Sun Blade X6275 M2 Server Module

Getting Started Guide

This guide describes the minimum steps you must perform to install your server module (blade) into a supported chassis and power it on for the first time.

The Sun Blade X6275 M2 server module is a dual-node blade. This means that the server module contains two compute nodes (Node 0 and Node 1) on a single motherboard inside the blade enclosure. Both nodes are identical and symmetric, but each functions as a fully independent server.

Detailed installation information can be found in the *Sun Blade X6275 M2 Server Module Installation Guide*, which is available on the Oracle web site. See "Documentation for This Product" at the end of this document for a list of documentation for this system.

Ship Kit Contents

The Sun Blade X6275 M2 server module is shipped with safety documentation and the components that you ordered for your configuration.

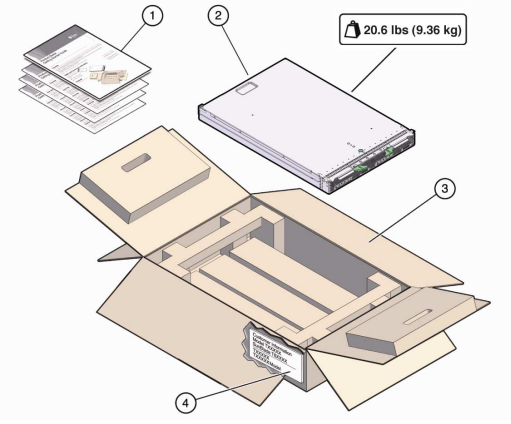

Figure Legend

1	Documentation
2	Server module
3	Shipping box
4	Shipping label

Documentation and Media Kit

The Documentation and Media Kit is an orderable option for your system. It contains printed installation documentation, the Tools and Drivers CD/DVD, and the SunVTS CD/DVD. You can order the Documentation and Media Kit at any time using the following part number: X6275M2-X-DOCKIT.

You can also download all of the latest documentation and software for your server from the web, as described later in this document.

Front Panel Description

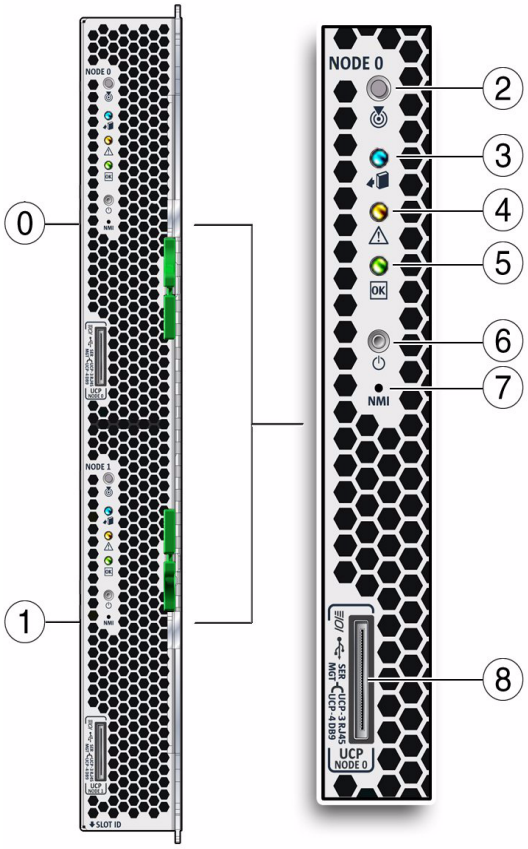

Figure Legend Server Module Front Panel Features

0 Node 0.

1 Node 1.

2 Locate LED (white). Press button to identify server.

3 Ready to Remove server module LED (blue). Main power is off.

4 Service Action Required LED (amber). A fault condition has occurred.

5 OK/Power LED (green). Modes:

- SP booting - fast blink, 0.125 second on, 0.125 second off.
- Standby power - blink, 0.1 second on, 2.9 seconds off.
- Host booting - slow blink, 0.5 second on, 0.5 second off.
- Full power - steady on.
- Updating - slow blink, 0.5 second on, 0.5 second off.

6 Power button. Press briefly to toggle server between standby and full power.

Caution - Pressing Power button for more than 4 seconds when in full power initiates immediate shutdown to standby power. This can cause data loss.

7 Non-Maskable Interrupt (NMI) button.

Caution - Service use only. Do not press unless instructed by Oracle personnel.

8 Universal Connector Port (UCP). Used for multi-port (dongle) cable.

Safety and Compliance Information

Before performing an installation, refer to the following documents for safety information:

- *Important Information for Sun Hardware Systems* – printed document included in the ship kit.
- *Sun Blade X6275 M2 Server Module Safety and Compliance Guide* – online at the Oracle documentation web site.

Install Optional Components

Optional components for your server module might be packaged and shipped separately. If applicable, install optional components prior to installing the server module into the system chassis (such as DIMMs, FMods, or USB flash drives).

Refer to the *Sun Blade X6275 M2 Server Module Service Manual* for installation procedures for optional components. For a complete list of optional components, refer to the Sun Blade X6275 M2 server module product page at: http://www.oracle.com/goto/x6275m2

Confirm a Supported Hardware Environment

At the release of this document, your server module is supported in the following hardware environment (refer to the server module documentation on the Oracle web site for up-to-date information).

Server Module	Supported Blade Chassis	Supported Network Express Modules (NEM)
Sun Blade X6275 M2 server module with 1GbE (X6275M2-BB) *See note below.*	• Sun Blade 6000 Modular System with PCIe 2.0 midplane (minimum CMM ILOM firmware required is 3.0.10.15, included in chassis software release 3.2)	• Sun Blade 6000 10 1GbE Pass-Thru NEM (X4250A) • Sun Blade 6000 Virtualized Multi-Fabric 10GbE M2 NEM (X4338A) • Sun Blade 6000 Virtualized Multi-Fabric 10GbE NEM (X4238) • Sun Blade 6000 Multi-Fabric NEM (X4212A)
Sun Blade X6275 M2 server module with 10GbE (X6275M2-CB) *See note below.*	• Sun Blade 6000 Modular System with PCIe 2.0 midplane (minimum CMM ILOM firmware required is 3.0.10.15, included in chassis software release 3.2)	• Sun Blade 6000 Ethernet Switched 24p 10GbE NEM (X2073A)

Note: The server module only supports using the network portion of a NEM. It can not use the SAS portion of a NEM.

▼ How to Insert the Server Module Into a Chassis

1. **Verify that the Sun Blade 6000 modular system 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. There can be no chassis or NEM faults (check the amber service action LEDs and log files). If there are faults, they must be corrected before attempting to install the server module.

2. **At the front of the chassis, locate and remove the filler panel from the slot where you will insert the server module.**

   Pinch together the ends of the filler panel ejector arm handle to unlock it, rotate the lever out to the open position, and eject the filler panel.

3. **Open both of the server module ejector levers and position the server module vertically so that the ejectors are on the right.**

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

5. **Lock the server module into the chassis by rotating both ejector levers in flush with the server module until they snap into place.**

   Upon insertion, standby power is applied to both server module node service processors (SP).

Note – A node SP can take several minutes to boot. As the node SP is booting, the OK/Power LED blinks rapidly (125ms on, 125ms off).

6. **Verify that each server module node has successfully powered-on to standby mode.**

   After the node 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 node SP has successfully powered on and is ready for normal operation.

Note – If there is insufficient chassis power available, the server module OK/Power LEDs will remain off. To troubleshoot, review the Integrated Lights Out Manager (ILOM) log messages to determine whether the server module has permission to power on. See the ILOM 3.0 documentation for information about viewing logs, and the chassis documentation for information about powering on components in the chassis.

▼ How to Power On and Off a Server Module Node

1. **To apply full power to a server module node, do the following:**

   a. **Verify that the OK/Power LED on the front panel for the node is in a standby blink state.**

      In standby blink state, the OK/Power LED for each node blinks (0.1 second on, 2.9 seconds off).

   b. **Use a non-metallic pointed object to press and release the recessed Power button for the node on the front panel.**

      The node OK/Power LED on the front panel illuminates a steady-on green light after successfully powering on, indicating that the node host is ready for normal operation.

2. **To power off a server module node, use one the following methods:**

   - **Graceful shutdown** – Use a non-metallic pointed object to press and release the Power button on the front panel of the server module. This action causes the Advanced Configuration and Power Interface (ACPI) enabled operating systems to perform an orderly shutdown of the operating system.
   - **Immediate shutdown** – Press and hold the Power button for four seconds to force main power off and to enter standby power mode.

▼ How to Set Up Server Module Node ILOM

These instructions assume an active network connection to the Chassis Monitoring Module (CMM) Ethernet management port. If you have not met this prerequisite, refer to the chassis documentation to set up CMM ILOM.

Once the blade is plugged into the chassis, you can access the node service processors (SP) through the CMM ILOM interface. Once you obtain the node SP IP address, you can access the node ILOM directly.

1. **Log in to the CMM ILOM.**

   - When accessing ILOM using the web interface, enter the CMM ILOM IP address in the browser as the URL (example: `http://129.144.82.26`). Then log in with the name of a CMM ILOM user account with administrator privileges.

- When accessing ILOM using the command line (CLI), open a terminal window and establish a Secure Shell connection with the name of a CMM ILOM user account with administrator privileges and the CMM ILOM IP address (example: `ssh username@129.144.82.26`).

2. **Obtain the SP IP address for each node.**
   - From the web interface, go to the **Configuration** -> **Network** tab for the blade node.
   - From the CLI, enter the command: **`show /CH/BL`***x*`/NODE`*y*`/SP/network`**

     where *x* represents the chassis blade slot (0-9) and *y* represents the server node (0 or 1).
3. **Confirm the network configuration for each node SP.**

   You can use DHCP (the default) or set a static IP address.

More detailed information on setting up ILOM for your server can be found in the *Sun Blade X6275 M2 Server Module Installation Guide*. For information about managing Oracle systems using ILOM, go to: http://www.oracle.com/goto/ilom

Update Firmware

Your system should be running the latest available firmware. This can be found on the Tools and Drivers CD/DVD included in the optional Documentation Media Kit, or downloadable from the web. Versions on the web might be more up-to-date and can be found at: http://www.oracle.com/technetwork/systems/patches/firmware/release-history-jsp-138416.html

Refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for the Sun Blade X6275 M2 Server Module* for information on updating firmware.

Install an Operating System and Drivers

You can install a supported Solaris, Linux, or Windows operating system on internal storage or externally attached storage. You also need to install the latest server-specific patches or drivers to ensure proper operating system support for your server.

The following table provides additional references for installing an operating system.

Operating system	Installation Documentation	Patch and Driver Information
Oracle Solaris 10 OS	*Sun Blade X6275 M2 Server Module Oracle Solaris OS Installation Guide*	http://sunsolve.sun.com
Linux	*Sun Blade X6275 M2 Server Module Linux OS Installation Guide*	http://wikis.sun.com/display/SystemsComm/Sun+Blade+System+x86+Blade+Downloads
Oracle VM	*Sun Blade X6275 M2 Server Module Oracle VM OS Installation Guide*	http://wikis.sun.com/display/SystemsComm/Sun+Blade+System+x86+Blade+Downloads
Windows	*Sun Blade X6275 M2 Server Module Windows OS Installation Guide*	http://wikis.sun.com/display/SystemsComm/Sun+Blade+System+x86+Blade+Downloads

Hardware Warranty and Software Service Plan

For information on hardware warranty, see: http://www.sun.com/service/warranty/index.jsp

For information on a software service plan, see: http://www.oracle.com/support/premier/index.html

If you need service for your system, you might be asked for your server module serial number. Locate the serial number for your system on the customer information sheet that came with the system, the ejector arm of the server module, or by using the ILOM **`show /SYS`** command described in the ILOM 3.0 documentation.

Documentation for This Product

The following table lists the documentation in the approximate order of the tasks that you might perform when installing a new system. Review the tasks on the left, then refer to the corresponding documentation on the right. You can find the most up-to-date versions of all the documents at the Oracle documentation web site: http://docs.sun.com/app/docs/prod/blade.x6275m2#hic

From the web site, you can select your language for available translated versions of the documentation.

Tasks	Where Documented
Review safety information.	*Sun Blade X6275 M2 Server Module Safety and Compliance Guide*
	Important Safety Information for Sun Hardware Systems
Review any known issues and workarounds.	*Sun Blade X6275 M2 Server Module Product Notes*
Cable and power on the server. Connect to service processor and configure network settings.	*Sun Blade X6275 M2 Server Module Installation Guide*
Update firmware, monitor alerts, set remote access and redirection, and view component status and event logs.	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for the Sun Blade X6275 M2 Server Module*
Remove and replace hardware components. Customize BIOS settings.	*Sun Blade X6275 M2 Server Module Service Manual*
Troubleshoot and isolate server problems.	*Oracle x86 Server Diagnostics Guide*

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