 1-4** Installation Task Checklist

Step	Task Description	For Instructions, See:
1	Unpack the Sun Netra X6270 M2 server module and any optional components from the shipping containers.	<ul style="list-style-type: none"><li>• <a href="#">Chapter 1 “About Your Server Module Shipment”</a> on page 1</li></ul>
2	Install the server module into a powered-on Sun Netra 6000 modular system Chassis.	<ul style="list-style-type: none"><li>• <a href="#">Chapter 2 “Installing and Powering On the Sun Netra X6270 M2 Server Module”</a> on page 11</li></ul>
3	Verify the power state of the server module and apply main power to the server module SP and host.	<ul style="list-style-type: none"><li>• <a href="#">Chapter 2 “Installing and Powering On the Sun Netra X6270 M2 Server Module”</a> on page 11</li></ul>
4	Connect a management station to configure an IP address.	<ul style="list-style-type: none"><li>• <a href="#">Chapter 2 “Installing and Powering On the Sun Netra X6270 M2 Server Module”</a> on page 11</li></ul>
5	Log in to ILOM and configure an IP address.	<ul style="list-style-type: none"><li>• <a href="#">Chapter 3 “Setting Up ILOM”</a> on page 21</li></ul>
6	If ordered, configure the factory-installed Oracle Solaris Operating System image.	<ul style="list-style-type: none"><li>• <a href="#">Chapter 4 “Configuring the Preinstalled Oracle Solaris 10 Operating System”</a> on page 29</li></ul>
7	If applicable, install one of the following operating systems: <ul style="list-style-type: none"><li>• Oracle Enterprise Linux 5.4 (64-bit)</li><li>• Oracle VM 2.2.1</li><li>• Oracle Solaris 10 10/09 and later</li><li>• Red Hat Enterprise Linux (RHEL) 5.4 (64-bit)</li><li>• SUSE Linux Enterprise Server (SLES) 10 SP3 (64-bit)</li><li>• SUSE Linux Enterprise Server (SLES) 11 (64-bit)</li><li>• VMware ESX and ESXi 4.0 Update 1</li></ul>	<ul style="list-style-type: none"><li>• <i>Sun Netra X6270 M2 Server Module Installation Guide for Linux, Virtual Machine Software, and Oracle Solaris Operating Systems</i>, 821-0940</li></ul>

**TABLE 1-4**    Installation Task Checklist *(Continued)*

Step	Task Description	For Instructions, See:
	<ul style="list-style-type: none"><li>• Microsoft Windows Server 2008 SP2 Datacenter (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 SP2 Enterprise (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 SP2 Standard (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 R2 Datacenter (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 R2 Enterprise (64-bit) with Hyper-V</li><li>• Microsoft Windows Server 2008 R2 Standard (64-bit) with Hyper-V</li></ul>	<ul style="list-style-type: none"><li>• <i>Sun Netra X6270 M2 Server Module Installation Guide for Windows Operating Systems</i>, 821-0941</li></ul>



# Commonly Used Terms

The following table identifies some of the terms commonly used in this guide to describe the installation process of a server module into the chassis.

**TABLE 1-5** Commonly Used Terms

Term	Definition
Server Module	Blade server hardware.
Chassis	Sun Netra 6000 modular system hardware. For additional information about these chassis systems, see the documentation: <a href="http://docs.sun.com/app/docs/prod/n6000.modsys?l=en&amp;a=view">http://docs.sun.com/app/docs/prod/n6000.modsys?l=en&amp;a=view</a>
CMM	Chassis monitoring module (CMM) hardware.
SP	Embedded service processor (SP) on server module and CMM.
ILOM	Oracle Integrated Lights Out Manager (ILOM) is the embedded management software on the server module SP and CMM SP that enables you to manage your system. For additional information about ILOM, refer to the <i>Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection</i> at: <a href="http://docs.sun.com/app/docs/prod/int.lights.mgr30#hic">http://docs.sun.com/app/docs/prod/int.lights.mgr30#hic</a>



# Installing and Powering On the Sun Netra X6270 M2 Server Module

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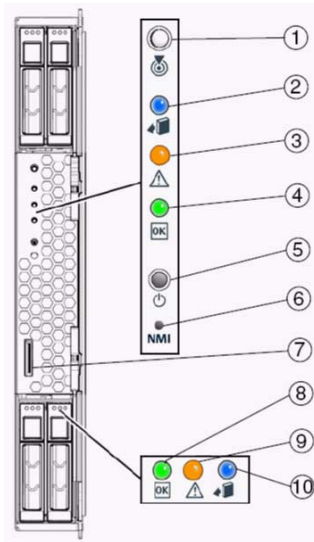
This chapter contains the following topics:

- [“Server Module Front Panel Indicators, Buttons, and Port” on page 12](#)
- [“Installing the Server Module Into the Chassis” on page 13](#)
- [“Powering On the Server Module” on page 16](#)
- [“Attaching Devices With a Dongle Cable” on page 19](#)

# Server Module Front Panel Indicators, Buttons, and Port

The server module provides standard indicators and buttons, and a Universal Connector Port on its front panel. See [FIGURE 2-1](#) for the locations of LEDs, buttons, and port.

**FIGURE 2-1**



**Figure Legend** Server Module LEDs, Buttons, and Port

- 
- |    |  |
|----|--|
| 1  | Server Module Locate LED – White                             |
| 2  | Server Module Ready to Remove LED – Blue                     |
| 3  | Server Module Service Action Required LED – Amber            |
| 4  | Server Module OK/Power LED – Green (blinking or solid state) |
| 5  | Server Module Power button/reset                             |
| 6  | Non-Maskable Interrupt (NMI) button (Service only)           |
| 7  | Universal Connector Port (UCP), used for dongle cable        |
| 8  | HDD OK/Power LED – Green                                     |
| 9  | HDD Service Action Required LED – Amber                      |
| 10 | HDD Ready to Remove LED – Blue                               |
-

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# Installing the Server Module Into the Chassis

Consult the following sections when installing a server module into a powered on chassis:

- “Before You Begin” on page 13
- “Install Server Module Into a Powered-On Chassis” on page 14

## Before You Begin

Prior to installing the server module into a powered-on chassis, ensure that the following requirements are met.

- Ensure that the following chassis components are installed and powered-on in the chassis.
  - Chassis monitoring module (CMM)
  - Network express modules (NEMs)
  - All required cabling to the chassis are attached.
  - The system chassis is powered-on.

For information about installing chassis components, attaching cables, and powering on the chassis, see the chassis documentation at:

<http://docs.sun.com/app/docs/prod/n6000.modsys?l=en&a=view>

- Review the documentation for procedures on proper installation and setup of the Sun Netra X6270 M2 server module. For more information, see [TABLE 1-4](#).

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**Note** – If the server module is inserted into a chassis that has SAS-1 Network Express Modules (NEMs), or SAS-1 NEMs and a Sun Blade 6000 Disk Module, the server module’s SAS-2 REM might hang. To prevent this problem, you need to upgrade the firmware of your SAS-1 components (SAS-NEMs and disk modules) to a firmware version that supports SAS-1/SAS-2 coexistence. This upgrade must be done before you insert the Sun Netra X6270 M2 server module into the chassis. At a minimum, all SAS expanders for SAS-1 NEMs and Sun Blade 6000 Disk Modules must be upgraded to firmware revision 5.04.03 to allow SAS-1/SAS-2 device coexistence in the chassis. See the *SAS-1/SAS-2 Compatibility Upgrade Guide*, 821-1800, for details on obtaining the firmware and performing the upgrade.

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- If applicable, install the following optional server module components prior to installing the server module into the system chassis:

- FEM, REM, DIMMs, and CPU

For instructions, see the *Sun Netra X6270 M2 Server Module Service Manual*, 821-0939.

- Use a grounded antistatic wrist strap or equivalent safety equipment to prevent electrostatic discharge (ESD) when you install the server module into the system chassis.



---

**Caution –** To protect electronic components from electrostatic damage, which can permanently disable the system or require repair by 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.

---

## ▼ Install Server Module Into a Powered-On Chassis

### 1. Verify that the chassis is powered-on.

When the chassis is powered-on, the fans are operating and the OK/Power LED illuminates a steady-on green light. The OK/Power LED is located on both the front and rear panels of the chassis. If the chassis is not powered-on, refer to the system chassis documentation.

### 2. In the front of the chassis, locate and remove the desired server module filler panel.

Pull the lever out and eject the filler panel.



---

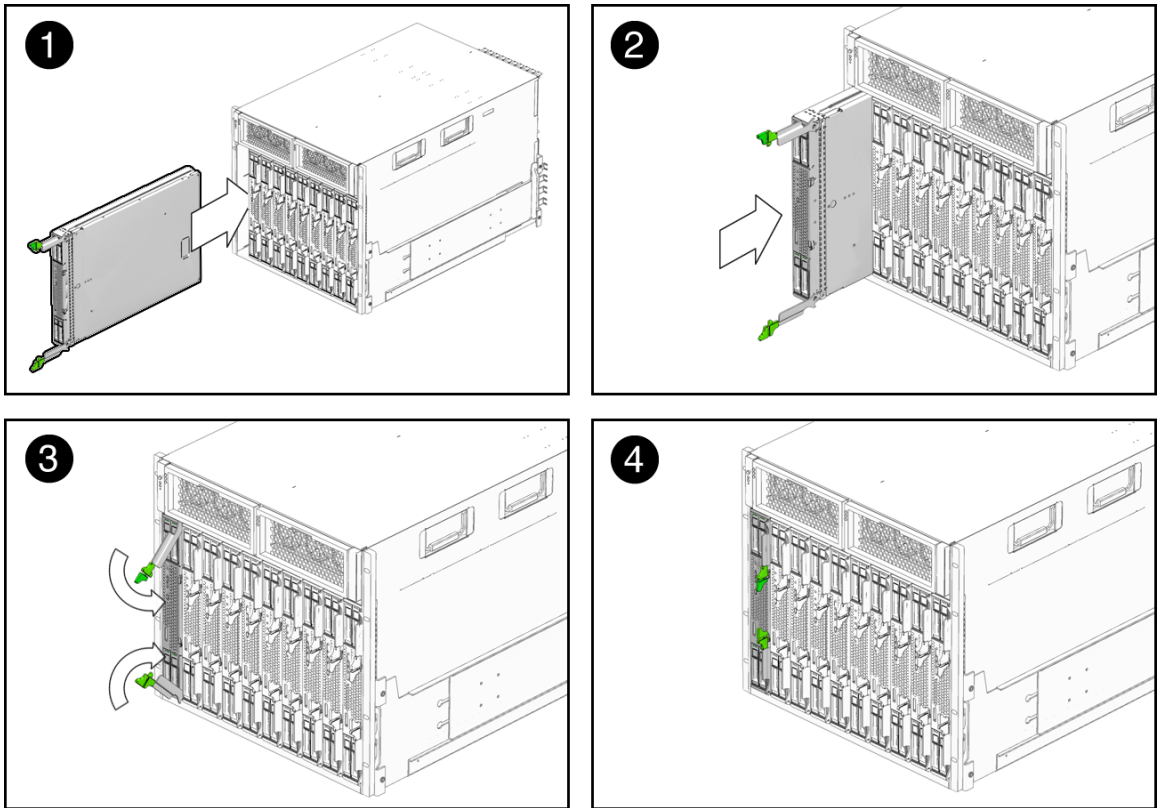
**Caution –** If you are not installing a server module into a slot, do not remove the server module filler panel from the slot. The server module filler panel is required to meet FCC standards for electromagnetic interference (EMI).

---

### 3. Position the server module vertically so that the ejectors are on the right and extend outward.

The following illustrations show the server module being inserted into the chassis. See box 1 in [FIGURE 2-2](#).

**FIGURE 2-2** Inserting the Server Module Into the Chassis



4. Push the server module into the slot until the server module stops and is flush with the chassis.

See Boxes 2 and 3 in [FIGURE 2-2](#).

5. To lock the server module into the chassis, do the following:

- Rotate the top ejector down until it snaps into place. See Box 3 in [FIGURE 2-2](#).
- Rotate the bottom ejector up until it snaps into place. See Box 3 in [FIGURE 2-2](#).

The server module is locked in the chassis (Box 4 in [FIGURE 2-2](#)) and Standby power is applied to the server module SP.

---

**Note** – The server SP can take several minutes to boot. As the SP is booting, the OK/Power LED illuminates a slow blink (0.5 second on, 0.5 second off). After the server SP boots, the OK/Power LED illuminates a standby blink (0.1 second on, 2.9 seconds off). The standby blink state indicates that the server SP is active and the server module host (BIOS) is powered off.

---

## Powering On the Server Module

After installing a server module into a powered-on chassis, the server module SP automatically boots and standby power from the chassis power supplies is supplied directly to the server module SP. At this time, you can connect to the Oracle Integrated Lights Out Manager (ILOM) and configure an IP address. However, to install an operating system or to fully operate the server module, you must apply main power to the server module host.

For more information about the Sun Netra X6270 M2 server module power states, see the following topics:

- [“Verify Standby Power State on Server” on page 16](#)
- [“Apply Main Power to the SP and Host” on page 17](#)
- [“Power Off the Server Module” on page 18](#)
- [“Troubleshoot Server Module Power States” on page 18](#)

### ▼ Verify Standby Power State on Server

#### 1. Verify that the system chassis is powered-on.

A steady-on green light should be visible from the chassis OK/Power LED.

If the chassis is not powered on, refer to the system chassis documentation for instructions on powering on the system chassis.

#### 2. Ensure that the OK/Power LED on the server module illuminates a standby blink.

The OK/Power LED on the server module front panel illuminates a standby blink (0.1 second on, 2.9 seconds off). The standby blink indicates that the server module SP is active but the server module host is powered off.

---

**Note** – The server module OK/Power LED will be set to standby blink only when there is enough chassis power for the server module to power on. If there is not enough chassis power, the OK/Power LED will remain off until there is enough power for the server module to power on. To troubleshoot this issue, see [“Troubleshoot Server Module Power States” on page 18](#).

---

At this time, standby power is supplied to the server module SP enabling you to connect to the Integrated Lights Out Manager (ILOM) and configure an IP address.

For information about connecting to ILOM and configuring an IP address, see [Chapter 2](#).

## ▼ Apply Main Power to the SP and Host

Main power to the server module host must be applied prior to installing an operating system.

### **1. Verify that the OK/Power LED on the front panel of the server module is in a standby blink state.**

In standby power state, the OK/Power LED on the front panel of the server module illuminates a standby blink (0.1 second on, 2.9 seconds off).

---

**Note** – The server power state will not be set to standby if the CMM in the chassis is not present or accessible to the server SP. The OK/Power LED on the server will remain off. In this situation, you should proceed by powering on the server as instructed below.

---

### **2. Press and release the recessed Power button on the server module front panel.**

The OK/Power LED on the server module front panel illuminates a steady-on green light when main power is applied. The steady-on LED state indicates that the server module SP and host are both powered-on.

## ▼ Power Off the Server Module

- To power off the server module from main power mode, use one of the following two methods:
  - **Graceful shutdown** – Press and release the Power button on the front panel.

This operation will cause any Advanced Configuration and Power Interface (ACPI) enabled operating system to perform an orderly shutdown of the operating system. If the server module is not running ACPI-enabled operating system, the server module will shut down to standby power mode immediately.
  - **Emergency shutdown** – Press and hold the Power button for five seconds to force main power off and to enter standby power mode.

## ▼ Troubleshoot Server Module Power States

Each time a server module powers on, it queries the CMM to ensure that there is enough power available from the power supply units (PSUs) to power on the server module. If there is not enough power to power on the server module, the SP denies the server module from receiving power (standby and main). If this situation occurs, the OK/Power LED on the front panel of the server module will remain off. To troubleshoot this power issue, follow these guidelines:

1. Review the ILOM event log messages to determine whether the server module has permission to power on. An event message is recorded in the log any time there is inadequate amount of power available from the PSUs to power on the server module.

For more information about the ILOM event log or monitoring power consumption, refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection* (see [“Related Documentation” on page viii](#) for part numbers).

2. Ensure that the system chassis has the proper amount of power supplies installed to support powering on all the chassis components that are currently installed.

Refer to the system chassis documentation for information about the number of power supplies required to power on chassis components.

3. To avoid power loss, it is recommended that you use the *default* CMM power management settings in ILOM for power supplies.

For more information about power management, refer to “Power Management Policy” in the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Netra X6270 M2 Server Module*, 821-0943.

---

**Note** – When power-on permissions become available, the OK/Power LED on the front panel of the server module will illuminate a standby blink.

---

4. As needed, refer to the *Oracle x86 Servers Diagnostics Guide*, 820-6750 for instructions on how to run the start-up diagnostic tools provided with the Sun Netra X6270 M2 server module.

---

## Attaching Devices With a Dongle Cable

Your system chassis is shipped with the following dongle cable that enables you to connect communication devices directly to the Sun Netra X6270 M2 server module:

- 3-Cable Dongle II (P/N 530-3936 Option #4622A). This cable provides a VGA connector, RJ-45 serial connector, and one dual USB connector.

---

**Note** – The 3-Cable Dongle II is typically provided with each chassis. Additional cables can be ordered.

---

You can use the VGA or USB connectors on the dongle cable to communicate with the server module BIOS and operating system. Or, you can use the serial connector to communicate with the server module SP.

---

**Note** – Direct management of an individual server module is through the embedded server module SP of the Oracle Integrated Lights Out Manager (ILOM). Access to the server module SP is made through the serial port or the chassis monitoring module (CMM) management network. For more information about server module-level management or chassis-level management in ILOM, see the system chassis documentation or the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection*.

---



---

**Caution** – You should use the dongle cable for configuration and service purposes. Disconnect the dongle cable from the server module after the configuration or service operation is complete to avoid damaging the cable.

---

## ▼ Attach Devices Using the 3-Cable Dongle

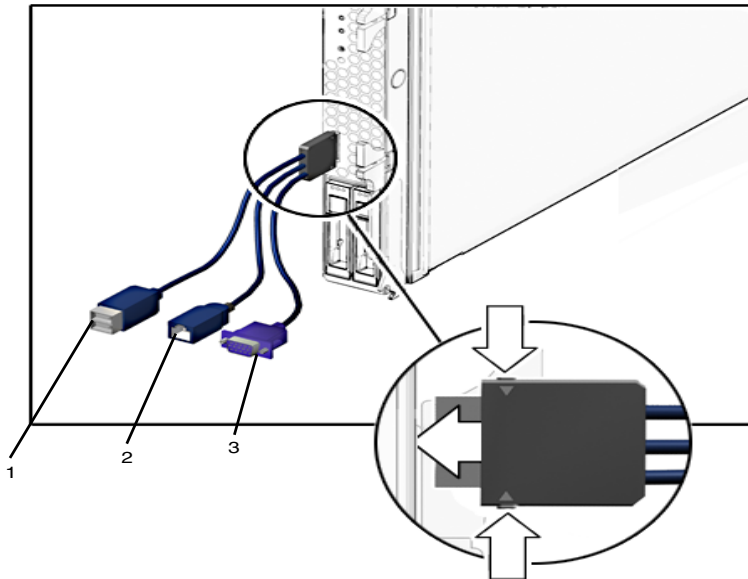
1. Insert the dongle cable into the universal connector port (UCP) on the server module front panel.

See [FIGURE 2-3](#).

2. Attach the connectors on the dongle cable to the appropriate devices.

See [FIGURE 2-3](#).

**FIGURE 2-3** Dongle Cable Connections



**Figure Legend** Dongle Cable Connectors

- 
- |   |                             |
|---|-----------------------------|
| 1 | Dual USB 2.0 connectors     |
| 2 | RJ-45 serial port connector |
| 3 | VGA video connector         |
-

## Setting Up ILOM

---

This chapter describes how to access the Oracle Integrated Lights Out Manager (ILOM) software and how to initially configure an IP address for the server module service processor.

This chapter contains the following topics:

- [“IP Configuration Task Checklist” on page 22](#)
- [“Logging In to ILOM” on page 23](#)
  - [“Log In to ILOM Using a Serial Connection” on page 23](#)
  - [“Log In to ILOM Using an Ethernet Connection and the CLI” on page 24](#)
- [“Configuring an IP Address” on page 25](#)
  - [“Configuring a DHCP Network” on page 25](#)
  - [“Configuring a Static Network” on page 26](#)

# IP Configuration Task Checklist

[TABLE 3-1](#) summarizes an ordered list of tasks that you must perform to initially configure an IP address for the server module SP.

**TABLE 3-1** IP Address Configuration Tasks

Step	Requirement	Description
1	Install the server module into the chassis.	The server module must be properly installed in the chassis system. For more information, see <a href="#">Chapter 1</a> and <a href="#">Chapter 2</a> of this guide.
2	Establish a console connection to ILOM.	<p>You can establish a connection with the ILOM server module SP through a local or remote console.</p> <ul style="list-style-type: none"><li>• <b>Local serial console.</b> Using a dongle cable you can connect a serial console to the UCP port on the front panel of the server module. For instructions for attaching local devices to the server module, see “<a href="#">Attach Devices Using the 3-Cable Dongle</a>” on page 20.</li></ul> <p>Alternatively, you can connect a serial console to the serial port on the rear panel of the CMM. For more information about attaching cables or devices to a CMM, see the system chassis documentation.</p> <ul style="list-style-type: none"><li>• <b>Remote console.</b> Attach a local area Ethernet network cable to the network management port (RJ-45 NET MGT 0) on the CMM. The chassis Ethernet ports provide the most robust method of connecting to ILOM. This connection supports both the ILOM command-line interface and the web interface. For more information about how to attach the CMM management network cable, see the system chassis documentation.</li></ul>
3	Obtain an Administrator user account.	<p>To configure an IP address in ILOM, you must log in to ILOM with an Administrator account.</p> <p>A preconfigured Administrator account is shipped on each server module SP. The preconfigured Administrator account name is <code>root</code> and its password is <code>changeme</code>. Because this preconfigured account cannot be deleted, you should change the password after initial setup. This account offers built-in administrative privileges (read and write access) to all service processor features and commands.</p> <p>For more information about ILOM user accounts, see the <i>Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection</i>.</p>

**TABLE 3-1** IP Address Configuration Tasks *(Continued)*

Step	Requirement	Description
4	Log in to ILOM.	Follow instructions in this chapter to log in to ILOM. See <a href="#">“Logging In to ILOM” on page 23</a> .
5	Configure an IP address.	Follow the instructions in this chapter to initially configure an IP address. See <a href="#">“Configuring an IP Address” on page 25</a> .
6	If applicable, obtain additional information about ILOM.	For more information about configuring or modifying an IP address in ILOM, refer to the <i>Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection</i> .

## Logging In to ILOM

This section presents the following procedures:

- [“Log In to ILOM Using a Serial Connection” on page 23](#)
- [“Log In to ILOM Using an Ethernet Connection and the CLI” on page 24](#)

### ▼ Log In to ILOM Using a Serial Connection

Use this procedure to log in to ILOM before you have assigned an IP address to the CMM or server module SP.

- 1. Verify that your serial console connection to the server module or CMM 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 ILOM.**

The ILOM Login prompt appears.

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

```
SUNSP-<product serial number> login: root  
Password: changeme
```

The ILOM CLI prompt (->) appears.

---

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

---

If you are logged in to ILOM on the CMM, you must navigate to the server module SP CLI by typing this command:

```
-> start /CH/BLn/SP/cli
```

Where *BLn* represents the slot in which the server module is installed in the chassis.

#### 5. Proceed to “Configuring an IP Address” on page 25.

## ▼ Log In to ILOM Using an Ethernet Connection and the CLI

To log in to ILOM using an Ethernet connection, you must know the IP address of the CMM or server module SP.

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

For example:

```
ssh username@host
```

or

```
ssh -l username host
```

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

The ILOM password prompt appears.

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

For example:

```
$ssh root@host
Password: changeme
```

The ILOM CLI prompt (->) appears.

---

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

---

If you are logged in to ILOM on the CMM, you must navigate to the server module SP CLI by typing this command:

```
-> start /CH/BLn/SP/cli
```

Where `BLn` represents the slot in which the server module is installed in the chassis.

3. To view or change the IP address, proceed to [“Configuring an IP Address” on page 25](#).

For more information about how to change settings in ILOM, refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection*.

---

## Configuring an IP Address

You can choose to configure a static or a dynamic IP address. Refer to the following sections for instructions:

- [“Configuring a DHCP Network” on page 25](#)
- [“Configuring a Static Network” on page 26](#)

## Configuring a DHCP Network

By default, the SP uses a Dynamic Host Configuration Protocol (DHCP) server for network configuration. If you choose to configure a dynamic IP address, refer to these sections:

- [“IP Configuration Task Checklist” on page 22](#)
- [“Logging In to ILOM” on page 23](#)
- [“Use DHCP for SP Network Configuration” on page 26](#)

## ▼ Use DHCP for SP Network Configuration

---

**Note** – The following instructions assume that the system is in its factory-default configuration.

---

1. Verify that your DHCP server is properly configured.
2. Verify that an Ethernet cable is connected to the Ethernet port (NET MGT) on the CMM.

3. If applicable, obtain the MAC address of the server module SP.

The MAC address is on a label on the cover of the server module.

4. Log in to ILOM as described in any one these procedures:

- “Log In to ILOM Using a Serial Connection” on page 23
- “Log In to ILOM Using an Ethernet Connection and the CLI” on page 24

By default, ILOM will attempt to obtain network settings using DHCP.

5. Perform one of the following methods to view the DHCP IP address assigned to the server module SP:

- **ILOM – CMM**

From the CMM, to view the dynamic IP address assigned for a particular server module, type:

```
-> show /CH/BL0/SP/network
```

---

**Note** – Where BL0 represents the server module installed in slot BL0. To specify the target server module, you must specify the number of the slot in which the server module is installed. Server module slots range from 0 to 9 on the chassis.

---

- **ILOM – server module SP**

To view the dynamic IP address assigned to the server module, type:

```
-> show /SP/network
```

6. To log out of ILOM, type:

```
-> exit
```

## Configuring a Static Network

If you are planning to assign a static IP address to a server module SP, or the CMM, consult the following topics:

- [“IP Configuration Task Checklist” on page 22](#)
- [“Logging In to ILOM” on page 23](#)
- [“Assign a Static IP Address to Server Module SP Using the CLI” on page 27](#)

---

**Note** – You can assign IP addresses to the server module by using the ILOM web interface or command-line interface (CLI). For instructions on how to assign an IP address using ILOM’s web interface, see the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection*.

---

## ▼ Assign a Static IP Address to Server Module SP Using the CLI

1. Connect and log in to ILOM as described in one of these procedures:
  - [“Log In to ILOM Using a Serial Connection” on page 23](#)
  - [“Log In to ILOM Using an Ethernet Connection and the CLI” on page 24](#)
2. At the ILOM CLI prompt (->), type the following command to set the working directory:  

```
-> cd /SP/network
```
3. To configure a static Ethernet configuration, type the following commands, using your own addresses in place of the examples below:  

```
-> cd /SP/network  
-> set pendingipaddress=IP address  
-> set pendingipnetmask=Netmask address  
-> set pendingipgateway=Gateway address  
-> set pendingipdiscovery=static  
-> set commitpending=true
```
4. To log out of ILOM, type:  

```
-> exit
```



# Configuring the Preinstalled Oracle Solaris 10 Operating System

---

This chapter explains the steps for configuring the Oracle Solaris 10 Operating System (OS) that is preinstalled on the hard disk drive or solid state drive, if ordered.

---

**Note** – Unlike with SPARC systems, you will *not* see the output of the preinstalled Oracle 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:

- [“Before You Begin” on page 30](#)
- [“Configuring Server RAID Drives” on page 30](#)
- [“Installation Worksheet” on page 30](#)
- [“Configuring the Preinstalled Oracle Solaris 10 Operating System” on page 34](#)
- [“Oracle Solaris 10 Operating System User Information” on page 39](#)
- [“Using the Oracle Solaris Installation Program” on page 40](#)
- [“Reinstalling the Oracle Solaris Operating System” on page 40](#)

---

## Before You Begin

Before you begin configuring the preinstalled Oracle Solaris 10 OS, do the following:

- Configure an IP address for the server SP. For details, see [Chapter 3](#).
- Ensure that main power has been applied to the server module host. For more information, see [“Powering On the Server Module” on page 16](#).
- Gather the information that you will need for the configuration, as listed in [“Installation Worksheet” on page 30](#). Note that default values are indicated by an asterisk (\*).

---

**Note** – To identify the MAC address for a server or other chassis components, see the Customer Information Sheet (shipped with the component), or inspect the printed MAC address label attached to the server or chassis component.

---

- The server ships with its console redirected to the *serial* port. You can choose an option to send the output to VGA (video port). For more information, see [“\(Optional\) Redirect the Console Output to the Video Port” on page 37](#).

---

## Configuring Server RAID Drives

Configuring server RAID drives is not a supported feature with the preinstalled version of the Oracle Solaris 10 OS. If you need to configure your drives in a RAID configuration, see the Oracle Solaris 10 OS installation instructions in the *Sun Netra X6270 M2 Server Module Installation Guide for Linux, Virtual Machine Software, and Oracle Solaris Operating Systems*, 821-0940.

---

## Installation Worksheet

Use the worksheet in [TABLE 4-1](#) to gather the information that you need to configure the preinstalled Oracle Solaris 10 OS. You only need to collect the information that applies to your application of the system.

**TABLE 4-1** Worksheet for Oracle Solaris 10 OS Configuration

Information for Installation		Description or Example	Your Answers: Defaults (*)
Language		Select from the list of available languages for the Oracle Solaris 10 software.	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?	<ul style="list-style-type: none"> <li>• Networked</li> <li>• Non-networked*</li> </ul>
DHCP		Can the system use Dynamic Host Configuration Protocol (DHCP) to configure its network interfaces?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No*</li> </ul>
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: 129.200.9.1	
	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?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No*</li> </ul>
Host name		The host name chosen for your system.	
Kerberos		Do you want to configure Kerberos security on this machine? If yes, gather this information:	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No*</li> </ul>
		Default realm: Administration server: First KDC: (Optional) Additional KDCs:	

**TABLE 4-1** Worksheet for Oracle Solaris 10 OS Configuration (*Continued*)

Information for Installation		Description or Example	Your Answers: Defaults (*)
Name service	Name service	If applicable, which name service should this system use?	<ul style="list-style-type: none"><li>• NIS+</li><li>• NIS</li><li>• DNS</li><li>• LDAP</li><li>• None*</li></ul>
	Domain name	Provide the name of the domain in which the system resides.	
	NIS+ and NIS	<i>If you chose NIS+ or NIS</i> , do you want to specify a name server, or let the installation program find one?	<ul style="list-style-type: none"><li>• Specify One</li><li>• Find One*</li></ul>
	DNS	<i>If you chose DNS</i> , 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			
	LDAP	<i>If you chose LDAP</i> , 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 4-1** Worksheet for Oracle Solaris 10 OS Configuration (*Continued*)

Information for Installation	Description or Example	Your Answers: Defaults (*)
Default route	<p>Do you want to specify a default route IP address, or let the Oracle Solaris installation program find one?</p> <p>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.</p> <p>You have the following choices:</p> <ul style="list-style-type: none"><li>• You can specify the IP address. An <code>/etc/defaultrouter</code> file is created with the specified IP address. When the system is rebooted, the specified IP address becomes the default route.</li><li>• You can let the Oracle Solaris 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.</li><li>• 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.</li></ul>	<ul style="list-style-type: none"><li>• Specify One</li><li>• Detect One</li><li>• None*</li></ul>
Time zone	How do you want to specify your default time zone?	<ul style="list-style-type: none"><li>• Geographic region*</li><li>• Offset from GM</li><li>• Time zone file</li></ul>
Root password	Choose a root password for the system.	

---

# Configuring the Preinstalled Oracle Solaris 10 Operating System

---

**Note** – Before you perform this procedure, you need to set up the IP address of the service processor. If you have not done so, see [Chapter 3](#).

---

After setting up the IP address of the service processor (SP), you can configure the preinstalled Oracle Solaris 10 Operating System (OS) over the network by using Secure Shell (SSH) or locally using the SER MGT port to connect to the system console.

Use the information that you gathered in “[Installation Worksheet](#)” on page 30 as you perform the configuration.

## ▼ Accessing the System Over the Network

1. **Using a Secure Shell, log in to ILOM by specifying the `root` user account or your Administrator account user name, the IP address of the server SP, and the password for the user account.**

The following example shows how to log in to ILOM using the `root` user account and its default password, `changeme`.

```
$ ssh root@host  
Password: changeme
```

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

ILOM displays the default command-line prompt (`->`), indicating that you have successfully logged in to ILOM.

2. **Verify that the communication properties of the service processor are set to the defaults. Type the following command:**

```
-> show /SP/serial/host
/SP/serial/host
Targets:

Properties:
    commitpending = (Cannot show property)
    pendingspeed = 9600
    speed = 9600

Commands:
    cd
    show
```

---

**Note** – If the speed is anything other than 9600, change it using this command:

-> **set /SP/serial/host pendingspeed=9600 commitpending=true**

---

3. Start the serial console. 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.
```

You are now connected to the server module host.

## ▼ Accessing the System Locally

1. Use a cable to connect the SER MGT port on the server module to the serial port of the client system.
2. To access the system console, start a terminal session using one of the following methods:

- **On a serial console running Oracle Solaris:**

Type the appropriate command to start a terminal session. For example, you can start a terminal session on a Oracle Solaris console by typing:

```
$tip -9600 /dev/ttya
```

- **On a client running Windows:**

Open the appropriate program to start a terminal session. For example, you can start a terminal session on a Windows console by selecting:

```
Start -> Programs -> Accessories -> Communications ->
Hyperterminal
```

■ **On a client running Linux:**

Type the appropriate command to start a terminal session. For example, to start a terminal session on a Linux console, you could launch Minicom.

Minicom is a text-based serial communication program that is included in the Linux distributions. For more information, see the man pages included in the Linux distribution.

**3. Press Enter on the terminal device to connect the terminal device to the ILOM SP.**

ILOM displays its login prompt.

---

**Note** – If you connect to the serial port on the server before the ILOM SP has been powered on or during the power-on sequence, SP boot messages might be displayed prior to the ILOM login prompt.

---

**4. Type your user name and password to log in to the ILOM SP.**

The default user name is `root` and its default password is `changeme`.

ILOM displays its default command-line prompt (`->`).

**5. Verify that the communication properties of the service processor are set to the defaults. Type the following command:**

```
-> show /SP/serial/host
/SP/serial/host
Targets:

Properties:
  commitpending = (Cannot show property)
  pendingspeed = 9600
  speed = 9600

Commands:
  cd
  show
```

---

**Note** – If the speed is anything other than 9600, change it using this command:

```
-> set /SP/serial/host pendingspeed=9600 commitpending=true
```

---

**6. Start the serial console. 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.
```

You are now connected to the server module host.

## ▼ Configure the Preinstalled Oracle Solaris 10 OS

1. **Press the recessed Power button on the front panel to apply main power to the server.**

For additional information about powering on your server, see [“Powering On the Server Module” on page 16](#).

POST messages appear on your screen as the OS boots up.

2. **(Optional) When the POST completes, you can choose to redirect the console output to the video port.**

For instructions, see [“\(Optional\) Redirect the Console Output to the Video Port” on page 37](#).

3. **Follow the Oracle Solaris 10 preinstallation on-screen prompts.**

4. **Use the information gathered in [“Installation Worksheet” on page 30](#) 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 Oracle Solaris login prompt.

## ▼ (Optional) Redirect the Console Output to the Video Port

The server module’s console is automatically directed to the serial port. However, you can choose to direct the serial console to the video port using the GRUB menu. GRUB is the open source boot loader. It is the default boot loader in the Oracle Solaris OS for x86-based systems. The boot loader is the first software program that runs after you power on a system.

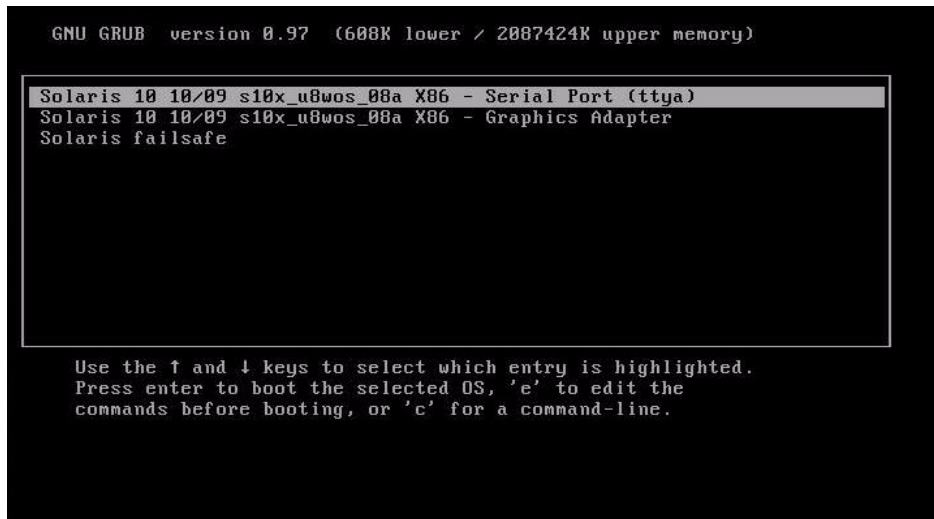
To redirect the console output to the video port, follow these steps:

**1. Power on the server and observe the POST messages.**

When the POST completes, the GRUB menu appears.

From the GRUB menu, you have the option of displaying the installation process to a tty connection (serial port) or a VGA connection (video port) as shown in [FIGURE 4-1](#).

**FIGURE 4-1**



**2. To display output to the video port, choose the following option:**

Solaris 10 10/09 s10x\_u8wos\_u08a X86 - Graphics Adapter

## ▼ (Optional) Modify the GRUB Menu to Auto Boot

The GRUB menu on the preinstall image is configured for an infinite timeout to enable you to choose the console output on power-up. You can modify this configuration so that the system boots automatically.

To modify the GRUB menu so that the system boots automatically, follow these steps:

- 1. From the GRUB menu, press `e` to enter edit mode.**
- 2. Edit the `/rpool/boot/grub/menu.1st` file by changing the `-1` value on the `timeout` line to the duration that you want the menu to be presented.**

For example, for a 10-second delay, change the timeout value to 10.

### 3. Add a line that specifies the default boot entry.

For example, to specify the first entry, add `default 10`.

---

## Oracle Solaris 10 Operating System User Information

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

### Oracle Solaris 10 User Documentation

Oracle Solaris 10 OS documentation is available from the web at:

<http://docs.sun.com>

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

- For the Oracle Solaris installation guides, see <http://docs.sun.com/app/docs/coll/1236.1>
- For the Oracle Solaris 10 administration guides, see <http://docs.sun.com/apps/docs/coll/47.16>
- For information about upgrading your system, see *Solaris 10 10/09 Installation Guide: Solaris Live Upgrade and Upgrade Planning*.
- For troubleshooting information, see Appendix A in *Solaris 10 10/09 Installation Guide: Custom Jumpstart and Advanced Illustrations*.
- See the *Sun Netra X6270 M2 Server Module Product Notes*, 821-0936 for patch and other late-breaking information.

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

---

# Using the Oracle Solaris Installation Program

The Oracle 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 Oracle 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 Oracle Solaris 10 Operating System you have installed. This documentation is available at:

<http://docs.sun.com/app/docs/prod/solaris.10>

After you configure the preinstalled Oracle Solaris OS, the Installation Program reboots the system and prompts you to log in. The system displays the message of the day, indicating the preloaded software that comes with your system.

---

# Reinstalling the Oracle Solaris Operating System

If you want to reinstall the Oracle Solaris OS on Oracle's Sun Netra X6270 M2 server module, or to install a different version of the Oracle Solaris OS, refer to the *Solaris 10 Installation Guide: Basic Installations*, 820-0176.

## Download the Oracle Solaris Operating System

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

- To download the Oracle Solaris 10 Operating System, go to:  
<http://www.sun.com/software/solaris/get.jsp>
- To download patches, go to the product web site and navigate to the appropriate page for Oracle Solaris patches:  
<http://www.oracle.com/goto/netrax6270m2>

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