

SPARC T3-1B Server Module

Installation Guide



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Using This Documentation

This document provides instructions, background information, and reference material to help you install the SPARC T3-1B server module from Oracle in the Sun Blade 6000 modular system from Oracle.

- “Related Documentation” on page v
- “Documentation, Support, and Training” on page vi

Related Documentation

The documents listed as online are available at:

(<http://docs.sun.com/app/docs/prod/sparc.t3.1b#hic>)

Application	Title	Format	Location
Product notes	<i>SPARC T3-1B Server Module Product Notes</i>	PDF	Online
Getting started	<i>SPARC T3-1B Server Module Getting Started Guide</i>	Printed	Ships with system
Installation, administration, and service	<i>SPARC T3-1B Server Module Topic Set</i>	HTML	Online
Installation	<i>SPARC T3-1B Server Module Installation Guide</i>	PDF HTML	Online
Administration	<i>SPARC T3 Series Servers Administration Guide</i>	PDF HTML	Online

Application	Title	Format	Location
Service	<i>SPARC T3-1B Server Module Service Manual</i>	PDF HTML	Online
Safety	<i>SPARC T3-1B Server Module Safety and Compliance Manual</i>	PDF	Online
Modular system firmware updates	<i>SAS-1/SAS-2 Compatibility Upgrade Guide</i>	PDF	Online

Note – The *SPARC T3 Series Servers Administration Guide* applies to several server and server module products. Some specific examples in that document are based on products other than this server module.

Documentation, Support, and Training

These web sites provide additional resources:

- Documentation (<http://docs.sun.com>)
- Support (<http://www.sun.com/support>)
- Training (<http://www.sun.com/training>)

Planning the Installation

These topics help you plan installation of the server module.

- [“Shipping Kit Inventory List” on page 2](#)
- [“Features” on page 4](#)
- [“Specifications” on page 5](#)
- [“Site Planning” on page 5](#)
- [“Preinstalled Software” on page 6](#)
- [“Front and Rear Panel Components” on page 7](#)
- [“Server Module Cabling” on page 8](#)
- [“Plan Communication With the Server Module During Installation” on page 11](#)

Related Information

- [“Installing the Server Module” on page 15](#)

Shipping Kit Inventory List

FIGURE: Shipping Kit Contents

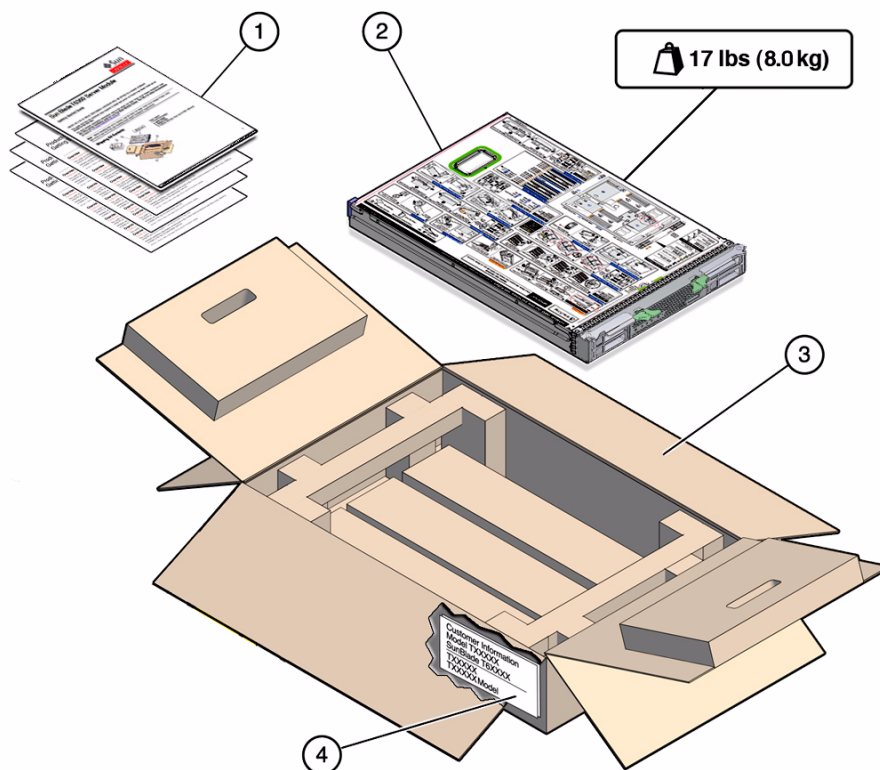


Figure Legend

- 1 Printed documentation, including *Getting Started Guide*
- 2 Server module
- 3 Shipping carton
- 4 Customer information sheet (on outside of shipping carton). Save for MAC address and other information about installed hardware and software.

The customer information sheet includes further details about optional hardware and software already installed in the server module.

Related Information

- “Features” on page 4
- “Specifications” on page 5
- “Site Planning” on page 5

Features

Feature	Description
Processor	One SPARC T3 multicore processor.
Memory	16 slots for DDR3 DIMMs.
Internal hard drives	Up to four hot-plugable 2.5-inch SAS-2 hard drives.
REM	RAID expansion module (hard drive management) with RAID controller. See the <i>SPARC T3-1B Server Module Product Notes</i> for details about supported REMs.
UCP	One UCP in the front panel. A universal cable (UCP-3 or UCP-4) is included with the modular system and can be purchased separately. The following connections are supported: <ul style="list-style-type: none">• USB 2.0 (two connections)• Serial• VGA video• Local KVMs support
Architecture	SPARC V9 architecture, ECC protected Platform group: sun4v Platform name: ORCL,SPARC-T3-1B Server Module
Ethernet ports	Two 10/100/1 Gb Intel 82576EB ports.
PCI I/O	Two PCI Express Gen2-capable ExpressModule slots.
FEM	See the <i>SPARC T3-1B Server Module Product Notes</i> for details about supported FEMs.
System firmware	8.0.1.c (minimum).
Operating system	Oracle Solaris 10 9/10 OS or higher. Oracle Solaris 10 10/09 OS with Maintenance Update 9. Note - Refer to the <i>SPARC T 3-1B Server Module Product Notes</i> for details on required patches for supported Oracle Solaris OS releases.
Power	The modular system chassis provides power.
Cooling	The modular system chassis provides environmental controls.

Related Information

- [“Specifications” on page 5](#)
- [“Site Planning” on page 5](#)

Specifications

The following physical and electrical specifications apply to the server module.

Physical Specifications

Measure	U.S.	Metric
Width	13 in.	330 mm
Depth	19.5 in.	495 mm
Height	1.75 in.	45 mm
Weight	17 lbs	8.0 kg

Electrical Specifications

Measure	Value
Voltage (nominal)	12V main from chassis backplane 3.3V AUX from chassis backplane
Power (maximum)	380W (estimated)

Related Information

- [“Features” on page 4](#)
- [“Site Planning” on page 5](#)

Site Planning

Site-planning information is included in the documentation for the Sun Blade 6000 modular system. Refer to the *Site Planning Guide for Sun Blade 6000 and Sun Blade 6048 Modular System*.

The following environmental requirements are specific to the server module.

Condition	Requirement
Operating temperature	5°C (41°F) to 35°C (95°F) noncondensing
Nonoperating temperature	-40°C (-40°F) to 65°C (149°F)
Operating humidity	10% to 90% noncondensing, 27°C (80°F) max. wet bulb
Nonoperating humidity	93% noncondensing, 38°C (100°F) max. wet bulb
Operating altitude	3048 meters (10,000 feet) at 35°C (95°F)
Nonoperating altitude	12,000 meters (40,000 feet)

Related Information

- [“Features” on page 4](#)
- [“Specifications” on page 5](#)

Preinstalled Software

You can order the server module with one to four disk drives assembled to order. In that case, the Oracle Solaris OS and other software is preinstalled on the root hard disk drive (HDD0). For details about the software preinstalled on this server module, refer to the *SPARC T3-1B Server Module Product Notes*. Preinstalled software is identified on the customer information sheet attached to the packaging for the server module.

For further information about the software preinstalled on your system, refer to this site:

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

Related Information

- [“Oracle Solaris Configuration Settings” on page 32](#)
- [“Install Oracle Solaris Software From the Network” on page 31](#)
- [“Shipping Kit Inventory List” on page 2](#)

Front and Rear Panel Components

FIGURE: Front and Rear Components

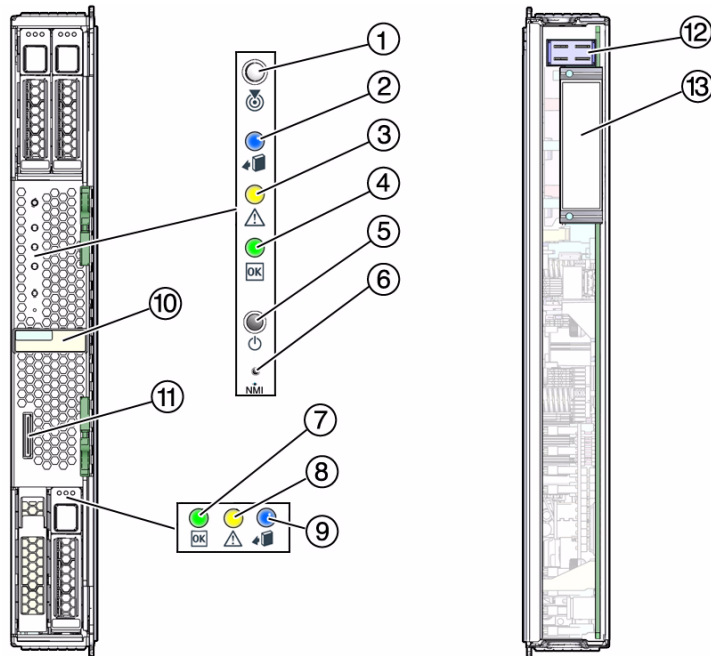


Figure Legend

-
- | | |
|----|--|
| 1 | White LED: Locator (functions as the physical presence switch) |
| 2 | Blue LED: Ready to Remove |
| 3 | Amber LED: Service Action Required |
| 4 | Green LED: OK |
| 5 | Power button |
| 6 | Reset button: NMI (for service use only) |
| 7 | Green LED: Drive OK |
| 8 | Amber LED: Drive Service Action Required |
| 9 | Blue LED: Drive Ready to Remove |
| 10 | RFID (sticker indicates serial number of the server module) |
| 11 | Universal connector port (UCP) |
| 12 | Chassis power connector |
| 13 | Chassis data connector |
-

Related Information

- [“Server Module Cabling” on page 8](#)

Server Module Cabling

No cables are connected to the server module during normal system operation. For setup, testing, or service purposes, you can connect cables directly to the server module by first attaching a dongle cable to the UCP on the front panel of the server module.



Caution – Dongle cables are intended for setup, testing, or service purposes and should be removed when not in use. These cables have not been evaluated for electromagnetic compatibility compliance and are not to be used during normal system operation.

You can use the dongle cable that shipped with the modular system chassis or order an optional dongle cable with the server module.

There are two types of dongle cables, with either three or four connectors. Use the three-connector dongle cable (UCP-3) instead of the four-connector version (UCP-4) whenever possible.

FIGURE: UCP-3 Three-Connector Dongle Cable

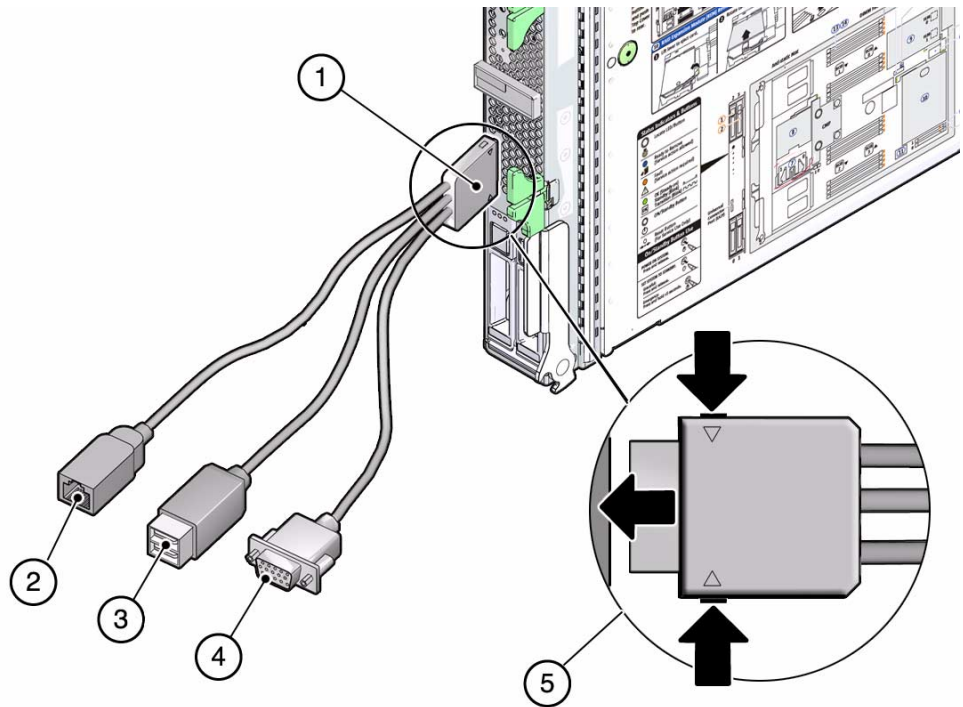


Figure Legend

-
- | | |
|---|---|
| 1 | Dongle connector attaching to the server module UCP |
| 2 | RJ-45 serial connector |
| 3 | USB 2.0 (two connectors) |
| 4 | VGA 15-pin female connector |
| 5 | Insertion and release buttons |
-

FIGURE: UCP-4 Four-Connector Dongle Cable

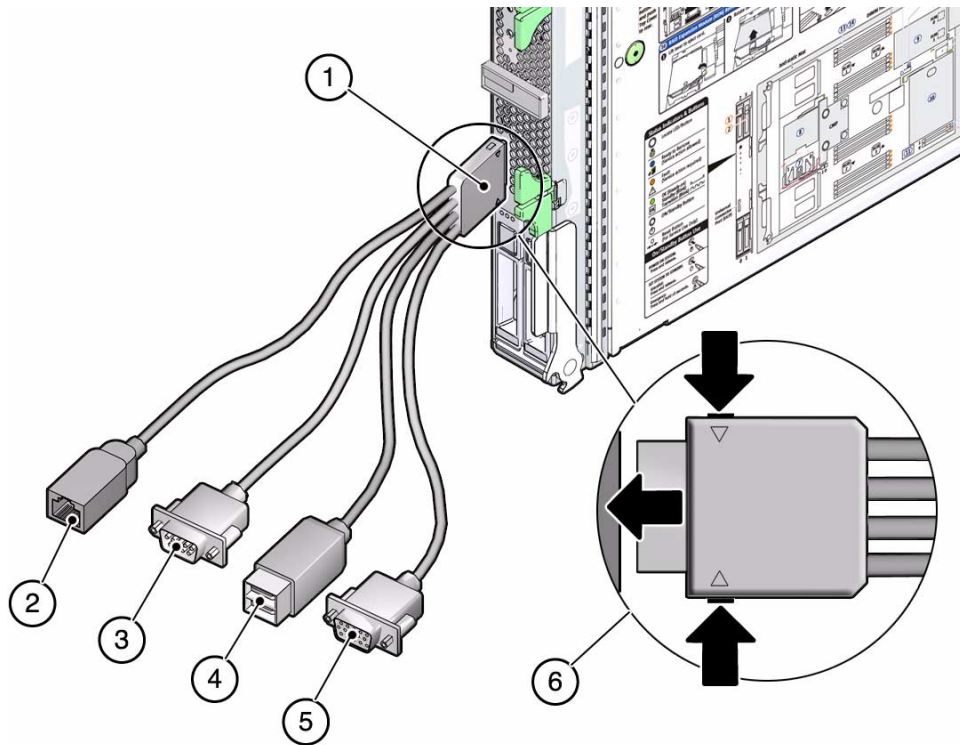


Figure Legend

-
- | | |
|---|--|
| 1 | Dongle connector attaching to the server module UCP |
| 2 | RJ-45 serial connector (Do not use this connector on the UCP-4.) |
| 3 | DB-9 serial male connector (TTYA) |
| 4 | USB 2.0 (two connectors) |
| 5 | VGA 15-pin female connector |
| 6 | Insertion and release buttons |
-

Both the UCP-3 and UCP-4 dongle cables provide a USB 2.0 connection (with two connectors) and an HD-15 female connector. The serial connectors differ on the two types of dongle cables:

- The UCP-3 dongle cable has an RJ-45 connector.
- The UCP-4 dongle cable has an RJ-45 connector, but that is not supported on this server module. Instead, use the DB-9 connector provided on the UCP-4. If you need an RJ-45 connection, attach an optional DB-9-to-RJ-45 adapter to the DB-9 connector.

Related Information

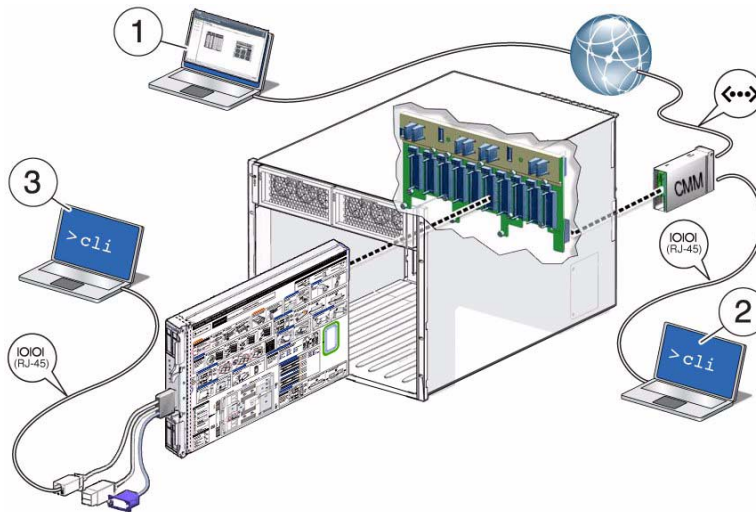
- [“Front and Rear Panel Components” on page 7](#)
- [“Plan Communication With the Server Module During Installation” on page 11](#)
- [“Connect Through the Server Module Front Panel UCP” on page 25](#)

▼ Plan Communication With the Server Module During Installation

There are several methods to communicate with the server module during the initial installation. Plan which method you will use. Before you perform the installation, arrange to have the equipment, information, and permissions required by that method.

- **Choose one of the connection methods to communicate with the server module SP.**

The connection methods are shown in the figure and described in the table. Obtain the cables, monitoring devices, addresses, and passwords required for the method you choose.



Method	Connection Description	Connection Requirements	Supported Interfaces
1	Ethernet From: CMM NET MGT port To: Your network	The CMM NET MGT port must be connected to your network. You must know the IP addresses of both the CMM and the server module SP. From your network, you must be able to log in to ILOM on the CMM using the IP address of the CMM. Then you can use the ILOM proxy to navigate to the server module SP ILOM interface.	ILOM CLI or the CMM ILOM web interface
2	Serial From: CMM SER MGT port To: Terminal device	A terminal device connected to the CMM SER MGT RJ-45 port. From this connection, you can use ILOM to navigate to the server module SP ILOM interface.	ILOM CLI
3	Serial From: Server module SP UCP port (dongle required) To: Terminal device	A UCP-3 dongle cable that connects directly to the server module and a terminal device connected to the RJ-45 connector on the dongle cable.	ILOM CLI

Related Information

- [“Connect Through the Ethernet Port of the Modular System CMM \(Web Interface\)” on page 20](#)
- [“Connect Through the Modular System CMM Serial Port” on page 23](#)
- [“Connect Through the Server Module Front Panel UCP” on page 25](#)
- [“Front and Rear Panel Components” on page 7](#)

- “Server Module Cabling” on page 8

Installing the Server Module

The following topics cover how to install the server module in the modular system, up to the point of powering on the server module for the first time.

- [“Handling Precautions” on page 15](#)
- [“ESD Precautions” on page 16](#)
- [“Tools Needed for Installation” on page 16](#)
- [“Optional Component Installation” on page 17](#)
- [“Modular System Chassis Preparation” on page 17](#)
- [“Insert the Server Module Into the Chassis” on page 18](#)
- [“Communicating With the Server Module During Startup” on page 20](#)
- [“Monitor the Diagnostic Messages” on page 26](#)

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)

Handling Precautions

- Use both hands to carry the server module.
- Extend the ejector arms on the front panel only while they need to be in that position to perform a step.

Related Information

- [“ESD Precautions” on page 16](#)

ESD Precautions

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



Caution – To protect electronic components from ESD, 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.

Related Information

- [“Handling Precautions” on page 15](#)
- [“Tools Needed for Installation” on page 16](#)

Tools Needed for Installation

The following tools are sufficient for installing the server module, whether or not you need to install components inside the server module:

- Antistatic mat
- Antistatic wrist strap
- UCP-3 or UCP-4 dongle cable
- Terminal or terminal emulator
- Stylus (to press power button)

Related Information

- [“Optional Component Installation” on page 17](#)
- [“Server Module Cabling” on page 8](#)
- [“Handling Precautions” on page 15](#)
- [“ESD Precautions” on page 16](#)

Optional Component Installation

Optional components that you order as part of the server module's initial configuration are installed in the server module before it is shipped. These optional components are identified on the customer information sheet included with the server module's packaging.

However, if you ordered optional components separately, you must install them in the server module before you install the server module in the modular system chassis. To install any optional components, refer to the *SPARC T3-1B Server Module Service Manual*.

After you verify that the optional components are installed and close the server module, continue with [“Installing the Server Module” on page 15](#).

Related Information

- [“Tools Needed for Installation” on page 16](#)

Modular System Chassis Preparation

You must install and configure the Sun Blade 6000 modular system before installing the server module. The modular system is sometimes called the chassis. This preparation includes configuring the modular system's CMM and the CMM ILOM firmware that is preinstalled on the CMM. For more information about preparing the modular system and CMM ILOM, refer to the *Sun Blade 6000 Modular System Installation Guide*.

Note – This server module is a SAS-2 component. You must upgrade the firmware of all SAS-1 components (such as SAS-1 NEMs and disk modules) to a firmware version that supports SAS-1/SAS-2 coexistence. You must complete this firmware upgrade before you insert this server module or any other SAS-2 component into the modular system chassis. Refer to the *SPARC T3-1B Server Product Notes* for more information about the firmware upgrade.

Related Information

- [“Insert the Server Module Into the Chassis” on page 18](#)

▼ Insert the Server Module Into the Chassis

1. **Be prepared to communicate with the server module as quickly as possible after completing the physical installation.**

As soon as you insert the server module in a powered modular system, power is supplied to the server module and the service processor begins generating messages. Be ready to connect using one of the methods in [“Communicating With the Server Module During Startup” on page 20.](#)

2. **Ensure that you have the MAC address and serial number for the server module.**

This information is on the customer information sheet attached to the shipping container. The serial number is also on a label attached to the RFID on the front panel of the server module. The MAC address is also displayed in the OBP banner.

3. **Ensure that the modular system chassis is powered on.**

Refer to the documentation for the Sun Blade 6000 modular system.

4. **Remove the protective cover from the rear connector of the server module.**

5. **Locate the slot in the chassis where you plan to install the server module.**

A filler panel should remain in this slot until just before you are ready to insert the server module. All slots should remain filled with server modules or filler panels to ensure correct air flow, heat, and electromagnetic interference conditions in the modular system.

6. **(Optional) Connect cables to the server module or the chassis CMM to be ready to view messages from the server module.**

The server module generates diagnostic messages as soon as you insert it in a chassis that has power applied. See [“Plan Communication With the Server Module During Installation” on page 11.](#)

7. **Remove the filler panel from the selected chassis slot.**

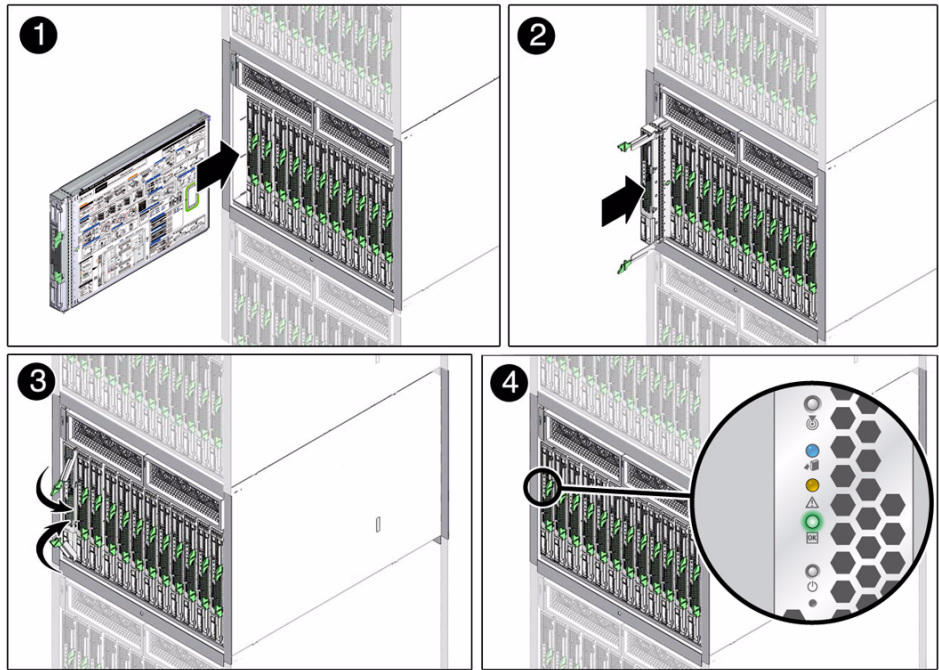
Pull down the ejector arm of the filler panel, then pull the panel straight out of the chassis.



Caution – Be ready to insert the server module within 60 seconds of removing the filler panel.

8. Use both hands to position the server module vertically with the ejector arms on the right.

See panel 1 in the figure.



9. Push the server module into the empty slot until the module extends about 1.5 cm (0.5 inch) from the chassis front.

See panel 2 in the figure.

10. Push the ejector arms down until they snap into place.

See panels 2 and 3 in the figure.

11. Monitor diagnostic messages when power is applied to the server module.

As soon as you insert the server module into a chassis that is connected to power, the server module goes into standby mode and its ILOM service processor initializes. The front panel LEDs blink three times, then the green OK LED on the front panel blinks for a few minutes. See panel 4 in the figure.

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)
- [“Front and Rear Panel Components” on page 7](#)

Communicating With the Server Module During Startup

Perform one of these procedures based on the connection method you selected in “Plan Communication With the Server Module During Installation” on page 11.

- “Connect Through the Ethernet Port of the Modular System CMM (Web Interface)” on page 20
- “Connect Through the Ethernet Port of the Modular System CMM (CLI)” on page 22
- “Connect Through the Modular System CMM Serial Port” on page 23
- “Connect Through the Server Module Front Panel UCP” on page 25

Related Information

- “Plan Communication With the Server Module During Installation” on page 11
- “Front and Rear Panel Components” on page 7
- “Server Module Cabling” on page 8

▼ Connect Through the Ethernet Port of the Modular System CMM (Web Interface)

You can connect to the CMM through the RJ-45 NET MGT 0 Ethernet port. While this Ethernet connection supports both the CLI and the web interface to the CMM SP, this installation procedure uses the web interface.

1. Know the IP addresses for the CMM and the server module SP that you plan to connect.

2. Ensure that the CMM is connected to the network you are on.

The network connection is through the RJ-45 connector labeled NET MGT 0 on the CMM.

3. In a browser on the same network as the modular system, enter the IP address of the CMM.

For example, if your CMM has the IP address 129.99.99.99, enter that address. A login window for ILOM appears.

4. **Log in to ILOM on the CMM by typing your user name and password.**
The factory default ILOM root password is changeme.
You are now logged in to the CMM ILOM web interface.
5. **Navigate to the server module SP.**
 - a. **Select the chassis view for the modular system.**
 - b. **Click on the image of the server module that you have installed in the modular system.**
The slots in the modular system are numbered 0 to 9.
6. **Select Remote Control on the top menu.**
You are offered a choice of video redirection or serial redirection.
7. **Start the Remote Console**
 - a. **Select the Redirection tab.**
 - b. **Click on Use serial redirection.**
 - c. **Click on Launch Remote Console.**
8. **Power on the server module.**
 - a. **Select the Remote Power Control tab.**
 - b. **From the menu on that tab, select Power On.**
 - c. **Select Save.**
 - d. **Select OK when you see this prompt: Are you sure you want to perform a Power On of the server?**
The server module host is powered on for the first time.
9. You can now configure the Oracle Solaris OS to meet your needs.
See [“Configure the System” on page 31.](#)

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)
- [“Connect Through the Ethernet Port of the Modular System CMM \(CLI\)” on page 22](#)

▼ Connect Through the Ethernet Port of the Modular System CMM (CLI)

You can connect to the CMM through the RJ-45 NET MGT 0 Ethernet port. While this Ethernet connection supports both the CLI and the web interface to the CMM SP, this installation procedure uses the CLI.

1. **Know the IP addresses for the CMM and the server module SP that you plan to connect.**

2. **Ensure that the CMM is connected to the network you are on.**

The network connection is through the RJ-45 connector labeled NET MGT 0 on the CMM.

3. **Log in to the CMM with the SSH client.**

```
$ ssh root@ipaddress
```

Replace *ipaddress* with the IP address of the CMM.

4. **Type your password for the CMM ILOM root account when prompted.**

The factory default ILOM root password is changeme.

```
Password: CMM_ILOM_password
Oracle(TM) Integrated Lights Out Manager
Version 3.x.x
...
Warning: password is set to factory default.
->
```

You are now logged in to the CMM ILOM CLI.

Note – When you are ready to log out of the CMM ILOM, type `exit`.

5. **Navigate to the server module SP.**

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

Replace *n* with a number that identifies the chassis slot in the modular system where the target server module is installed.

6. Access the server module SP.

```
-> start  
Are you sure you want to start /CH/BLn/SP/cli (y/n)? y  
start: Connecting to /CH/BLn/SP/cli as user root
```

If you are prompted for a password for the `root` user on the server module SP, type `changeme` (the factory default password).

You are now logged into ILOM on the server module SP.

7. Continue to power on the server module host for the first time.

[“Powering On the Server Module for the First Time” on page 29](#)

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)
- [“Connect Through the Ethernet Port of the Modular System CMM \(Web Interface\)” on page 20](#)

▼ Connect Through the Modular System CMM Serial Port

You can access the server module SP by first accessing the chassis CMM ILOM through a terminal or terminal emulator connected to the RJ-45 serial port on the chassis. Then you can connect to the server module SP through the CLI of the CMM ILOM software.

1. **Verify that the terminal, laptop, or terminal server that will connect to the chassis is operational.**
2. **Configure the terminal device or terminal emulation software with these settings:**
 - 8N1 (eight data bits, no parity, one stop bit)
 - 9600 baud (the default, but can be set to any standard rate up to 57600)
 - Disable hardware flow control (CTS/RTS)

3. Connect a serial cable from the chassis serial port to the terminal device.

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

The serial port requires a cable with these pin assignments.

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)

4. Press Enter on the terminal device.

The connection between the terminal device and the CMM is established. If you have connected to the serial port before it has been powered up or during its power-up sequence, you will see boot messages. When the system has booted, the CMM ILOM software displays its login prompt:

```
SUNCMMnnnnnnnnnnnnnnnnnnnn login:
```

The first string in the prompt is the default host name, which consists of the prefix SUNCMM followed by the CMM ILOM MAC address. The MAC address for each service processor is unique.

5. Log in to ILOM on the CMM by typing your user name and password.

The factory default ILOM root password is changeme.

You are now logged in to the CMM ILOM web interface.

After you have successfully logged in, the CMM ILOM displays its default command prompt:

```
->
```

6. Navigate to the server module ILOM:

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

In this command, BL is followed by the slot identifier number (the lowest is 0) that represents this server module in the chassis.

7. Type the start command.

```
-> start
```

A prompt is displayed.

8. Type y to continue.

The ILOM software running on the server module SP prompts for the password specific to that server module SP.

Note – The CMM ILOM logs into the server module ILOM using the user name in the user target under /CH/BLn/SP/cli (where *n* is the slot where the server module is installed).

9. Type the password when prompted.

The default password is changeme.

You are now logged into ILOM on the server module SP. You can continue to power on the server module host for the first time. See [“Powering On the Server Module for the First Time” on page 29](#)

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)

▼ Connect Through the Server Module Front Panel UCP

You can access the server module SP directly by connecting a dongle cable to the UCP on the front of the server module.



Caution – Dongle cables are intended for setup, testing, or service purposes and should be removed when not in use. These cables have not been evaluated for electromagnetic compatibility compliance and are not to be used during normal system operation.

1. Configure the terminal device or terminal emulation software with these settings:

- 8N1 (eight data bits, no parity, one stop bit)
- 9600 baud (the default, but can be set to any standard rate up to 57600)
- Disable hardware flow control (CTS/RTS)

2. Connect the dongle cable to the universal connector port (UCP) on the front panel of the server module.

If possible, use a three-connector UCP-3 dongle cable rather than a four-connector UCP-4. See [“Server Module Cabling” on page 8](#) for more information about the UCP and the dongle cables.

3. Connect a terminal or terminal emulator to dongle cable.

- For a UCP-3 dongle cable, use the RJ-45 connector.
- For a UCP-4 dongle cable, use the DB-9 serial connector (TTYA). If you need to make an RJ-45 connection to a UCP-4, do so through a DB-9-to-RJ-45 adapter attached to the DB-9 connector.

The ILOM login prompt is displayed on the terminal or terminal emulator.

4. Type the user name and password when prompted.

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

You are now logged into ILOM on the server module SP. You can continue to power on the server module host for the first time. See [“Powering On the Server Module for the First Time” on page 29](#)

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)
- [“Monitor the Diagnostic Messages” on page 26](#)

▼ Monitor the Diagnostic Messages

If the modular system is connected to power, the server module will go into standby mode as soon as you insert it into the chassis. The ILOM service processor initializes and diagnostic messages start to appear immediately.

- **Check the messages displayed on the connection you made to the server module’s service processor.**

To help determine which portion of the server module is mentioned in a message, refer to the *SPARC T3-1B Server Module Service Manual*.

Related Information

- [“Powering On the Server Module for the First Time” on page 29](#)

Powering On the Server Module for the First Time

After you install the server module in the modular system, you can power on the server for the first time and begin configuration.

- [“Initial Power-On Task Overview” on page 29](#)
- [“Power On the System for the First Time” on page 30](#)
- [“Configure the System” on page 31](#)
- [“Install Oracle Solaris Software From the Network” on page 31](#)
- [“Oracle Solaris Configuration Settings” on page 32](#)
- [“Assign a Static IP Address to the Service Processor” on page 33](#)

Related Information

- [“Planning the Installation” on page 1](#)
- [“Installing the Server Module” on page 15](#)

Initial Power-On Task Overview

As soon as the server module is inserted in a modular system that is connected to power, the following stages occur:

1. The server module’s SP is provided with power and becomes active.
2. The SP runs diagnostics and initializes the ILOM firmware. Diagnostic and status messages are generated by the SP immediately.
3. The SP displays a prompt to log in. After that, you are able to enter commands at the `->` prompt.
4. You enter an ILOM command causing the server module to power up, starting initialization and configuration of the Oracle Solaris OS.

Related Information

- [“Power On the System for the First Time” on page 30](#)
- [“Configure the System” on page 31](#)

▼ Power On the System for the First Time

1. At the server module ILOM prompt, type:

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

The server module initializes.

2. Switch communication to the server module host.

When the ILOM prompt appears, type:

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

The server module might take several minutes to complete POST. If a boot device installed with Oracle Solaris OS is accessible locally, the server module boots. Otherwise, the system will use the `boot net` command to seek a boot device on the network.

You are now connected to the server module host.

3. The server module hardware installation is now complete.

You can now configure the Oracle Solaris OS to meet your needs.

Related Information

- [“Configure the System” on page 31](#)

▼ Configure the System

This procedure assumes that you are using the Oracle Solaris OS software that was preinstalled on the hard disk drive in slot HDD0 of the server module. If you are installing the Oracle Solaris OS another way, complete the Oracle Solaris OS installation then resume this procedure.

- **Respond to configuration questions in the Oracle Solaris installation process.**
See the configuration choices you planned, based on [“Oracle Solaris Configuration Settings”](#) on page 32.

Related Information

- [“Install Oracle Solaris Software From the Network”](#) on page 31
- [“Assign a Static IP Address to the Service Processor”](#) on page 33

▼ Install Oracle Solaris Software From the Network

If you choose to use Oracle Solaris OS software other than the preinstalled Oracle Solaris OS, you can install the operating system from the network.

- **Refer to the *Solaris Installation Guide: Network-Based Installations* for the version of Oracle Solaris OS that you plan to use.**

You can obtain this guide at:

<http://docs.sun.com>

This guide includes information about using a JumpStart server on your network to install the OS.

Related Information

- [“Oracle Solaris Configuration Settings”](#) on page 32

Oracle Solaris Configuration Settings

The following are configuration parameters that you are prompted to provide when configuring the Oracle Solaris OS on the SPARC T3-1B server module from Oracle.

Parameter	Description
Language	Select a number from the displayed language list.
Locale	Select a number from the displayed locale list.
Terminal Type	Select a terminal type that corresponds with your terminal device.
Network?	Select Yes.
Multiple Network Interfaces	Select the network interfaces that you plan to configure. If you are not sure, select the first interface in the list.
DHCP?	Select Yes or No according to your network environment.
Host Name	Enter the host name for the server.
IP Address	Enter the IP address for this Ethernet interface.
Subnet?	Select Yes or No according to your network environment.
Subnet Netmask	(If subnet was Yes) Enter the netmask for the subnet for your network environment.
IPv6?	Specify whether or not to use IPv6. If you are not sure, select No to configure the Ethernet interface for IPv4.
Security Policy	Select either standard UNIX security (No) or Kerberos Security (Yes). If you are not sure, select No.
Confirm	Review the onscreen information and change it if needed. Otherwise, continue.
Name Service	Select the name service according to your network environment. Note – If you select a name service other than None, you will be prompted for additional name service configuration information.
NFSv4 Domain Name	Select the type of domain name configuration according to your environment. If you are not sure, select Use the NFSv4 domain derived by the system.
Time Zone (Continent)	Select your continent.
Time Zone (Country or Region)	Select your country or region.
Time Zone	Select the time zone.
Date and Time	Accept the default date and time or change the values.
root Password	Enter the root password twice. This password is for the superuser account for the Oracle Solaris OS on this server. This password is not the SP password.

Related Information

- [“Configure the System” on page 31](#)
- [“Install Oracle Solaris Software From the Network” on page 31](#)
- [“Assign a Static IP Address to the Service Processor” on page 33](#)

▼ Assign a Static IP Address to the Service Processor

If the network your server module is connected to does not support DHCP for IP addressing, perform this procedure.

1. Set the SP to accept a Static IP Address.

```
-> set /SP/network pendingipdiscovery=static  
Set 'pendingipdiscovery' to 'static'
```

2. Set the IP address for the SP.

```
-> set /SP/network pendingipaddress=service-processor-IPaddr  
Set 'pendingipaddress' to 'service-processor-IPaddr'
```

3. Set the IP address for the SP gateway.

```
-> set /SP/network pendingipgateway=gateway-IPaddr  
Set 'pendingipgateway' to 'gateway-IPaddr'
```

4. Set the netmask for the SP.

```
-> set /SP/network pendingipnetmask=255.255.255.0  
Set 'pendingipnetmask' to '255.255.255.0'
```

This example uses 255.255.255.0 to set the netmask. Your network environment subnet might require a different netmask. Use a netmask number most appropriate to your environment.

5. Use the `show /SP/network` command to verify that the parameters were set correctly.

```
-> show /SP/network
/SP/network
Targets:
Properties:
  commitpending = (Cannot show property)
  dhcp_server_ip = xxx.xxx.xxx.xxx
  ipaddress = xxx.xxx.xxx.xxx
  ipdiscovery = dhcp
  ipgateway = xxx.xxx.xxx.xxx
  ipnetmask = 255.255.252.0
  macaddress = 00:14:4F:3F:8C:AF
  pendingipaddress = xxx.xxx.xxx.xxx
  pendingipdiscovery = static
  pendingipgateway = xxx.xxx.xxx.xxx
  pendingipnetmask = 255.255.255.0
  state = enabled
Commands:
  cd
  set
  show
->
```

6. Commit the changes to the SP network parameters.

```
-> set /SP/network commitpending=true
Set 'commitpending' to 'true'
```

Note – You can run the `show /SP/network` command again (after performing the `set /SP/network commitpending=true` command) to verify that the parameters have been updated.

7. Set the static IP address when you configure the Oracle Solaris OS.

See [“Configure the System” on page 31](#).

Related Information

- [“Power On the System for the First Time” on page 30](#)
- [“Configure the System” on page 31](#)
- [“Oracle Solaris Configuration Settings” on page 32](#)

Glossary

A

ANSI SIS American National Standards Institute Status Indicator Standard.

ASR Automatic system recovery.

B

blade Generic term for server modules and storage modules.

blade server Server module.

C

chassis Modular system enclosure.

CLI Command-line interface.

CMM Chassis monitoring module. ILOM runs on the CMM, providing lights out management of the components in the modular system chassis. *See* [ILOM](#).

CMM ILOM ILOM that runs on the CMM. *See* [ILOM](#).

D

DHCP	Dynamic Host Configuration Protocol.
disk module or disk blade	Interchangeable terms for storage module.
DTE	Data terminal equipment.

E

ESD	Electrostatic discharge.
------------	--------------------------

F

FEM	Fabric expansion module. FEMs enable server modules to use the 10GbE connections provided by certain NEMs. <i>See</i> NEM .
FRU	Field-replaceable unit.

H

HBA	Host bus adapter. <i>See</i> REM .
------------	--

I

ILOM	Oracle Integrated Lights Out Manager. ILOM firmware is preinstalled on a variety of Oracle systems. ILOM enables you to remotely manage your Oracle servers regardless of the state of the host system.
ID PROM	Chip that contains system information for the server module.
IP	Internet Protocol.

K

KVM Keyboard, video, mouse. Refers to using a switch to enable sharing of one keyboard, one display, and one mouse with more than one computer.

M

MAC or MAC address Media access controller address.

MSGID Message ID.

N

name space Top-level ILOM CMM target.

NEM Network express module. NEMs provide 10/100/1000 Ethernet, 10GbE Ethernet ports, and SAS connectivity to storage modules.

NET MGT Network management port. An Ethernet port on the CMM and on server module service processors.

NMI Non-maskable interrupt.

O

OBP OpenBoot PROM.

P

PCI EM PCIe ExpressModule. Modular components that are based on the PCI Express industry-standard form factor and offer I/O features such as Gigabit Ethernet and Fibre Channel.

POST	Power-on self-test.
PSH	Predictive self-healing.

R

REM	RAID expansion module. Sometimes referred to as an HBA <i>See</i> HBA . Supports the creation of RAID volumes on disk drives.
------------	---

S

SAS	Serial attached SCSI.
SCC	System configuration chip.
SER MGT	Serial management port. A serial port on the CMM and on server modules service processors.
server module	Modular component that provides the main compute resources (CPU and memory) in a modular system. Server modules might also have onboard storage and connectors that hold REMs and FEMs.
SP	Service processor.
SSH	Secure shell.
storage module	Modular component that provides computing storage to the server modules.

U

UCP	Universal connector port.
UI	User interface.
UTC	Coordinated Universal Time.
UUID	Universal unique identifier.

W

WWID World-wide identifier. A unique number that identifies a SAS target.

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