

Sun Blade T6320 Server Module

Installation Guide



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Preface

This guide includes general information about the Sun Blade T6320 server module from Oracle and instructions for installing the server module in a Sun Blade modular system.

Before You Read This Document

This document is intended for experienced system administrators. Before installing a Sun Blade T6320 server module, you must have thorough knowledge of the topics discussed in these documents:

- *Sun Blade T6320 Server Module Product Notes*
- Installation documentation included with your Sun Blade modular system (chassis)

Refer to [“Related Documentation”](#) on page viii for more information.

Related Documentation

Documentation for the Sun Blade T6320 server module is available at:

<http://docs.sun.com/app/docs/prod/blade.t6320#hic>

Additional Sun documentation is available at:

<http://docs.sun.com>

Application	Title	Part Number
Late-breaking news	<i>Sun Blade T6320 G2 and Sun Blade T6320 Server Modules Product Notes</i>	820-2383
Safety information	<i>Sun Blade T6320 Server Module Safety and Compliance Guide</i>	820-2387
	<i>Important Safety Information About Sun Hardware</i>	816-7190 or 821-1590
Integrated Lights Out Manager (ILOM) and Administration	<i>Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Blade T6320 Server Modules</i>	820-7145
	<i>Sun Integrated Lights Out Manager 2.0 Supplement for Sun Blade T6320 Server Modules</i>	820-2546
Service	<i>Sun Blade T6320 Server Module Service Manual</i>	820-2386
Chassis installation	Refer to the installation guide for your Sun Blade modular system.	

Additional information about the Oracle Integrated Lights Out Manager firmware that is installed on the server module and on the modular system, is available at:

■ <http://docs.sun.com/app/docs/coll/ilom3.0>

■ <http://docs.sun.com/app/docs/coll/ilom2.0>

Documentation, Support, and Training

These web sites provide additional resources:

Sun Function	URL
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Sun Blade T6320 Server Module Installation Guide, part number 820-2384-11.

Before You Begin the Installation

This chapter includes general information to help you become familiar with the hardware and software features of the Sun Blade T6320 server module from Oracle®.

This chapter contains the following topics:

- [“Hardware Overview” on page 1](#)
- [“Physical Specifications” on page 2](#)
- [“Environmental Requirements” on page 2](#)
- [“Front Panel Features” on page 3](#)
- [“Preinstalled Software” on page 4](#)
- [“Managing Your Sun Blade T6320 Server Module With ILOM” on page 4](#)

Hardware Overview

The Sun Blade T6320 server module includes the following hardware features:

- One 4-, 6-, or 8-core, up to 64-thread UltraSPARC T2 processor, up to 1.4 GHz
- Sixteen FBDIMM slots supporting a minimum of 4 Gbytes and maximum of 64 Gbytes capacity.
- One dual gigabit Ethernet controller
- One SAS/SATA controller
- One to four SAS/SATA drives (optional)
- Two USB ports connected to dongle cable (the dongle cable is optional)
- One DB-9 or RJ-45 serial virtual console port connected to a dongle cable (the dongle cable is optional)

Physical Specifications

The Sun Blade T6320 server module is approximately 12.9 x 20.1 x 1.7 inches in a 1U form factor. The server module plugs in to a Sun Blade modular system, or *chassis*, which provides power to each module, as well as cooling through fans. In addition to the main power, the chassis provides AUX power to each module to power the local FRU ID EEPROM. This AUX power enables the chassis management module (CMM) to query each module slot prior to main power and fan application to validate that there is sufficient power and cooling to support the number and type of modules installed in the chassis.

Environmental Requirements

TABLE 1-1 includes the environmental requirements that are specific to the Sun Blade T6320 server module.

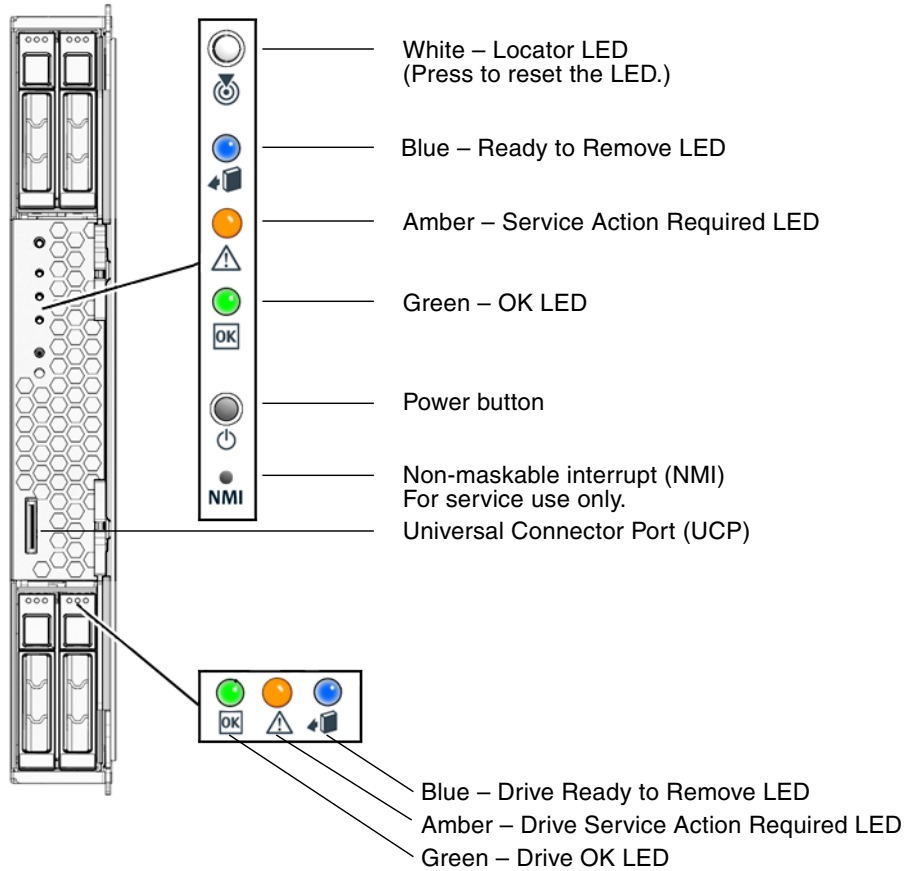
TABLE 1-1 Sun Blade T6320 Server Module Environmental Requirements

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

Front Panel Features

FIGURE 1-1 illustrates the front panel, with descriptions of its features.

FIGURE 1-1 Sun Blade T6320 Server Module Front Panel



Preinstalled Software

You can order the Sun Blade T6320 server module with one or more hard disk drives assembled to order. In that case, Solaris Operating System software and other software is preinstalled on the root hard drive. For information about preinstalled software, refer to this site:

<http://www.sun.com/software/preinstall>

For information about software that is preinstalled on the root hard drive, refer to the *Sun Blade T6320 Server Module Product Notes*.

Managing Your Sun Blade T6320 Server Module With ILOM

Oracle Integrated Lights Out Manager (ILOM) is system management firmware you can use to monitor, manage, and configure the Sun Blade T6320 server module. The ILOM firmware is preinstalled on the service processor (SP) of the Sun Blade T6320 server module and initializes as soon as you apply power to the system. You can access ILOM through several interfaces, such as web browsers, a command-line interface (CLI), an SNMP interface, and an Intelligent Platform Management Interface (IPMI). ILOM will continue to run regardless of the state of the host operating system, making it a “lights-out” management system.

For information about configuring and using ILOM, refer to the ILOM documentation described in “[Related Documentation](#)” on page viii.

Service Processors

A *service processor* (SP) is a board that operates independently of the other hardware in the system. It has its own Internet Protocol (IP) address and media access control (MAC) address and is capable of operating regardless of the state of the other system hardware. In a Sun Blade server module, the SP can operate whether the server module is fully operational, powered down, or somewhere in between. The Sun Blade modular system and every server module in the modular system has its own SP. On some server modules, the service processor is called a *system controller*.

Chassis Management Module

The Sun Blade modular system, or *chassis*, has its own service processor, called a *chassis management module* (CMM). CMM ILOM is a modified version of ILOM firmware that is preinstalled on the CMM.

Before installing the Sun Blade T6320 server module, you should have already installed and configured your Sun Blade modular system, including the CMM ILOM. For more information, refer to the installation guide for your Sun Blade modular system.

ILOM on the Server Module SP and CMM

ILOM supports two ways to manage a system: using the CMM or using the server module's SP directly.

- **Using the Chassis Management Module** – Managing the system from the CMM enables you to set up and manage components throughout the entire system, as well as to manage the individual blade server SP.
- **Using the service processor directly** – Managing the SP on a Sun Blade server module enables you to manage individual server module operations. This approach might be useful in troubleshooting a specific service processor or controlling access to specific server modules.

Establishing Communication With ILOM

You can establish communication with ILOM through a console connection to the serial management port or through an Ethernet connection to the network management port on the CMM. The type of connection you establish to ILOM determines which type of tasks you can perform. For example, to remotely access the full range of system management functionality in ILOM, you require both an Ethernet connection and an IP assignment to the server module SP and the CMM. For detailed information about configuring and using ILOM, refer to the ILOM documentation described in [“Related Documentation”](#) on page viii.

Attaching a Serial Console to the Chassis Management Module

You can attach a serial console to the chassis management module (CMM). Refer to the installation guide for your Sun Blade modular system (chassis) for a description of that procedure.

Attaching a Serial Console to the Server Module

To communicate directly with the Sun Blade T6320 server module, you can connect a serial console to the universal connector port (UCP) on the front panel of the server module by using a dongle cable. See [“Connecting to the Server Module SP Using a Dongle Cable” on page 17](#) for more information.



Caution – Dongle cables are intended for set-up, testing, or service purposes and should be removed when not in use. They have not been evaluated for electromagnetic compatibility (EMC) compliance and are not to be used during normal system operation.

You can order an optional dongle cable with the Sun Blade T6320 server module, or you can use the dongle cable that shipped with your Sun Blade modular system. [TABLE 1-2](#) lists the ports to be used for serial connections to the server module using UCP-3 or UCP-4 dongle cables. [FIGURE 1-2](#) shows possible connections on the dongle cable.

TABLE 1-2 Serial Connectors for Dongle Cables

Dongle Cable	Serial Connector
UCP-3	RJ-45.
UCP-4	DB-9. Can be used with optional DB-9-to-RJ-45 serial adapter. Note - The RJ-45 connector on UCP-4 dongle cables is <i>not</i> supported on Sun Blade T6320 server modules.

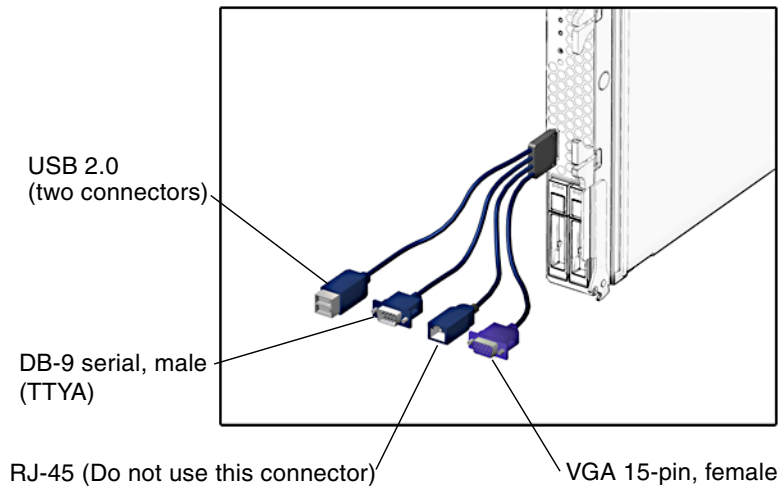
▼ To Insert the Dongle Cable

- **Insert the connector straight into the UCP on the server module.**

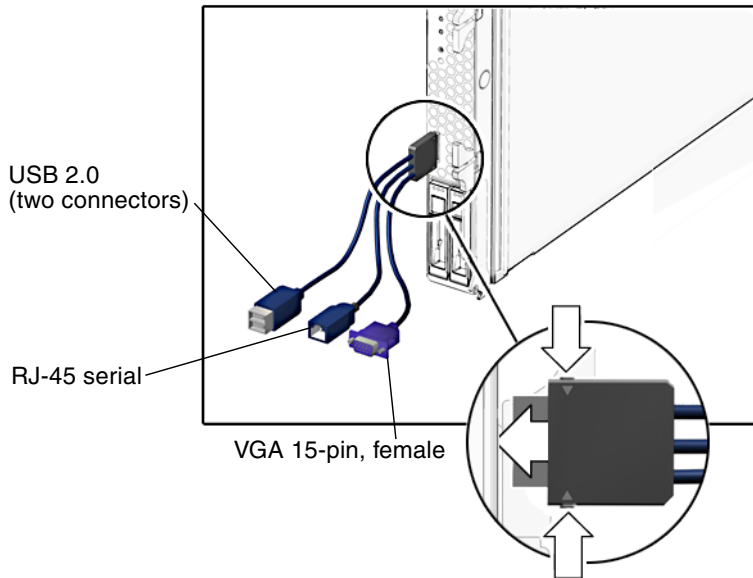
[FIGURE 1-2](#) illustrates how to insert the dongle cable into the UCP.

FIGURE 1-2 Dongle Cable Connectors

Four-connector dongle cable (UCP-4)



Three-connector dongle cable (UCP-3)



Installation and Configuration

After you have familiarized yourself with the features and components of the Sun Blade T6320 server module, use the instructions in this chapter to install the server into the chassis.

This chapter contains the following topics:

- [“Handling the Server Module” on page 10](#)
- [“Installing the Module in the Chassis” on page 10](#)
 - [“To Insert the Server Module” on page 10](#)
- [“Setting Up the ILOM Software” on page 12](#)
 - [“Connection Overview” on page 12](#)
 - [“Connecting to the Server Module ILOM” on page 13](#)
 - [“Configuring and Viewing the IP Address for a Server Module SP” on page 18](#)
 - [“Changing the ILOM Password and Powering On the Host” on page 25](#)
 - [“To Change the ILOM Password” on page 25](#)
 - [“To Power On the Host” on page 25](#)
- [“Powering On and Powering Off the Server Module” on page 26](#)
 - [“To Apply Standby Power for Initial Service Processor Configuration” on page 26](#)
 - [“To Power on Main Power for All Server Components” on page 27](#)
 - [“To Shut Down Main Power Mode” on page 27](#)
- [“Installing the Solaris Operating System on a Hard Drive” on page 28](#)
 - [“JumpStart Server Installation” on page 28](#)
 - [“JumpStart Server Configuration” on page 29](#)

Handling the Server Module

Electronic equipment is susceptible to damage by static electricity. Use a grounded antistatic wriststrap, footstrap, or equivalent safety equipment to prevent electrostatic damage (ESD) when you install the Sun Blade T6320 server module.



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

Installing the Module in the Chassis

▼ To Insert the Server Module

1. **Ensure that you have the MAC address and serial number from the labels on the shipping container and server module.**

2. **Ensure that the modular system (chassis) is powered on.**

Refer to [“Powering On and Powering Off the Server Module” on page 26](#) and to the documentation that came with your Sun Blade modular system.

3. **Locate the desired slot in the chassis.**

Other filler panels should remain in any unused slots, as they ensure the modular system complies with FCC limits on electromagnetic interference (EMI).

4. **Remove the filler panel from the target slot, if applicable.**

5. **Optional: Attach a serial cable from the terminal server to the virtual console connector on the dongle cable.**

If you plan to use a dongle cable to connect directly to the server module, you must connect the terminal server to the dongle cable before you insert the server module so that you can see the boot messages for the ILOM firmware. Refer to the sections [“Managing Your Sun Blade T6320 Server Module With ILOM” on page 4](#) and [“Setting Up the ILOM Software” on page 12](#) for more information.

a. Attach the dongle cable to the server module.

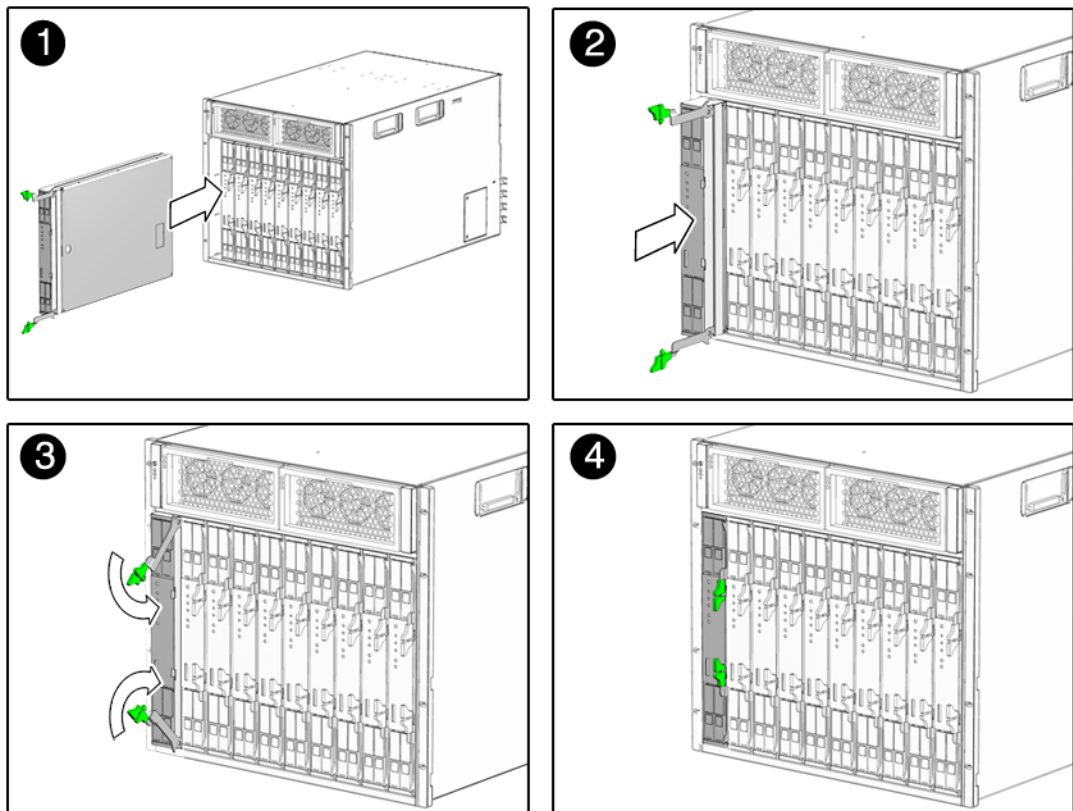
Refer to “Attaching a Serial Console to the Server Module” on page 6.

b. Attach a serial cable from the terminal server to the virtual console connector on the dongle cable.

6. Position the server module vertically so that the ejectors are on the right.

FIGURE 2-1 shows the server module being inserted into the chassis. See box 1.

FIGURE 2-1 Inserting the Sun Blade T6320 Server Module Into the Sun Blade Modular System



7. Push the server module into the slot until the module is about 1.5 cm (one-half inch) from the chassis front.

See box 2 in FIGURE 2-1.

8. Push the ejectors down until they snap into place.

See boxes 3 and 4 in [FIGURE 2-1](#). The server module is now flush with the modular system and the ejectors are locked.

The server module goes into standby mode and the ILOM service processor initializes as soon as you insert the server module into the chassis.

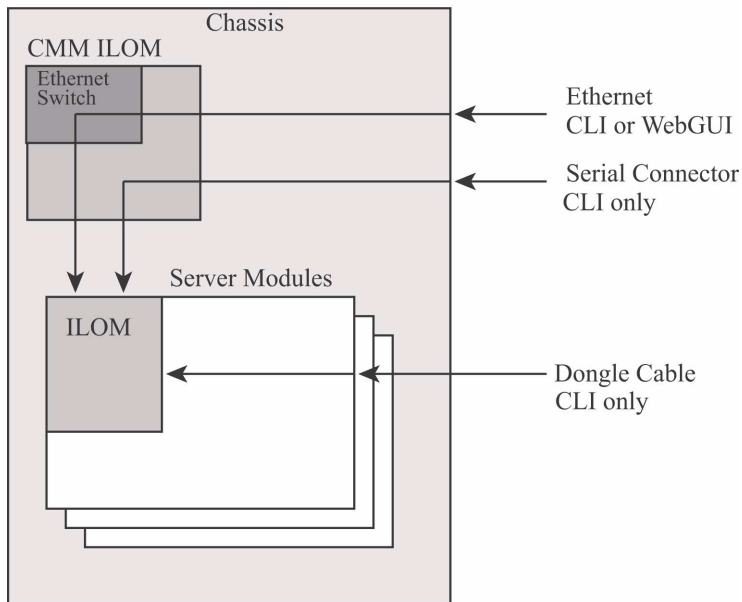
Setting Up the ILOM Software

Before you continue installing the server module, you must ensure that you can connect to the SP.

Connection Overview

[FIGURE 2-2](#) shows the connections to the server module SP and ILOM software.

FIGURE 2-2 CMM and Server Module Connection Options



Connecting to the Server Module ILOM

This section describes how to connect to the server module SP using one of the methods listed below and described in the corresponding sections:

- **Connect to the CMM through the Ethernet port.** This method supports access through both the command-line interface (CLI) and the web interface (sometimes called the *WebGUI*, *browser user interface*, or *BUI*). The Ethernet port on the modular system chassis provides the most robust method of connecting to the CMM and the server module SP. See [“Connecting Through the Chassis CMM Ethernet Port” on page 13](#).
- **Connect to the CMM through the serial connector on the chassis.** Then use the CMM ILOM to navigate to the server module SP and its ILOM firmware. This method supports CLI access only. See [“Connecting to the Server Module SP Through the Chassis CMM Serial Connector” on page 15](#).
- **Connect directly to the server module SP through a serial connection by using a dongle cable.** Dongle cables are intended for setup, testing, or service purposes and should be removed when not in use. This method supports CLI access only. See [“Connecting to the Server Module SP Using a Dongle Cable” on page 17](#).

Connecting Through the Chassis CMM Ethernet Port

The Ethernet port on the modular system chassis provides the most robust method of connecting to the CMM and the server module SP. This connection supports both the CLI and the web interface.

You can connect to the CMM through the RJ-45 NET MGT 0 Ethernet port.

Before you can use the Ethernet connection, you must know the IP addresses for the CMM and server module SP to which you want to connect. To configure the IP address on the T6320 server module, refer to [“Configuring and Viewing the IP Address for a Server Module SP” on page 18](#).

▼ To Log In or Out of the SP Using the CLI

ILOM supports SSH access to the CLI over the Ethernet.

1. **Start an SSH client.**
2. **Log in to the IP:**

```
$ ssh root@ipaddress
```

3. **Type your password when prompted.**

Note – The default user name is **root**, and the default password is **changeme**. See [“Changing the ILOM Password and Powering On the Host” on page 25](#) for information about changing the default password.

For example:

```
$ ssh root@192.168.25.25
root@192.168.25.25's password:
Sun Integrated Lights Out Manager
Version 1.0
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
Warning: password is set to factory default.
```

4. Type **exit** to log out.

▼ To Log In or Out of the SP Using the Web Interface

1. To log in to the web interface, type the IP address of the SP into your web browser.

The login screen is displayed.

2. Type your user name and password.

When you first try to access the web interface, it prompts you to type the default user name and password. The default user name and password are:

- Default user name – root
- Default password – changeme

The default user name and password are in lowercase characters. See [“Changing the ILOM Password and Powering On the Host” on page 25](#) for information about changing the default password.

3. Click Log In.

The web interface is displayed.

4. To log out of the web interface, click the Log Out button at the top right of the screen.

The log out screen is displayed.

Connecting to the Server Module SP Through the Chassis CMM Serial Connector

You can access the CMM ILOM by connecting a terminal or a terminal emulator to the RJ-45 serial port on the chassis. Once the server module is installed in the modular system chassis, you can connect to the server module SP by using the CLI on the CMM ILOM software.

▼ To Connect Through the Chassis Serial Connector

1. **Verify that your terminal, laptop, or terminal server is operational.**
2. **Configure the terminal device or terminal emulation software to use the following settings:**
 - 8N1: eight data bits, no parity, one stop bit
 - 9600 baud (default, can be set to any standard rate up to 57600)
 - Disable hardware flow control (CTS/RTS)
3. **Connect a serial cable from the serial port on the chassis to a terminal device.**

Refer to the modular system chassis documentation for the location of the serial port.

Note – The serial port requires the pin assignments described in [TABLE 2-1](#). Note that these are the same as the serial cable connector for the Sun Advanced Lights Out Manager (ALOM) or Remote System Control (RSC).

TABLE 2-1 Serial Management Port Pinouts

Pin	Signal Description
1	Request To Send (RTS)
2	Data Terminal Ready (DTR)
3	Transmit Data (TXD)
4	Ground
5	Ground
6	Receive Data (RXD)
7	Data Carrier Detect (DCD)
8	Clear To Send (CTS)

Note – The CMM ILOM logs on to the server module ILOM using the user name in the user target under `/CH/BLn/SP/cli` (where *n* is the server module number).

9. Enter the password when prompted.

The default password is changeme.

The server module ILOM prompt is displayed.

See “[Changing the ILOM Password and Powering On the Host](#)” on page 25 for information about changing the default password.

10. When you are done, type `exit`.

The server module ILOM exits and the CMM CLI prompt is displayed.

The following display shows an example of the login screen:

```
-> cd /CH/BL2/SP/cli
/CH/BL2/SP/cli

-> start
Are you sure you want to start /CH/BL2/SP/cli (y/n)? y
Password:          Type the ILOM password for the server module SP.

Sun(TM) Integrated Lights Out Manager

Version 2.0

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Warning: password is set to factory default.

-> exit          Type the exit command to exit the server module SP and return to the CMM.
Connection to 10.6.153.33 closed.
```

Connecting to the Server Module SP Using a Dongle Cable

A dongle cable allows you to connect a terminal directly to the server module.



Caution – Dongle cables are intended for set-up, testing, or service purposes and should be removed when not in use. They have not been evaluated for electromagnetic compatibility (EMC) compliance and are not to be used during normal system operation.

▼ To Connect to the Server Module SP Using a Dongle Cable

1. Connect a dongle cable to the UCP port on the front of the server module.

Refer to [“Attaching a Serial Console to the Server Module”](#) on page 6 for information about attaching UCP dongle cables.

2. Connect a terminal or terminal emulator to the serial connector on the dongle cable.

The ILOM login prompt is displayed.

3. Enter the user name and password when prompted.

The default user is `root` and the default password is `changeme`.

The server module ILOM prompt is displayed.

See [“Changing the ILOM Password and Powering On the Host”](#) on page 25 for information about changing the default password.

4. When you are done, exit the ILOM software by typing:

```
-> exit
```

Configuring and Viewing the IP Address for a Server Module SP

You can configure and view the network IP address for the T6320 server module SP in two ways:

- By connecting to the CMM in the Sun Blade modular system chassis.

Refer to [“Configuring and Viewing the IP Address for a Server Module SP Through the CMM”](#) on page 19.

- By connecting directly to the T6320 server module SP.

Refer to [“Configuring and Viewing the IP Address for a Server Module SP Through the UCP”](#) on page 23.

Configuring and Viewing the IP Address for a Server Module SP Through the CMM

You can attach to the CMM on the modular system chassis through a serial port or an Ethernet port:

- **CMM serial port** – You can attach a terminal device. Refer to [“Connecting to the Server Module SP Through the Chassis CMM Serial Connector”](#) on page 15.
- **CMM Ethernet port** – You can connect to your management network. Refer to [“Connecting Through the Chassis CMM Ethernet Port”](#) on page 13.

After attaching to the CMM using one of these ports, you can log in to the CMM ILOM software to configure and view your server module IP address, whether the IP address is assigned by DHCP or a static IP address.

▼ To View or Configure the IP Address for the Server Module SP When Assigned by DHCP — Through the CMM

1. **Verify that your DHCP server is configured to accept new media access control (MAC) addresses.**
2. **Attach to the CMM using the CMM serial or Ethernet port.**
3. **Find the IP address that DHCP has assigned to the server module SP.**

A valid IP address may already have been assigned to the server module SP by your DHCP server. To view the IP address that has been assigned, type:

```
-> show /CH/BLn/SP/network ipaddress
```

Where *n* is an integer representing the slot where the target server module is installed. The CMM ILOM software displays the IP address currently assigned to the server module SP.

If the assigned IP address is not valid, you will need to provide the MAC address for the server module SP to your DHCP system administrator. In that case, proceed to [Step 4](#).

4. **Obtain the MAC address for the server module SP.**

MAC addresses are 12-digit hexadecimal strings in the format *xx:xx:xx:xx:xx:xx* where *x* represents a single hexadecimal letter (0–9, A–F, a–f). The Customer Information document shipped with your server module lists the MAC address, or you can find it using this procedure:

- a. **Log in to the CMM ILOM software and type this command:**

```
-> show /CH/BLn/SP/network macaddress
```

Where n is an integer representing the slot where the target server module is installed. The CMM ILOM software displays the current MAC address.

b. Write down the MAC address and use it to configure your DHCP server.

5. View the IP address that DHCP has assigned to the server module SP.

After a valid IP address has been assigned to the server module, view the IP address, as described in [Step 3](#).

▼ To View or Configure the IP Address for the Server Module SP Using Static IP Addresses — Through the CMM

1. Attach to the CMM using the CMM serial or Ethernet port.

2. (Optional) View the IP address.

- To see all the IP address-related information, type:

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

- To see only the IP address, type:

```
-> show /CH/BLn/SP/network ipaddress
```

3. Navigate to `/CH/BLn/SP/network` by typing the following command:

```
-> cd /CH/BLn/SP/network
```

4. Type the following commands:

- To configure a static Ethernet configuration:

```
-> set pendingipdiscovery=static
-> set pendingipaddress=xxx.xxx.xx.xx
-> set pendingipnetmask=yyy.yyy.yyy.y
-> set pendingipgateway=zzz.zzz.zz.zzz
-> set commitpending=true
```

Where *xxx.xxx.xx.xx*, *yyy.yyy.yyy.y* and *zzz.zzz.zz.zzz* are the IP address, netmask, and gateway for your ILOM and network configuration. To determine these addresses, contact your system administrator.

- To revert to a dynamic Ethernet configuration:

```
-> set pendingipdiscovery=dhcp
-> set commitpending=true
```

The following display shows a typical session where the user looks at static settings, configures them to be dynamic, then looks at the new settings.

```

-> cd /CH/BL2/SP/network

-> show

/CH/BL2/SP/network
Targets:

Properties:
  commitpending = (Cannot show property)
  ipaddress = 10.6.42.42
  ipdiscovery = static
  ipgateway = 10.6.42.1
  ipnetmask = 255.255.255.0
  macaddress = 00:14:4F:3A:26:74
  pendingipaddress = 10.6.42.42
  pendingipdiscovery = static
  pendingipgateway = 10.6.42.1
  pendingipnetmask = 255.255.255.0

Commands:
  cd
  set
  show

-> set pendingipdiscovery=dhcp
Set 'pendingipdiscovery' to 'dhcp'

-> set commitpending=true
Set 'commitpending' to 'true'

-> show

/CH/BL2/SP/network
Targets:

Properties:
  commitpending = (Cannot show property)
  ipaddress = 10.6.42.191
  ipdiscovery = dhcp
  ipgateway = 10.6.42.1
  ipnetmask = 255.255.255.0
  macaddress = 00:14:4F:3A:26:74
  pendingipaddress = 10.6.42.191
  pendingipdiscovery = dhcp
  pendingipgateway = 10.6.42.1
  pendingipnetmask = 255.255.255.0

Commands:
  cd
  set
  show

```


Configuring and Viewing the IP Address for a Server Module SP Through the UCP

You can connect to the server module SP by one of these methods:

- **Through the front-panel universal connector port (UCP) using a dongle cable.**
- **Through the SP Ethernet port.** You must already know the IP address to use this method, so it is not useful for configuration.

▼ To View or Configure the IP Address for the Server Module SP When Assigned by DHCP — Through the UCP

1. **Verify that your DHCP server is configured to accept new media access control (MAC) addresses.**
2. **Connect to the server module SP through the front-panel UCP using a dongle cable.**

Refer to [“Connecting to the Server Module SP Using a Dongle Cable”](#) on page 17.

3. **Find the IP address that DHCP has assigned to the server module SP.**

A valid IP address may already have been assigned to the server module SP by your DHCP server. To view the IP address that has been assigned, type:

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

The ILOM software displays the IP address currently assigned to the server module SP.

If the assigned IP address is not valid, you will need to provide the MAC address for the server module SP to your DHCP system administrator. In that case, proceed to [Step 4](#).

4. **Obtain the MAC address for the server module SP.**

MAC addresses are 12-digit hexadecimal strings in the format `xx:xx:xx:xx:xx:xx` where `x` represents a single hexadecimal letter (0–9, A–F, a–f). The Customer Information document shipped with your server module lists the MAC address, or you can find it using this procedure:

- a. **Type this command:**

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

The ILOM software displays the current MAC address.

- b. Write down the MAC address and use it to configure your DHCP server.
5. View the IP address that DHCP has assigned to the server module SP.
After a valid IP address has been assigned to the server module, view the IP address. Refer to [Step 3](#).

▼ To View or Configure the IP Address for the Server Module SP Using Static IP Addresses — Through the UCP

1. Connect to the server module SP through the front-panel UCP using a dongle cable.
Refer to “[Connecting to the Server Module SP Using a Dongle Cable](#)” on page 17.
2. (Optional) View the IP address.
 - To see all the IP address-related information, type:

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

- To see only the IP address, type:

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

3. Follow the instructions in “[To View or Configure the IP Address for the Server Module SP Using Static IP Addresses — Through the CMM](#)” on page 20, starting with [Step 3](#).
After you have finished following those steps, proceed to [Step 4](#), below.
4. When you are done, exit from the ILOM software on the SP by typing `exit`.
 - If you connected to the server module ILOM through the CMM ILOM, you will be returned to the CMM ILOM.
 - If you connected to the ILOM using SSH, you will be disconnected automatically, because you logged in under a different IP address.

Changing the ILOM Password and Powering On the Host

▼ To Change the ILOM Password

1. At the initial login prompt on the server module SP, you logged in using the default administrator user name and password.

```
hostname login: root
Password: changeme
```

2. Use the ILOM password command to change the password.

```
-> set /SP/users/root password
Enter new password: *****
Enter new password again: *****
->
```

After the root password has been set, on subsequent reboots, the ILOM CLI login prompt is displayed.

▼ To Power On the Host

After the service processor boots, the ILOM CLI prompt (->) is displayed the first time the service processor is booted.

1. Issue the `start /SYS` command.

You see an ILOM -> prompt on the system console. This indicates that the system has reset. Issue the `start /SYS` command:

```
-> start /SYS
Are you sure you want to start /SYS (y/n)? y
Starting /SYS
```

2. Issue the `start /SP/console` command.

```
-> start /SP/console
Are you sure you want to start /SP/console (y/n)? y
Serial console started. To stop, type #.

0:0:0>Scrub Memory...Done
0:0:0>SPU CWQ Tests...Done
0:0:0>MAU Tests...Done
```

After you issue the `start` commands, the CPU and memory controllers initialize, and eventually the OpenBoot PROM (OBP) firmware initializes. If a boot device installed with the Solaris OS is accessible locally, that device will be booted. Otherwise, the system will use the `boot net` command to seek a boot device on the network.

Powering On and Powering Off the Server Module

You must apply standby power to the server before initial configuration so that you can perform initial configuration of the service processor (SP). Procedures for powering on to main power mode and for shutting down from main power mode are also included in this section. Refer to the documentation for your Sun Blade modular system for more information.

▼ To Apply Standby Power for Initial Service Processor Configuration

Use this procedure to apply standby power to the service processor (SP) *before* initial configuration.

1. **Connect grounded AC power cords to the AC power connectors on the back panel of the chassis and to grounded AC power outlets.**

For details, see your chassis documentation.

In standby power mode, the OK LED on the front panel of the server flashes, indicating that the SP is working. See [FIGURE 1-1](#) for the LED location.

Note – At this point, standby power is supplied only to the Graphics Redirect and Service Processor board and power supply fans.

2. Continue with initial software setup tasks.

Refer to [“Setting Up the ILOM Software”](#) on page 12.

▼ To Power on Main Power for All Server Components

1. Verify that standby power is on.

In standby power mode, the OK LED on the front panel flashes. See [FIGURE 1-1](#).

2. Use a pointed object or stylus to press and release the recessed Power button on the server front panel.

When main power is applied to the full server, the Power/OK LED above the Power button lights and remains lit.

▼ To Shut Down Main Power Mode

To power off the server from main power mode, use one of the following two methods:

- **Graceful shutdown.** Use a pointed object or other stylus to 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 of the operating system. Servers not running ACPI-enabled operating systems will shut down to standby power mode immediately.
- **Emergency shutdown.** Press and hold the Power button for four seconds to force main power off and enter standby power mode.

When main power is off, the Power/OK LED on the front panel will begin flashing, indicating that the server is in standby power mode.

Note – To power off the server completely, you must either remove the server module from the chassis or disconnect the AC power cords from the back panel of the chassis.

Installing the Solaris Operating System on a Hard Drive

The basic configuration of Oracle's Sun Blade T6320 server module ships with or without hard drives. If you ordered an optional hard drive with preinstalled software, refer to "Preinstalled Software" on page 4.

If you ordered an optional hard drive without preinstalled software and want to install the Solaris OS on the hard drive in slot 0, you must install the operating system from your network.

For instructions on how to install the operating system from the network, refer to the *Solaris Installation Guide: Network-Based Installations*. You can obtain this guide at:

<http://docs.sun.com/>

JumpStart Server Installation

You can use a JumpStart server to install the OS. A JumpStart server consists of several components:

- *Install client* – The target system to be installed or upgraded.
- *Boot server* – The network providing a failsafe operating system to the installing client.

The boot image is architecture independent, providing basic operating system services to all hardware supported by that operating system release. The Boot Server provides RARP, TFTP and bootparam services.

- *Configuration server* – A system that helps client systems determine unique profile information.

Partition sizes, lists of software components to install, begin, and finish scripts are specified in a profile served by the configuration server.

- *Install server* – The source of the software packages to be installed on the client.

Note – The boot server, configuration server, and install server can be one server. They do not need to be physically separate servers.

JumpStart Server Configuration

Specific instructions on how to configure a JumpStart server are out of the scope of this document. However, configuring the JumpStart server consists of the following tasks:

1. Load the Solaris OS.
2. Create the configuration server.
3. Create the configuration files.
4. Verify the configuration file syntax.
5. Share the installation directory.
6. Start the NFS server.
7. Configure the client access.

The configuration and use of the JumpStart server depends on the configuration of your network. For a full explanation of these steps and instructions on how to configure the JumpStart server, refer to the following documents:

- *Configuring JumpStart Servers to Provision Sun x86-64 Systems* by Pierre Reynes, Network Systems Group, Sun BluePrints OnLine, February 2005
- *Building a JumpStart Infrastructure* by Alex Noordergraaf, Enterprise Engineering, Sun BluePrints OnLine, April 2001

You can obtain these documents from the following site:

<http://www.sun.com/blueprints>

