Netra Blade X3-2B
(formerly Sun Netra X6270 M3 Blade)

Installation Guide

Part No.: E26406-04
November 2012

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Contents

Using This Documentation

This documentation describes how to install the blade in a supported blade chassis and how to download software and firmware updates and releases.

Product Notes

For late-breaking information and known issues about this product, see the product notes at:

`http://www.oracle.com/pls/topic/lookup?ctx=NetraBladeX3-2B`

Related Documentation

Documentation	Link
All Oracle products	http://www.oracle.com/documentation
Netra Blade X3-2B	http://www.oracle.com/pls/topic/lookup?ctx=NetraBladeX3-2B
Sun Netra 6000 Modular System	http://www.oracle.com/pls/topic/lookup?ctx=Netra6000
Oracle Integrated Lights Out Manager (ILOM) 3.1	http://www.oracle.com/pls/topic/lookup?ctx=ilom31
Oracle Hardware Management Pack	http://www.oracle.com/pls/topic/lookup?ctx=ohmp

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Support and Accessibility

Description	Links
Access electronic support through My Oracle Support	http://support.oracle.com For hearing impaired: http://www.oracle.com/accessibility/support.html
Learn about Oracle's commitment to accessibility	http://www.oracle.com/us/corporate/accessibility/index.html
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About Blade Features and Components

This section provides an overview of the features and product specifications of Oracle's Netra Blade X3-2B.

Task	Link
Review blade features.	"Blade Features" on page 1
Locate front panel features.	"Blade Front Panel Features" on page 4
Locate rear panel features.	"Blade Rear Panel Features" on page 5
Learn about UEFI BIOS.	"UEFI BIOS" on page 6
Review product specifications.	"Specifications" on page 7

Blade Features

Feature	Description
Chassis compatibility	Sun Netra 6000 modular system with PCIe 2.0 midplane (standard with models A90–B and A90–D). The minimum Oracle ILOM CMM firmware for each chassis is as follows: • A90–B: CMM ILOM 3.0.12.11b (software release 3.3.3) • A90–D: CMM ILOM 3.1 (software release 4.2)

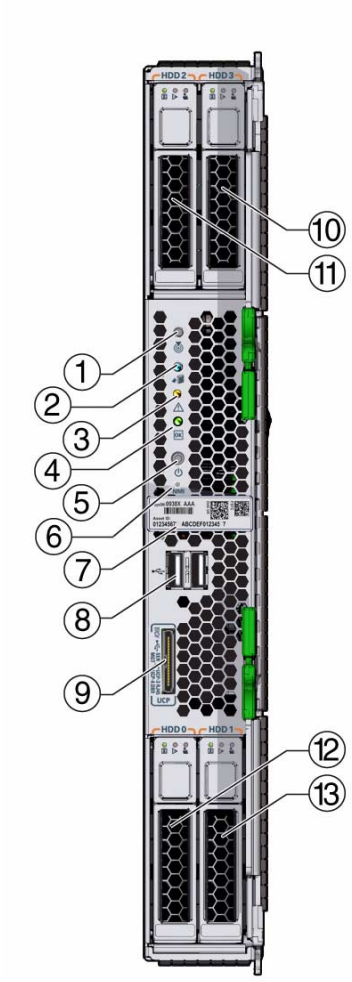
Feature	Description
Chassis midplane and internal I/O	• Two x8 PCIe 2.0 bus connections to a chassis PCIe EM slot • One x8 PCIe 2.0 bus connection to REM slot • Two x8 PCIe bus connections to FEM slots. PCEIe port speeds vary by FEM • Two 10/100/1000/10000 BASET Ethernet ports for NEMs from the FEM
CPUs	Supports two CPUs, which are Intel Xeon Eight-Core E5-2658, 2.1GHz, 20MB Cache, 8.0 GT/s QPI,Turbo Boost, 95W with Heatsink
Rear I/O	Dual internal USB drive ports in the rear of the blade. Most blades have Oracle System Assistant installed on USB drive in port 0. See "Setting Up Software and Firmware" on page 43 for important information regarding port limitations and OSA setup.
Front panel I/O	A universal connector port (UCP) is available for use with the multiport (dongle) cable. The multiport cable provides the following interface connections: • VGA graphics port • RJ-45 serial management port • Dual USB ports (keyboard, mouse, USB drive) The front panel also has two front and two internal USB 2.0 ports.
Memory	24 registered DDR3 DIMMs with ECC memory slots total (12 slots per CPU). See the *Netra Blade X3-2B Product Notes* for details on supported memory.
Network express module (NEM) compatibility	Both 10 GbE and 1 GbE NEM interfaces are supported. See the *Netra Blade X3-2B Product Notes* for details on the supported NEMs.
Operating systems	Oracle Solaris can be optionally preinstalled on the blade. Operating systems such as Oracle Solaris, Linux, and Windows are supported. For a complete list of supported OS versions for your blade, see the *Netra Blade X3-2B Product Notes.*
Virtualization software	Oracle VM software is supported and can optionally be preinstalled on the blade. VMware ESXi is also supported for the blade. For information about versions supported, see *Netra Blade X3-2B Product Notes*.

Feature	Description
Service processor (SP)	The AST2300 SP provides IPMI 2.0 compliant remote management capabilities. The SP features: • Oracle Integrated Lights Out Manager (ILOM version 3.1) • Local Oracle ILOM command-line access using a serial connection • 10/100 management Ethernet port to midplane • Remote keyboard, video, mouse, and storage (KVMS) over IP
Storage	• Four SAS/SATA 2.5-inch disk bays. See the *Netra Blade X3-2B Product Notes* for details on supported hard drives. • Two internal USB 2.0 ports, accessible when the blade is removed from the chassis. • Two front panel USB 2.0 ports. • Two optional LSI REM host bus adapters are supported: Sun Storage 6Gb/s SAS REM HBA (SGX-SAS6-REM-Z) Sun Storage RAID 6Gb/s SAS RAID REM HBA, (SGX-SAS6-R-REM-Z) For more information, see "Preparing the Storage Drives to Install an Operating System" on page 51.
Video	A maximum resolution of 1280x1024 is supported with 8 MB of video memory.

Related Information

- "About the Installation Procedure" on page 1
- "Specifications" on page 7
- "Blade Front Panel Features" on page 4
- "Blade Rear Panel Features" on page 5

Blade Front Panel Features



1	Locate LED (white). Press button to identify blade.
2	Ready to Remove LED (blue). Main power removed.
3	Service Action Required LED (amber). A fault condition has occurred.

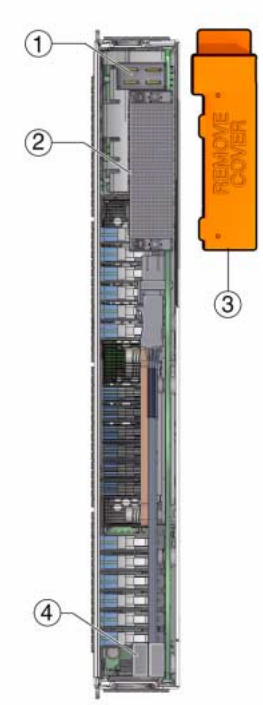
4	OK/Power LED (green). Modes: • SP booting—Fast blink, 0.125 second on, 0.125 second off. • Standby power—Blink, 0.1 second on, 2.9 seconds off. • Host booting—Slow blink, 0.5 second on, 0.5 second off. • Full power—Steady on.
5	Power button. Press briefly to toggle the blade between standby and full power. **Caution -** Pressing the Power button for more than four seconds when the blade is in full power initiates immediate shutdown to standby power. Can cause data loss.
6	NMI button — for Oracle Service use only.
7	Serial number label.
8	Two USB 2.0 ports.
9	Universal connector port (UCP). Used for multiport (dongle) cable.
10, 11, 12, 13	Hard drives (HDDs).

Related Information

- "Blade Rear Panel Features" on page 5
- "About the Installation Procedure" on page 1
- "Blade Features" on page 1
- "Specifications" on page 7

Blade Rear Panel Features

The following illustration shows rear panel features on the blade.



1	Power connector	3	I/O Connector
2	Rear connector cover (remove)	4	USB flash drives 2, 3

UEFI BIOS

The Netra Blade X3-2B contains a Unified Extensible Firmware Interface (UEFI)-compatible BIOS that provides more boot options and configuration capability for adapter cards than previous versions of the BIOS.

A legacy version of the BIOS is also included for use with software or adapters that do not have UEFI drivers. The legacy version is the default.

See the *Netra Blade X3-2B Administration Guide* for more information about UEFI BIOS.

Specifications

The following topics provide information about blade dimensions and electrical and environmental specifications.

Blade Dimensions

Specification	Value
Height	12.87 inches (327 mm)
Width	1.69 inches (43 mm)
Depth	19.6 inches (497 mm)
Weight	20 lbs (9 kg)

Electrical Specifications

Specification	Value
Voltage (nominal)	12V main from chassis backplane 3.3V AUX from chassis backplane
Power (maximum)	604W (maximum operational)

Note – You can also manage chassis and blade power using Oracle ILOM. For more information, see the Oracle ILOM documentation at:
.http://www.oracle.com/pls/topic/lookup?ctx=ilom31

Environmental Specifications

Specification	Value
Operating Temperature	5 to 45° C

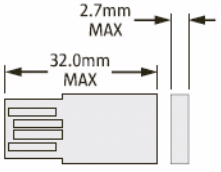
Specification	Value
Operaring Humidity	5 to 85% non-condensing 5% to 90%, NEBS short-term
Operating Altitude	4,000m up to 35° C, 1,800m up to 45° C
Non-operating Temperature (storage)	-40 to 70° C
Non-operating Humidity	93%, non-condensing up to 40° C

Internal USB Port

The blade has two internal USB ports.

One USB port might be preinstalled with a USB drive containing Oracle System Assistant. See the *Netra Blade X3-2B Administration Guide* for more information about Oracle System Assistant.

A USB flash drive with a standard USB 2.0 interface can be obtained from third-party sources. The USB flash drive must be no larger than 2.7 mm wide and 32.0 mm long, as shown in this illustration:



Caution – Using a larger USB device could damage the USB port.

Related Information

- "About the Installation Procedure" on page 1
- "Blade Features" on page 1
- "Blade Front Panel Features" on page 4
- "Blade Rear Panel Features" on page 5

Installing the Blade

This section describes the tasks related to installing the blade into a Sun Netra 6000 modular system chassis.

Installation Overview

The following table list the tasks that you need to complete to install the Netra Blade X3-2B.

Step	Description	Link
1	Review the blade features.	"About Blade Features and Components" on page 1
2	Prepare for the installation.	"Preparing to Install the Blade" on page 10
3	Install the blade into the modular system chassis.	"Install Your Blade" on page 14
4	Cable the blade.	"Cabling the Blade" on page 17
5	Set up Oracle ILOM.	"Connecting to Oracle ILOM" on page 23
6	Set up your system software and firmware.	"Setting Up Software and Firmware" on page 43

Step	Description	Link
7	Prepare the storage drives for OS installation.	"Preparing the Storage Drives to Install an Operating System" on page 51
8	Configure a preinstalled OS.	"Configuring the Preinstalled Oracle Solaris OS" on page 61 "Configuring Preinstalled Oracle VM Software" on page 69
9	Troubleshoot installation issues.	"Troubleshoot Installation Issues" on page 77

Preparing to Install the Blade

Review the following information before installing the blade:

Task	Link
Inventory the blade ship kit.	"Shipping Inventory List" on page 10
Review ESD and safety precautions.	"ESD and Safety Precautions" on page 11
Install additional components.	"Additional Components" on page 12
Prepare the chassis.	"Prepare the Chassis" on page 13

Shipping Inventory List

Standard configurations for the blade are assembled at the factory and shipped ready for installation in a Sun Netra 6000 series chassis.

Standard blade components found in the packing carton include:

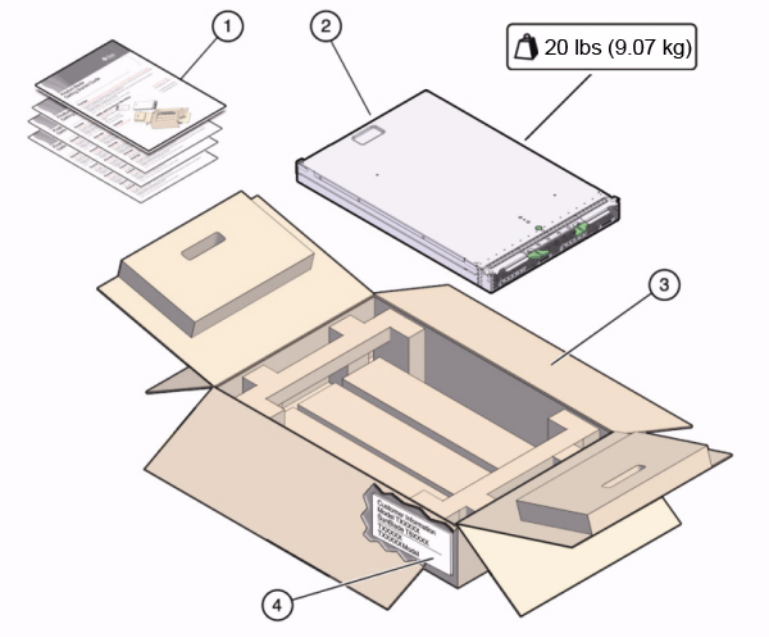


Figure Legend	Description
1	Documentation
2	Blade
3	Box
4	Customer Information Sheet

Related Information

- "Locating the System Serial Number" on page 84
- "Additional Components" on page 12

ESD and Safety Precautions

Electronic equipment is susceptible to damage by static electricity.

Caution – System damage possible. Take the following ESD precautions to protect electronic components from electrostatic damage, which can permanently disable the system or require repair by a service technician.

- 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.

Read safety information in the *Netra Blade X3-2B Safety and Compliance Guide* before installing the blade.

Note – This blade is fully compliant with the Reduction of Hazardous Substances (RoHS) Directive.

Related Information

- "Additional Components" on page 12
- "Install Your Blade" on page 14

Additional Components

Optional blade components that you purchase independent of the standard configuration are shipped separately and, in most cases, must be installed before you install the blade into the chassis.

The following optional blade components can be ordered and purchased separately:

- DDR3 DIMM memory kits
- SAS storage drives
- Multi port (or dongle) cable
- Fabric expansion modules (FEMs)
- RAID expansion modules (REMs)
- Operating system software

Supported components and their part numbers are subject to change over time and without notice. For the most up-to-date list, go to:
`https://support.oracle.com/handbook_private/`

Note – This site requires an Oracle web account to access.

Click the name and model of your blade. On the product page that opens for the blade, click Full Components List for a list of components.

See the service label on the top cover or the *Netra Blade X3-2B Service Manual* component installation instructions.

Related Information

- "ESD and Safety Precautions" on page 11
- "Install Your Blade" on page 14

Prepare the Chassis

There are four Sun Netra 6000 modular system hassis models. Two are AC and two are DC. Ensure that the modular system chassis in which you will install the blade is running with supported hardware and firmware and has no faults. Check the following:

- The chassis midplane supports PCIe 2.0 (standard with model N6000-AC or N6000-DC). See the *Sun Netra 6000 Modular System Product Notes* for the latest information about how to determine your midplane version.
- The chassis monitoring module (CMM) has at least the minimum firmware version that corresponds with the chassis model as follows:
  - A90–B: CMM ILOM 3.0.12.11b (software release 3.3.3)
  - A90–D: CMM ILOM 3.1 (software release 4.2)
- All required power and data cables to the chassis are attached.
- The network express modules (NEMs) that are supported for use with your blade have been installed in the chassis and are operating without faults. For more information about supported NEMs, see *Netra Blade X3-2B Product Notes*.

For information about installing chassis components, attaching cables to the chassis, and powering on the chassis, see the Sun Netra 6000 modular system documentation at: `http://docs.oracle.com/cd/E19938-01/`

Related Information

- "Install Your Blade" on page 14

▼ Install Your Blade

Perform all steps and fulfill all requirements in "Preparing to Install the Blade" on page 10

1. **Locate a free blade slot in the chassis, and remove the slot filler panel.**

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

   Keep the filler panel for later use.

Caution – If you are not installing a blade into a slot, do not remove the slot filler panel. The slot filler panel is required to meet FCC standards for electromagnetic interference (EMI). Do not operate the chassis with empty slots for more than 60 seconds. Always insert a filler panel into an empty slot to reduce the possibility of chassis shutdown.

2. **Remove the rear connector cover from the blade.**

   See "Blade Rear Panel Features" on page 5 for the location of the rear connector cover.

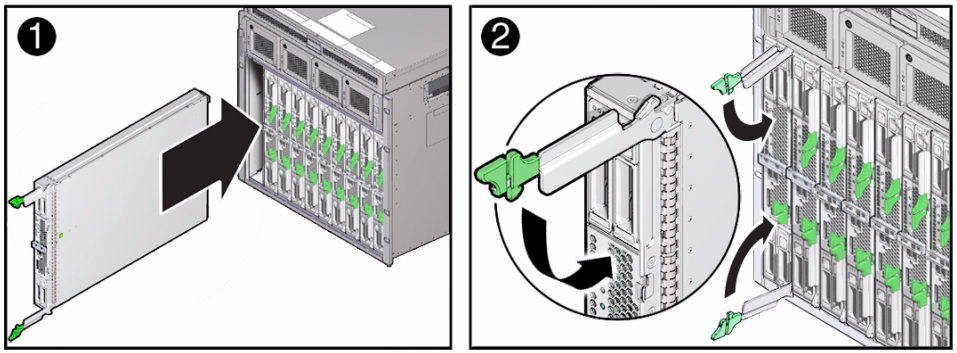
3. **Open both of the blade ejector levers and position the blade vertically so that the ejectors are on the right.**

4. **Install the blade as follows:**

   a. **Push the blade into the slot until the blade stops and is flush with the chassis (see 1).**

   b. **Lock the blade into the chassis. Rotate the top ejector down while rotating the bottom ejector up until they both latch into place (see 2).**

      The blade is now locked in the chassis.



5. **Verify that the blade LEDs illuminate properly.**

   After you install a blade into a powered-on chassis, the blade SP automatically boots using standby power from the chassis power supplies. The blade front panel indicators illuminate as follows:

   - After you plug in the blade, all four blade LEDs blink three times. This indicates that the blade has been powered on and the SP boot process has begun.
   - The green OK/Power LED blinks rapidly. This indicates that the SP is booting (0.125 seconds on, 0.125 seconds off).
   - After the SP completes its boot cycle, the green OK/Power LED blinks briefly once every 3 seconds indicating that the blade is in standby power mode.

Tip – For front panel LED information, see "Blade Front Panel Features" on page 4. For additional information about blade indicators, blade removal, power procedures, and front panel cable connections, see the *Netra Blade X3-2B Service Manual*.

Next Steps

- "Cabling the Blade" on page 17
- "Setting Up Software and Firmware" on page 43
- "Connecting to Oracle ILOM" on page 23

Cabling the Blade

This section contains procedures for cabling the blade.

The cabling options that you choose depend on how you want to set up your blade and which additional modules are installed in the chassis.

Note – The procedures in this section do not cover cabling of PCIe ExpressModules (PCIe EMs) or network express modules (NEMs) installed in the chassis and connected to the blade through the chassis midplane. See the chassis, PCIe EM, or NEM documentation for instructions on cabling these modules.

The following table describes how to determine which cabling procedures to follow.

If you want to...	Links
Set up your blade locally with Oracle System Assistant.	"Attach the 3-Cable Dongle to the Blade" on page 18 "Attach a VGA Monitor to the Dongle Video Connector" on page 19 "Attach a Keyboard and Mouse to the Dongle or Blade" on page 20
Set up or manage your blade with Oracle ILOM using a serial (local) connection.	"Attach the 3-Cable Dongle to the Blade" on page 18 "Attach a Serial Device to the Dongle" on page 21
Set up or manage your blade using Oracle ILOM with a network (remote) connection.	"Cable the CMM NET MGT Port" on page 22

Related Information

- "Connecting to Oracle ILOM" on page 23

▼ Attach the 3-Cable Dongle to the Blade

Your system chassis is shipped with the following dongle cable that enables you to connect communication devices directly to the Netra Blade X3-2B:

3-Cable Dongle II (part number X4622A-N)

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 Sun Netra 6000 series chassis. Additional cables can be ordered.

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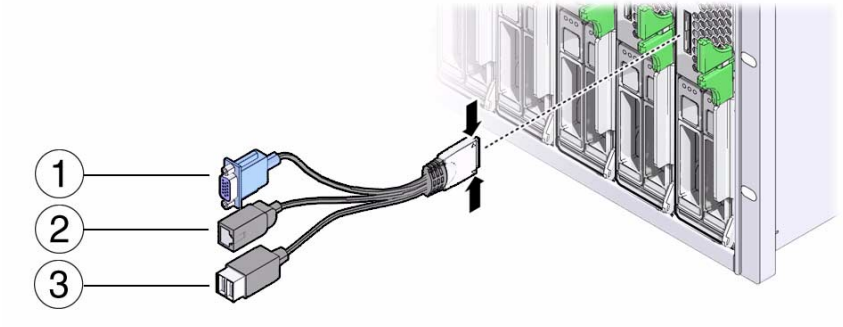
1. **Attach the dongle universal connector port (UCP) connector to the UCP port on the blade.**



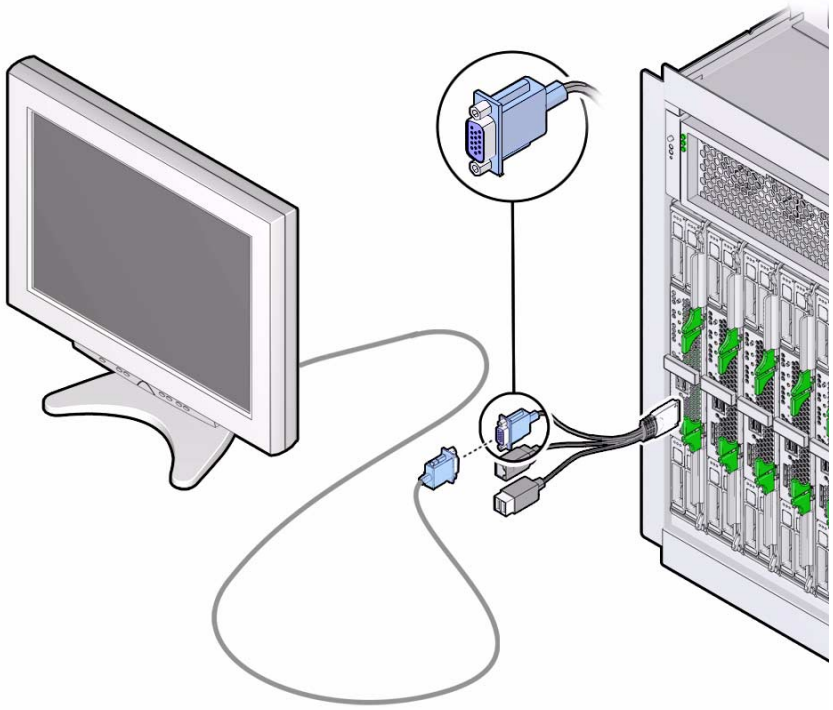
Label	Connector
1	VGA video connector
2	RJ45 serial connector
3	2 USB connectors

2. **Attach devices as needed to the dongle connectors as described in the following sections:**
   - "Attach a VGA Monitor to the Dongle Video Connector" on page 19
   - "Attach a Keyboard and Mouse to the Dongle or Blade" on page 20
   - "Attach a Serial Device to the Dongle" on page 21

Caution – Cable or connector damage possible. Use the dongle cable for configuration and service purposes. Disconnect the dongle cable from the blade after the configuration or service operation is complete to avoid damaging the cable or connector.

▼ Attach a VGA Monitor to the Dongle Video Connector

1. **Insert the dongle cable into the universal connector port (UCP) on the blade front panel. See** "Attach the 3-Cable Dongle to the Blade" on page 18
2. **Attach the VGA monitor cable to the video connector on the dongle.**



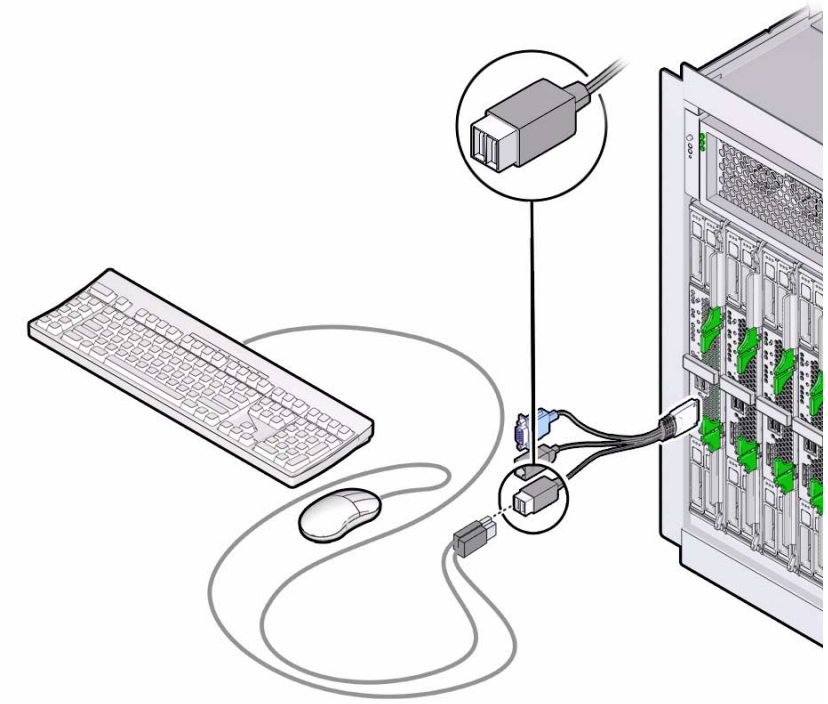
Related Information

- "Attach the 3-Cable Dongle to the Blade" on page 18

- "Attach a Keyboard and Mouse to the Dongle or Blade" on page 20
- "Attach a Serial Device to the Dongle" on page 21

▼ Attach a Keyboard and Mouse to the Dongle or Blade

1. **Insert the dongle cable into the universal connector port (UCP) on the blade front panel. See** "Attach the 3-Cable Dongle to the Blade" on page 18
2. **Attach a keyboard and mouse to the USB connectors on the dongle or the blade front panel.**

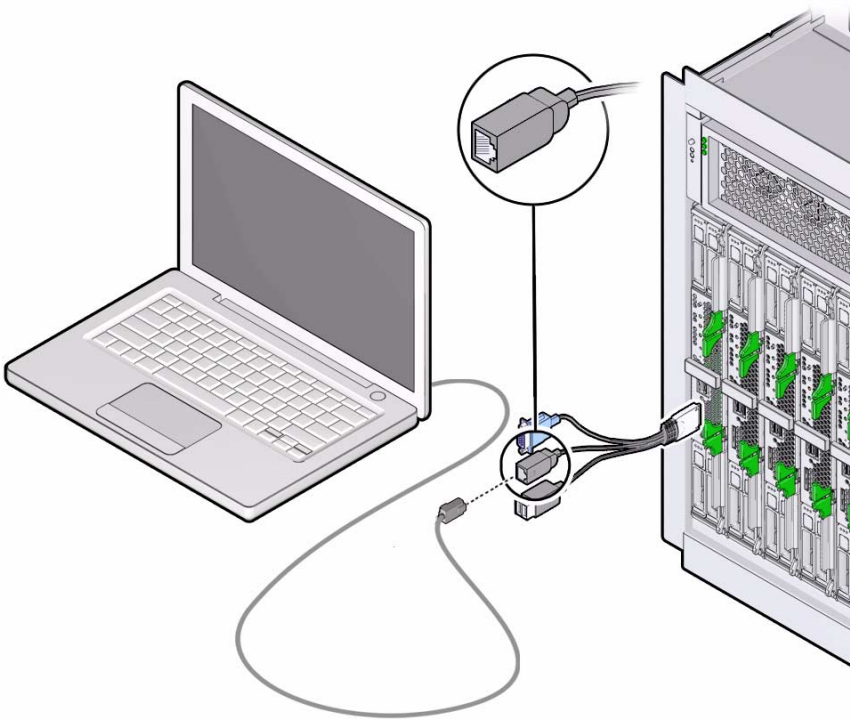


Related Information

- "Attach the 3-Cable Dongle to the Blade" on page 18
- "Attach a VGA Monitor to the Dongle Video Connector" on page 19
- "Attach a Serial Device to the Dongle" on page 21

▼ Attach a Serial Device to the Dongle

1. **Insert the dongle cable into the universal connector port (UCP) on the blade front panel. See** "Attach the 3-Cable Dongle to the Blade" on page 18
2. **Attach a terminal device or terminal emulator cable to the SER MGT port on the dongle.**

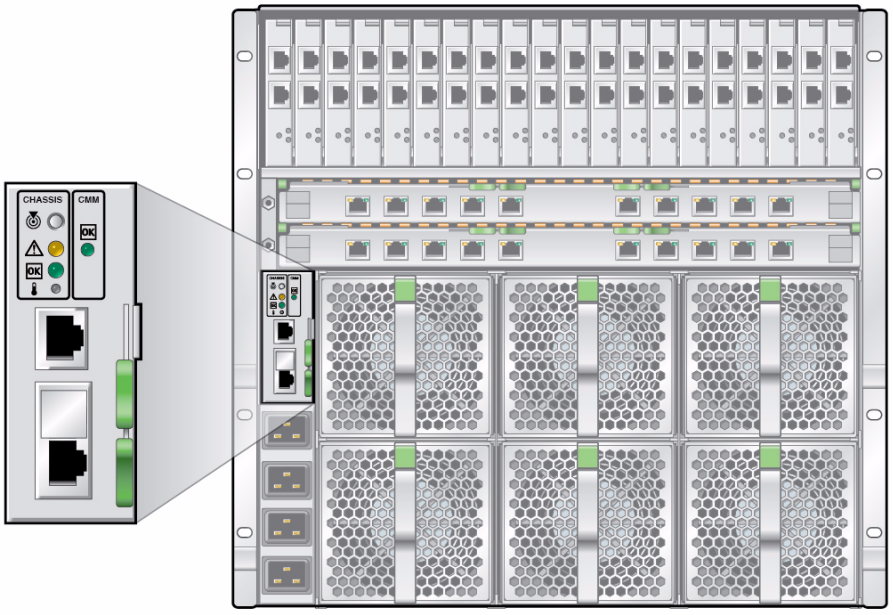


Related Information

- "Attach the 3-Cable Dongle to the Blade" on page 18
- "Attach a VGA Monitor to the Dongle Video Connector" on page 19
- "Attach a Keyboard and Mouse to the Dongle or Blade" on page 20

▼ Cable the CMM NET MGT Port

1. **Locate the NET MGT 0 port on the chassis CMM.**
2. **Attach an Ethernet cable that is connected to the Internet to the CMM NET MGT 0 port.**



Related Information

- "Connecting to Oracle ILOM" on page 23

Connecting to Oracle ILOM

This section describes how to access the Oracle Integrated Lights Out Manager (ILOM) and set up the service processor (SP) network configuration for your blade.

The following table provides information about Oracle ILOM setup tasks.

Task	Link
Learn about using Oracle ILOM with your blade.	"Oracle ILOM Overview" on page 23
Log in to Oracle ILOM CMM and obtain the IP address of the SP.	"Determining the Oracle ILOM SP IP Address" on page 29
Log in to Oracle ILOM.	"Logging In to Blade SP Oracle ILOM" on page 35
Optional: Access the host console through Oracle ILOM.	"Accessing the Blade Console Through Oracle ILOM" on page 39

Oracle ILOM Overview

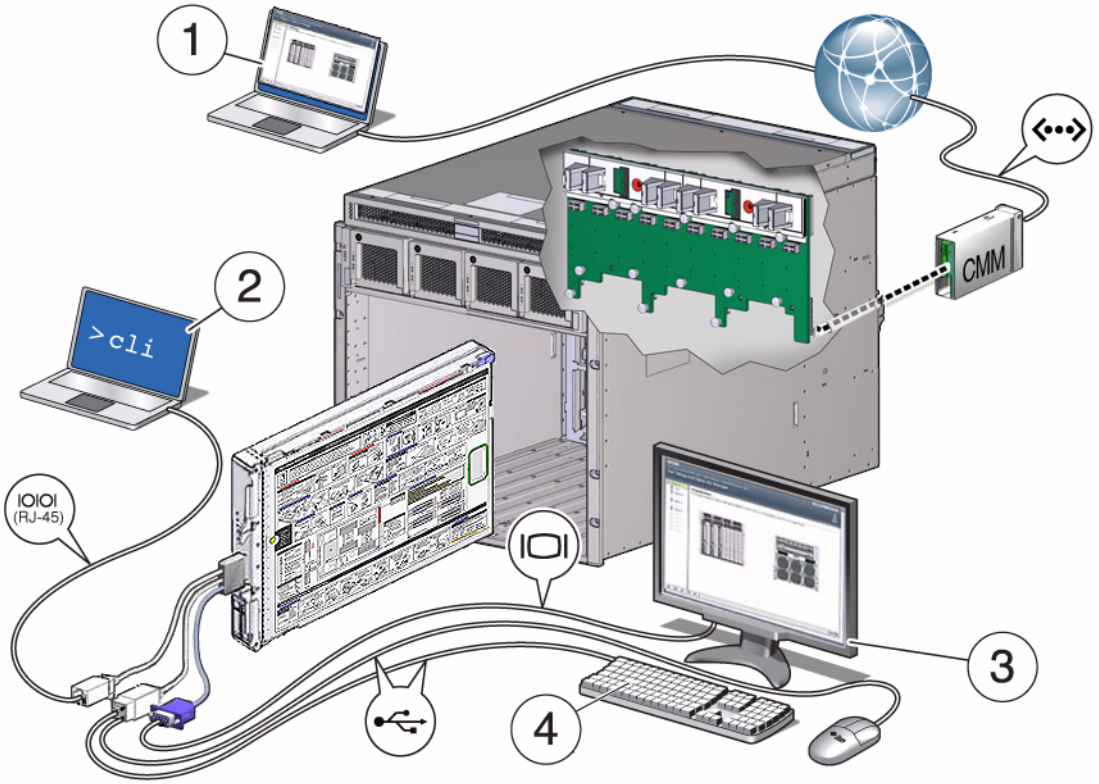
Your server supports Oracle Integrated Lights Out Manager (ILOM) version 3.1 or later. Oracle ILOM allows you to manage the Netra Blade X3-2B. This can be done using either the chassis CMM or the blade's service processor.

The following sections describe CMM and server management Oracle ILOM:

- "Connectivity Options" on page 24
- "About Oracle ILOM CMM" on page 25
- "About Blade SP Oracle ILOM" on page 27

Connectivity Options

The following illustration and table show some of the ways you can connect to Oracle ILOM to perform administrative tasks.



No	Source	Destination	Description
1	(Ethernet) CMM NET MGT port	Your network	The CMM NET MGT port is connected to your network. From your network, log in to Oracle ILOM on the CMM using the IP address of the CMM. Once logged in, you can navigate to an individual blade SP to administer that blade. You can use the CMM CLI or the web interface.

No	Source	Destination	Description
2	(Serial connection) Blade SP UCP port (dongle required)	Terminal device	A terminal device is connected to a dongle that is connected to a blade. You can log in to Oracle ILOM on the blade SP using the CLI.
3, 4	(Local KVM connection) Blade SP UCP port (dongle required)	USB keyboard and mouse, and a VGA monitor	A USB keyboard and mouse are connected to a dongle on the blade or front panel USB connectors. A VGA monitor is connected to the 15-pin dongle connector. You can log in to Oracle ILOM on the blade SP using the SP CLI or the web interface.

About Oracle ILOM CMM

The Sun Netra 6000 modular system chassis has its own service processor, called a chassis monitoring module (CMM). Oracle ILOM CMM provides an Ethernet connection through the chassis to the blade service processor.

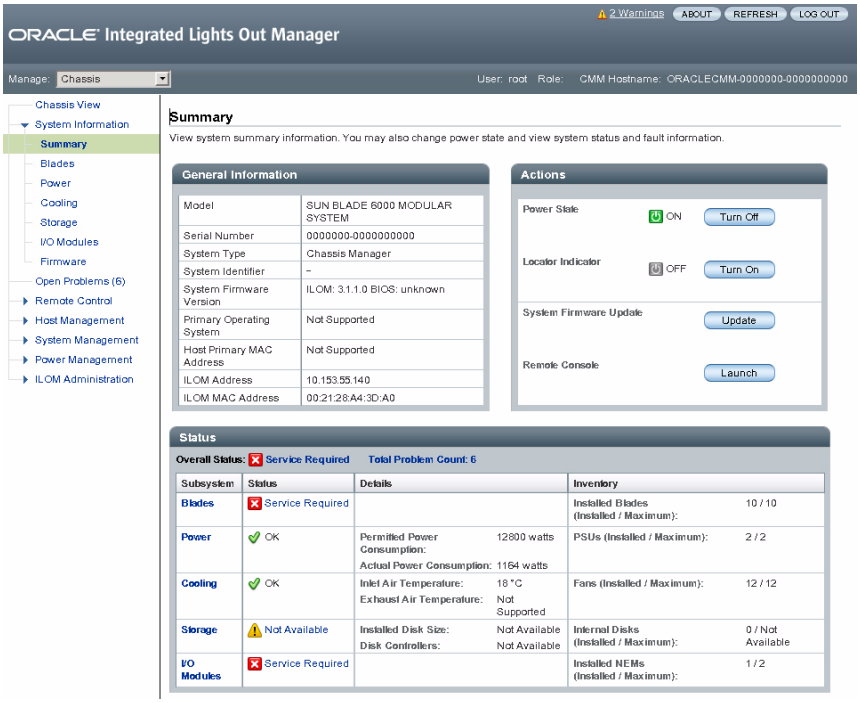
The minimum Oracle ILOM CMM firmware version corresponds to the chassis model as follows:

- A90–B: CMM ILOM 3.0.12.11b (software release 3.3.3)
- A90–D: CMM ILOM 3.1 (software release 4.2)

For information about how to identify the chassis, see *Netra Blade X3-2B Product Notes*.

Oracle ILOM CMM software allows you to monitor and manage all of the chassis components, including installed server and storage blades.

The following illustration shows an example of the web interface when you are logged in to the Oracle ILOM CMM.



The following is an example of using the CMM command-line interface (CLI) to show information about the blade when you are logged in to the Oracle ILOM CMM. In this example, the blade is installed in chassis blade slot 1.

Note – The /CH target is hidden in the CMM CLI by default. In order to see this target and its sub-targets, use the following command: `/CMM/cli legacy_targets=enable`

```
-> show /CH/BL1
 /CH/BL1
    Targets:
        HOST
        System
        SP
    Properties:

    Commands:
        cd
        show
```

See the system chassis documentation for more information at:

http://www.oracle.com/pls/topic/lookup?ctx=sb6000

Related Information

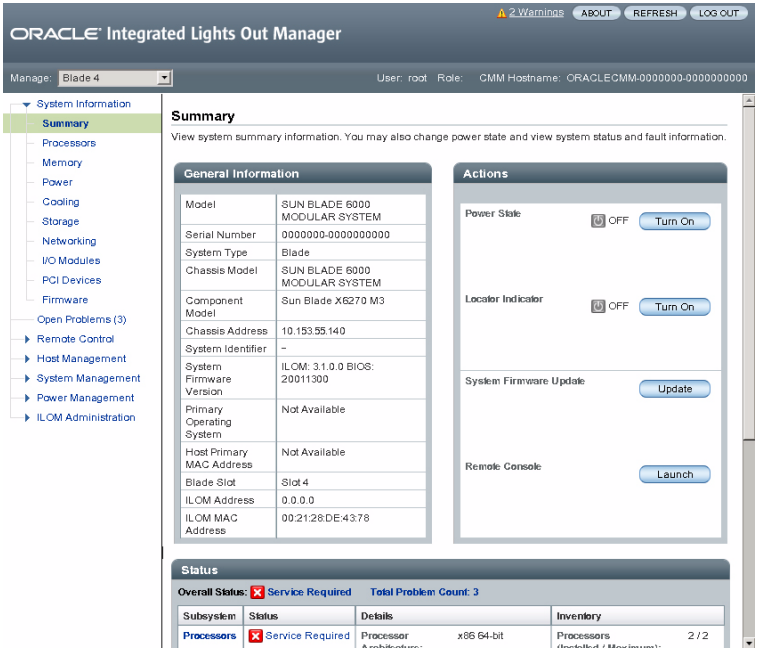
- "Determining the Oracle ILOM SP IP Address" on page 29
- "Logging In to Blade SP Oracle ILOM" on page 35

About Blade SP Oracle ILOM

With Oracle ILOM software, you can monitor and manage blade components, using the blade SP, including:

- Configuring network information
- Viewing and editing hardware configurations for the SP
- Monitoring vital system information and viewing logged events
- Managing Oracle ILOM user accounts

The following illustration shows an example of the web interface when you are logged in to the Oracle ILOM SP.



The following is an example of using the command-line interface (CLI) to show information available when you are logged in to the Oracle ILOM SP. It shows information about the blade and its chassis connections.

```
-> show /System
 /System
    Targets:
        Cooling
        Processors
        Memory
        Power
        Storage
        PCI_Devices
        Firmware
        Networking
        Open_Problems (1)
        BIOS
        IO_Modules
        SP
    Properties:
        health = Service Required
        health_details = /SYS (Motherboard) is faulty. Type 'show
                         /System/Open_Problems' for details.
        open_problems_count = 1
        power_state = Off
        locator_indicator = Off
        serial_number = 489089M-1122PR0071
        model = ASSY,BLADE,SUN NETRA X6270 M3
        type = Blade
        system_fw_version = ILOM: 3.1.0.0  BIOS: 20010900
        host_primary_ip_address = (none)
        host_primary_mac_address = (none)
        system_identifier = (none)
        primary_operating_system = (none)
        actual_power_consumption = 10 watts
        ilom_address = 10.134.210.152
        ilom_mac_address = 00:21:28:BB:D7:22
        action = (none)
    Commands:
        cd
        reset
        show
        start
        stop
```

For detailed information, see the Oracle ILOM 3.1 documentation.

Related Information

- “Determining the Oracle ILOM SP IP Address” on page 29
- “Logging In to Blade SP Oracle ILOM” on page 35

Determining the Oracle ILOM SP IP Address

This section describes ways to obtain a blade's Oracle ILOM service processor (SP) IP address. To access the blade over the network through the Oracle ILOM CMM, you need the blade SP IP address for the blade.

Note – You do not need the SP IP address if you plan to log in only through the blade serial connection. See “Log In to Oracle ILOM SP CLI (Serial)” on page 38

Choose a method of obtaining a blade SP IP address. as described in the following sections:

- “Display the Oracle ILOM IP Address (Web)” on page 29
- “Display the Oracle ILOM IP Address (CLI)” on page 33

▼ Display the Oracle ILOM IP Address (Web)

You need to use the chassis Oracle ILOM CMM to display the network configuration for the Oracle ILOM service processor of the blade, including its IP address. This procedure also verifies that a blade's Oracle ILOM is working correctly and that you can access it through the Oracle ILOM CMM.

The chassis CMM must already be connected to the network using its Ethernet management port, configured and operational. If it is not, see your chassis documentation before proceeding.

1. **To log in, type the IP address of the Oracle ILOM CMM in your web browser address field (example:** `http://10.153.55.140`**).**

   The web interface Login page is displayed.

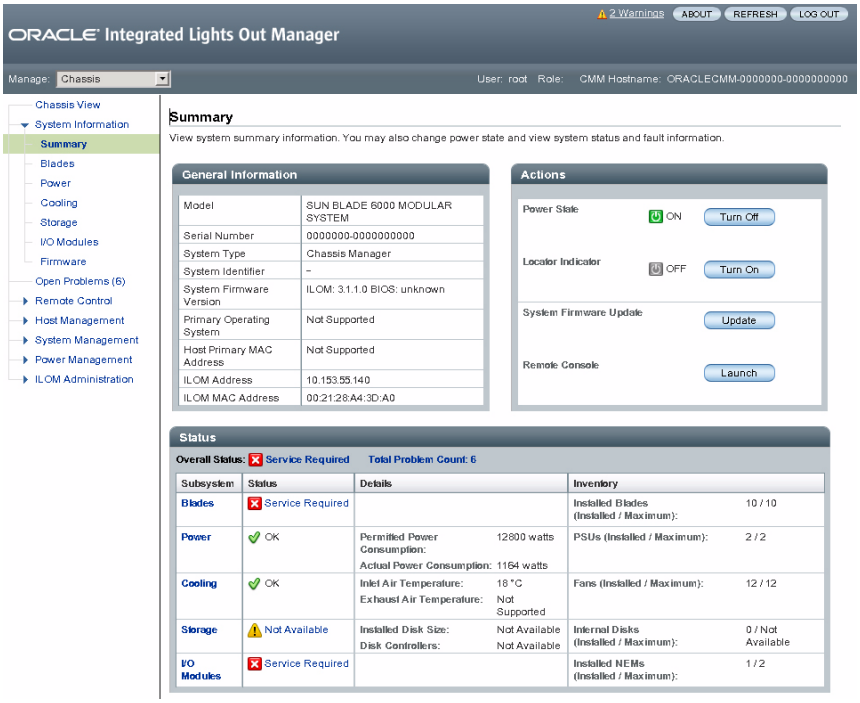
2. **Type your user name and password.**

Tip – The default Oracle ILOM administrator account user name is **`root`** and the password is **`changeme`**. If this default administrator account has been changed, contact your system administrator for an Oracle ILOM user account with administrator privileges.

---

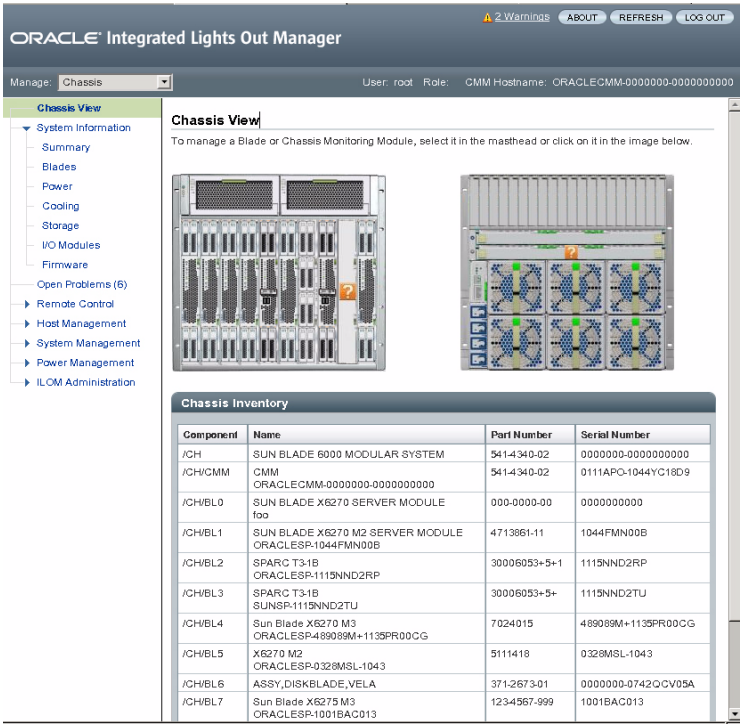
3. **Click Log In.**

   The System Summary page is displayed.



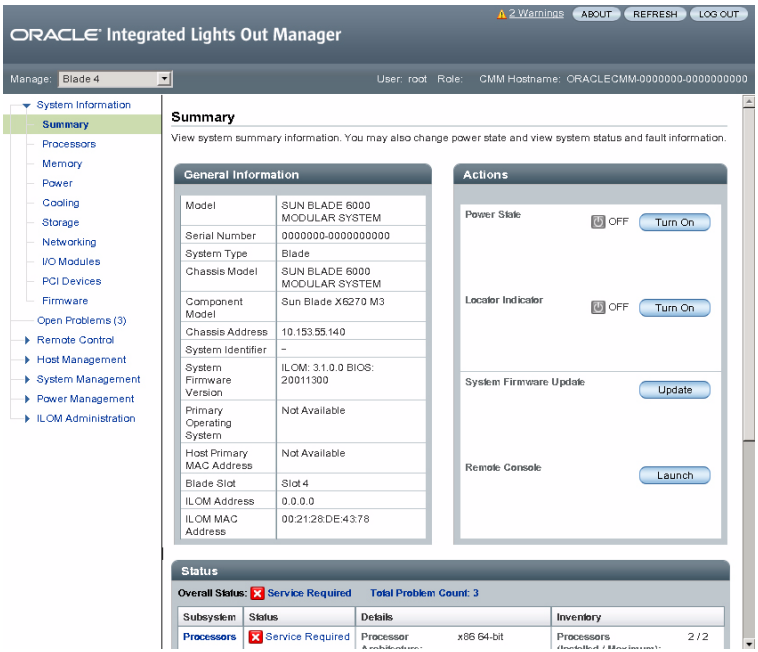
4. **Click Chassis View in the upper left pane.**

   The Chassis View page is displayed.



5. **Select the image of the blade in the chassis that you want to view.**

   The blade Summary page is displayed.



The Oracle ILOM SP address is in the General Information table, labeled ILOM Address.

6. **Make a note of the blade's SP IP address.**

   You need to know the IP address of the blade SP to log in directly to the blade Oracle ILOM over the network. The IP address of the blade SP is configured using DHCP.

Next Steps

- "Logging In to Blade SP Oracle ILOM" on page 35

▼ Display the Oracle ILOM IP Address (CLI)

You need to use the chassis Oracle ILOM CMM to display the network configuration for the Oracle ILOM service processor of each blade, including its IP address.

This procedure verifies that a blade's Oracle ILOM is working correctly and that you can access it through the Oracle ILOM CMM.

The chassis CMM must already be connected to the network using its Ethernet management port, configured and operational. If it is not, see your chassis documentation before proceeding.

1. **Open a terminal window.**

2. **Log in to the chassis Oracle ILOM CMM using a Secure Shell (SSH) session.**

   For example, type:

   `$` **`ssh`** *username***`@`***CMMIPaddress*

   where *username* is a user account with administrator privileges and the *CMMIPaddress* is the IP address of the Oracle ILOM CMM.

Tip – The default Oracle ILOM administrator account user name is **`root`** and the password is **`changeme`**. If this default administrator account has been changed, contact your system administrator for an Oracle ILOM user account with administrator privileges.

   Once you are successfully logged in to the Oracle ILOM CMM, you will see the Oracle ILOM prompt (`->`).

3. **Type:**

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

   where `BL0` represents a Netra Blade X3-2B slot 0 in the chassis. The Oracle ILOM CMM displays information about the blade, including its IP address and MAC address.

   The following example shows blade 0 blade information:

```
-> show /CH/BL0/SP/network
   /CH/BL0/SP/network
    Targets:
        interconnect
        ipv6
        test
    Properties:
        commitpending = (Cannot show property)
        dhcp_server_ip = 10.134.210.11
        ipaddress = 10.134.210.152
        ipdiscovery = dhcp
        ipgateway = 10.134.210.254
        ipnetmask = 255.255.255.0
        macaddress = 00:21:28:BB:D7:22
        managementport = /SYS/SP/NET0
        outofbandmacaddress = 00:21:28:BB:D7:22
        pendingipaddress = 10.134.210.152
        pendingipdiscovery = dhcp
        pendingipgateway = 10.134.210.254
        pendingipnetmask = 255.255.255.0
        pendingmanagementport = /SYS/SP/NET0
        sidebandmacaddress = 00:21:28:BB:D7:23
        state = enabled
    Commands:
```

```
          cd
          set
          show
->
```

4. **Make a note of the network configurations, including the blade's SP IP address.**

   You need to know the IP address of the SP to log in directly to the blade Oracle ILOM.

   By default, the IP address of the blade SP is configured using DHCP. If you want to set a static IP address, see the Oracle ILOM 3.1 documentation.

5. **To log out of Oracle ILOM CMM, type:**

   -> **exit**

Next Steps

- "Logging In to Blade SP Oracle ILOM" on page 35

Logging In to Blade SP Oracle ILOM

This section describes several ways to access a blade's service processor (SP) Oracle ILOM. They are described in the following sections:

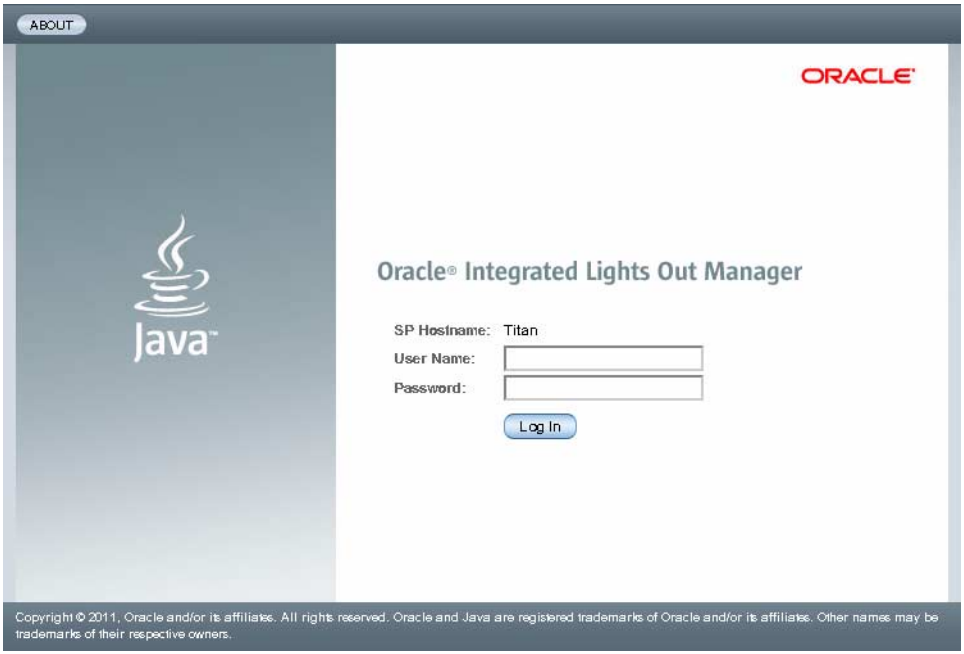
- "Log In to the Oracle ILOM SP Web Interface (Ethernet)" on page 35
- "Log In to the Oracle ILOM SP CLI (Ethernet)" on page 37
- "Log In to Oracle ILOM SP CLI (Serial)" on page 38

▼ Log In to the Oracle ILOM SP Web Interface (Ethernet)

- To improve response times, disable the web browser proxy server (if used).
- If you do not know the SP IP address for the blade, see "Display the Oracle ILOM IP Address (Web)" on page 29 for for information about how to find it using the Oracle ILOM CMM.

1. **To log in, type the IP address of blade's Oracle ILOM in your web browser.**

   The web interface Login page is displayed.



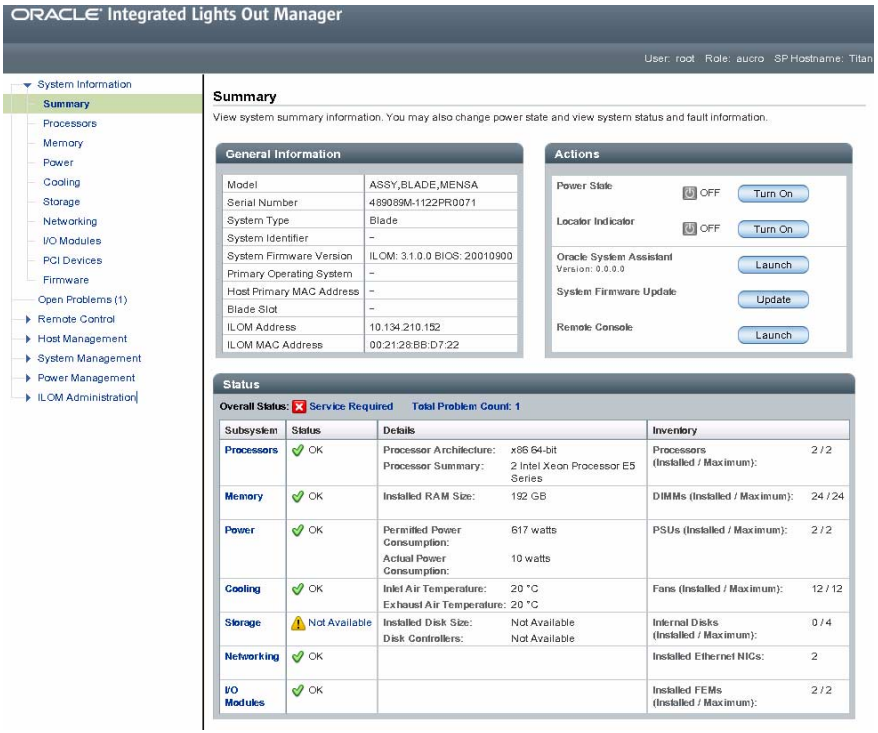
2. Type your user name and password.

Tip – The default Oracle ILOM administrator account user name is **`root`**, and the password is **`changeme`**. If this default administrator account has been changed, contact your system administrator for an Oracle ILOM user account with administrator privileges.

---

3. Click Log In.

The Summary page is displayed.



You are now logged in to the blade's Oracle ILOM.

See the Oracle ILOM 3.1 documentation library for more information about how to use the Oracle ILOM web interface.

Next Steps

- "Accessing the Blade Console Through Oracle ILOM" on page 39
- "Configuring the Preinstalled Oracle Solaris OS" on page 61
- "Configuring Preinstalled Oracle VM Software" on page 69

▼ Log In to the Oracle ILOM SP CLI (Ethernet)

If you do not know the SP IP address for the blade, see "Display the Oracle ILOM IP Address (CLI)" on page 33 for information about how to find it using the Oracle ILOM CMM.

1. **Open a terminal window.**

2. **Log in to the blade Oracle ILOM SP using a Secure Shell (SSH) session.**

   For example, type:

   ```
   $ ssh username@SPIPaddress
   ```

   where *username* is a user account with administrator privileges, and the *SPIPaddress* is the IP address of the blade service processor.

Tip – The default Oracle ILOM administrator account user name is **root**. and the password is **changeme**. If this default administrator account has been changed, contact your system administrator for an Oracle ILOM user account with administrator privileges.

   Once you are successfully logged in to the blade Oracle ILOM, the Oracle ILOM prompt (->) is displayed.

   See the Oracle ILOM 3.1 documentation for more information about how to use the CLI interface to configure Oracle ILOM.

Next Steps

- "Accessing the Blade Console Through Oracle ILOM" on page 39
- "Configuring the Preinstalled Oracle Solaris OS" on page 61
- "Configuring Preinstalled Oracle VM Software" on page 69

▼ Log In to Oracle ILOM SP CLI (Serial)

This procedure requires that you are physically at the blade. You do not need an SP IP address to log in to Oracle ILOM using a serial connection.

You need a multiport cable (also known as a dongle). The multiport cable provides a direct method for connecting to a node host or SP console. A multiport cable might be shipped with the Sun Netra 6000 modular system chassis.

1. **Cable the blade using the procedures described in the following sections:**

   a. "Attach the 3-Cable Dongle to the Blade" on page 18

   b. "Attach a Serial Device to the Dongle" on page 21

2. **Ensure that the following serial communication settings are configured at your terminal:**

   - 8N1: eight data bits, no parity, one stop bit
   - 9600 baud (default—do not change)
   - Disable hardware flow control (CTS/RTS)

3. **Press Enter to establish a serial console connection to the server's Oracle ILOM.**

   A login prompt for Oracle ILOM is displayed. For example:

```
SP-productserialnumber login:
```

4. **Log in to the Oracle ILOM CLI using an administrator account. Type a user name and password for the administrator account.**

Tip – The default Oracle ILOM administrator account user name is **root** and the password is **changeme**. If this default administrator account has been changed, contact your system administrator for an Oracle ILOM user account with administrator privileges.

   The Oracle ILOM CLI prompt (->) is displayed.

   You are now logged in to the blade Oracle ILOM.

   See the Oracle ILOM 3.1 documentation library for more information about how to use the CLI interface to configure the Oracle ILOM.

Next Steps

- "Accessing the Blade Console Through Oracle ILOM" on page 39

Accessing the Blade Console Through Oracle ILOM

Connecting to the blade host console through Oracle ILOM allows you to perform actions as if you were at the host. This can be useful when you need remote access to the server's BIOS setup program or when you configure or install an OS or other software on the server.

Choose one of the following methods:

- Use the serial console through the Oracle ILOM command-line interface. See "Connect to the Blade (Serial Console)" on page 40
- Use the Remote Console feature of the Oracle ILOM web interface. See "Connect to the Blade (Remote Console)" on page 40

▼ Connect to the Blade (Serial Console)

1. **Log in to a blade's Oracle ILOM using an account with administrator privileges.**

   Use one of the following previously described methods:

   - Use the serial management port as described in "Log In to Oracle ILOM SP CLI (Serial)" on page 38
   - Use a client system to establish an SSH session over the network. See "Log In to the Oracle ILOM SP CLI (Ethernet)" on page 37

2. **To access the host serial console, type:**

   ```
   -> start /HOST/console
   ```

   The serial console output is displayed.

Note – If the serial console is in use, stop the console session with the **`stop /HOST/console`** command followed by the **`start /HOST/console`** command.

---

3. **To return to the Oracle ILOM console, press Esc followed by the (character (Shift+9).**

Next Steps

- "Configuring the Preinstalled Oracle Solaris OS" on page 61
- "Configuring Preinstalled Oracle VM Software" on page 69

▼ Connect to the Blade (Remote Console)

For you to connect to the host console from a remote system, your remote system must meet the following requirements:

- An operating system such as Oracle Solaris, Linux, or Windows is installed.
- The system must be connected to a network that has access to the CMM Ethernet management port.
- Java Runtime Environment (JRE) 1.5 or later is installed. For CD-ROM redirection, 32-bit Java must be used.
- If the remote console system is running Oracle Solaris OS, volume management must be disabled for the remote console to access the physical floppy and CD/DVD-ROM drives.
- If the remote console system is running Windows, Internet Explorer Enhanced Security must be disabled.

- The remote console system and Oracle ILOM service processor are set up according to the instructions in the *Oracle Integrated Lights Out Manager (ILOM) 3.1 Daily Management Web Interface Procedures Guide*.

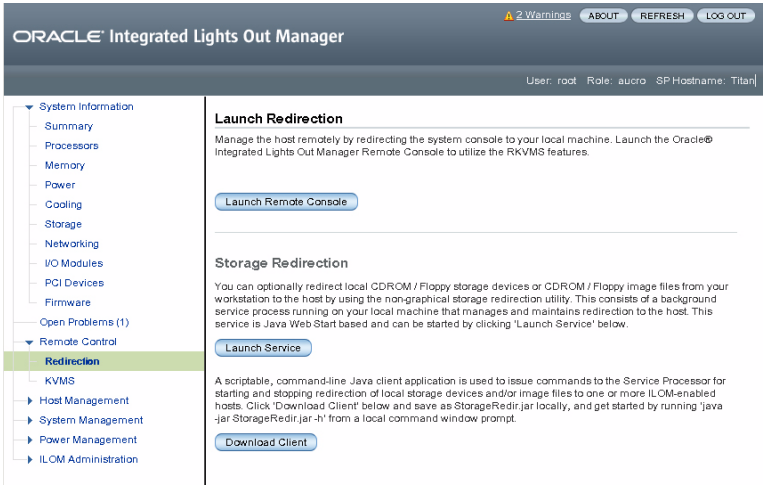
1. **Log in to a blade's Oracle ILOM from a web browser.**

   These steps are described in "Log In to the Oracle ILOM SP Web Interface (Ethernet)" on page 35

2. **Click Remote Control > Redirection.**

   The Launch Redirection screen is displayed.

Note – Make sure that the mouse mode is set to Absolute mode in the Mouse Mode Settings tab.

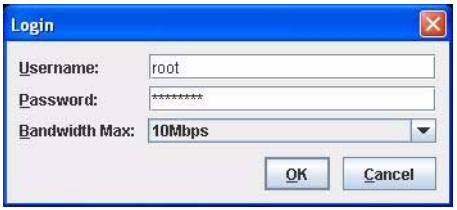


3. **Click Launch Remote Console.**

   Note the following:

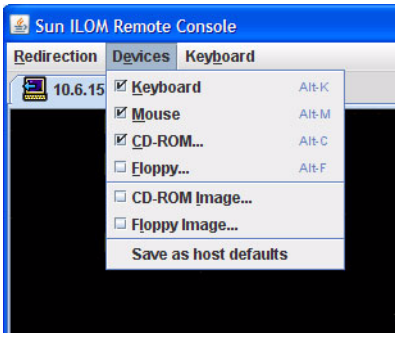
   - When using a Windows system for Remote Console system redirection, a Hostname Mismatch warning dialog box might appear after you click Launch Remote Console. If it does, click the Yes button to clear it.

- A Remote Control login dialog box might be displayed. If it is, reenter your user name and password, and click OK.



The JavaRConsole screen is displayed.

4. **To redirect devices on your remote system to the host console, choose the appropriate items from the Devices menu.**



- **Remote Physical Floppy Disk** – Select Floppy to redirect the server to the physical floppy drive attached to the remote system.
- **Remote Floppy Image** – Select Floppy Image to redirect the server to the floppy image file located on the remote system.
- **Remote Physical CD/DVD** – Select CD-ROM to redirect the server to the CD/DVD in the CD/DVD drive attached to the remote system.
- **Remote CD/DVD Image** – Select CD-ROM Image to redirect the server to the `.iso` image file located on the remote system.

Note – Using either of the CD/DVD options to install software on your server significantly increases the time necessary to perform the installation because the content is accessed over the network. The installation duration depends on the network connectivity and traffic.

Next Steps

- "Accessing the Blade Console Through Oracle ILOM" on page 39
- "Configuring the Preinstalled Oracle Solaris OS" on page 61
- "Configuring Preinstalled Oracle VM Software" on page 69

Setting Up Software and Firmware

Oracle System Assistant is the easiest method for setting up your system software and firmware. If Oracle System Assistant is not on your blade or you prefer to use Oracle ILOM or Hardware Management Pack for system set up, see the *Netra Blade X3-2B Administration Guide* for additional setup procedures.

This section covers the information about setting up software and firmware shown in the following table.

Task	Link
Launch Oracle System Assistant from Oracle ILOM or locally.	"Accessing Oracle System Assistant" on page 43
Use Oracle System Assistant to perform common setup tasks.	"Set Up Software and Firmware (Oracle System Assistant)" on page 47
Learn about the options for configuring or installing an operating system and drivers.	"Setting Up an Operating System and Drivers" on page 49

Accessing Oracle System Assistant

The Oracle System Assistant (OSA) application is a task-based server provisioning tool that allows you to perform initial server setup and maintenance for Oracle x86 servers. Using Oracle System Assistant, you can install a supported Oracle VM, Linux, or Windows operating system, update your blade to the latest software release, and configure blade hardware.

Note – Under high-ambient temperatures, the USB port that is used for the OSA drive might become unreliable. There is no user space on the OSA drive, and it is intended only for the functions described by OSA. The rear USB ports require industrial-temperature-rated devices to meet NEBS maximum input ambient conditions. Currently, Oracle does not offer industrial-temperature-rated USB ports.

The following procedures describe different ways to access Oracle System Assistant:

- "Launch Oracle System Assistant (Oracle ILOM)" on page 44
- "Launch Oracle System Assistant (Locally)" on page 45

▼ Launch Oracle System Assistant (Oracle ILOM)

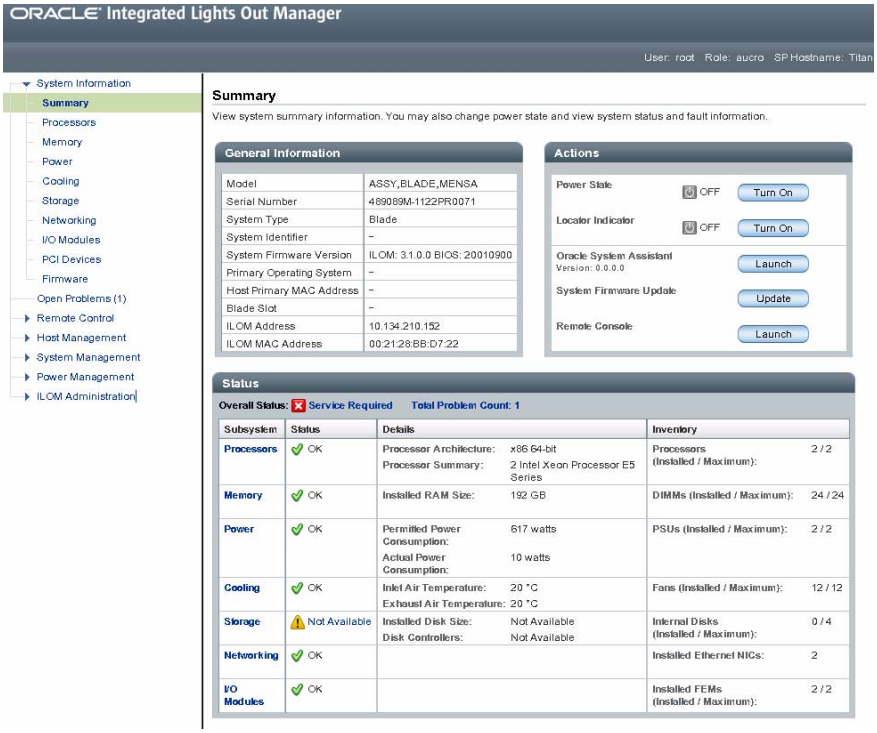
1. **Ensure that the blade is in standby power mode.**

   In blade standby mode, the Power/OK LED blinks slowly.

2. **Log in to the blade SP Oracle ILOM web interface.**

   See "Log In to the Oracle ILOM SP Web Interface (Ethernet)" on page 35

   The System Summary screen is displayed.

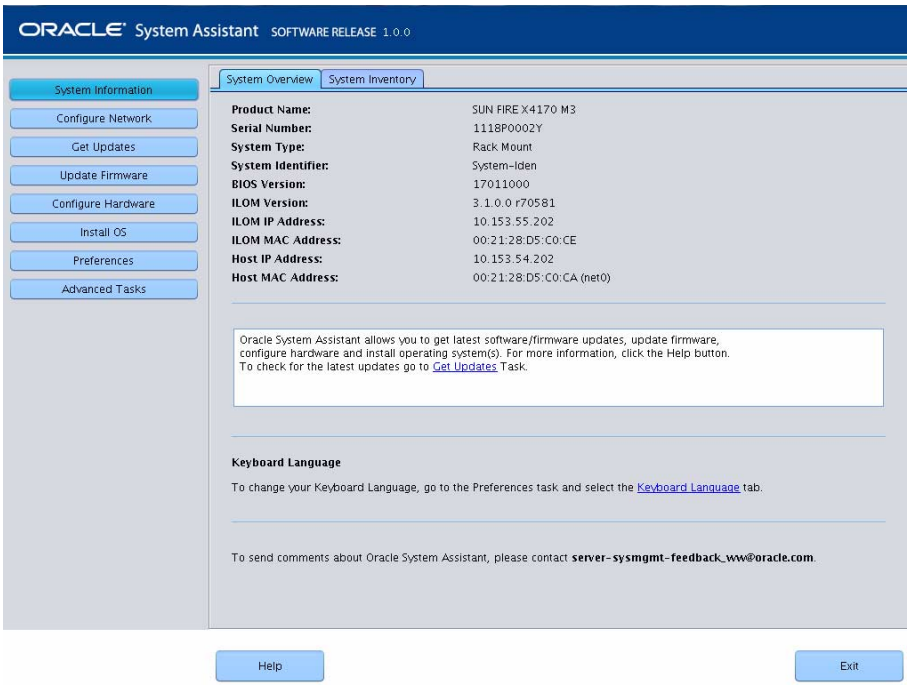


   The Oracle System Assistant Launch button is in the upper right panel.

3. **Click Launch.**

4. **In the dialog that asks if you want to run a JavaRConsole session, click Yes.**

   The blade is powered on, the Oracle System Assistant application boots, and the application main screen is displayed.



Next Steps

- "Set Up Software and Firmware (Oracle System Assistant)" on page 47

▼ Launch Oracle System Assistant (Locally)

To launch the Oracle System Assistant locally, you must be physically present with the blade and have access to the following:

- 3–cable dongle
- VGA monitor
- Keyboard and mouse

1. **Ensure that the blade is in standby power mode.**

   In server standby mode, the Power/OK LED blinks slowly.

2. **Connect locally to the blade using the following procedures:**

   a. "Attach the 3-Cable Dongle to the Blade" on page 18

   b. "Attach a VGA Monitor to the Dongle Video Connector" on page 19

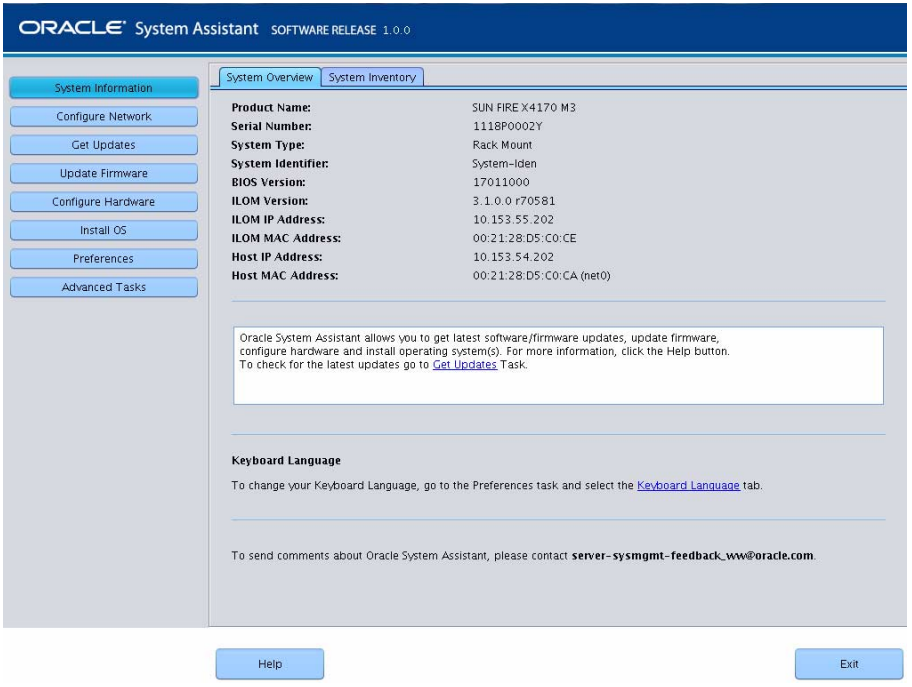
   c. "Attach a Keyboard and Mouse to the Dongle or Blade" on page 20

3. **Press the front-panel Power button to power on the blade to full power mode.**

   The blade boots, and POST messages appear on the monitor.

4. **When prompted, press the F9 key.**

   The Oracle System Assistant application boots, and the application main screen is displayed.



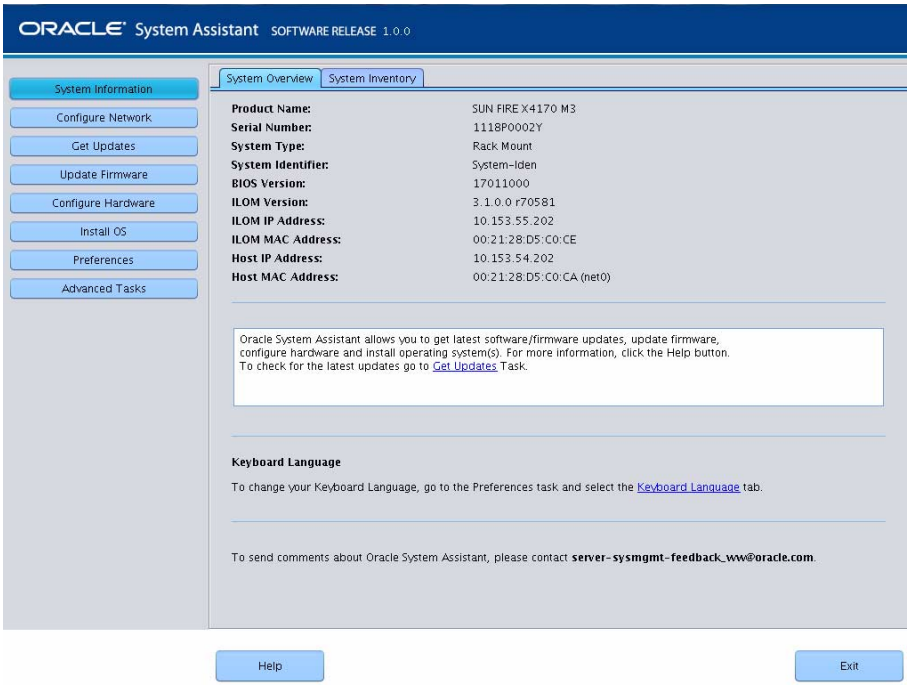
Next Steps

- "Set Up Software and Firmware (Oracle System Assistant)" on page 47

▼ Set Up Software and Firmware (Oracle System Assistant)

1. **Launch the Oracle System Assistant using one of the following procedures:**
   - "Launch Oracle System Assistant (Oracle ILOM)" on page 44
   - "Launch Oracle System Assistant (Locally)" on page 45

   The Oracle System Assistant application boots, and the application main screen is displayed.



2. **Use the Oracle System Assistant application to perform the tasks shown in the following table in order.**

   See the *Netra Blade X3-2B Administration Guide* or the embedded help on the Oracle System Assistant for more information about using Oracle System Assistant.

Step	Task	Oracle System Assistant Screen
1	Set up the Oracle System Assistant network connection.	Network Configuration

Step	Task	Oracle System Assistant Screen
2	Get the latest software and firmware updates.	Get Updates
3	Update Oracle ILOM, BIOS, disk expander, or HBA firmware, if needed.	Update Firmware
4	Configure Oracle ILOM.	Configure Hardware > Service Processor Configuration
5	Configure RAID.	Configure Hardware > RAID Configuration
6	Install a Linux or Windows OS or Oracle VM software. **Note -** For more information, see "Setting Up an Operating System and Drivers" on page 49 or the OS installation guide for the OS that you plan to install.	Install OS

Next Steps

- "Setting Up an Operating System and Drivers" on page 49
- "Configuring the Preinstalled Oracle Solaris OS" on page 61
- "Configuring Preinstalled Oracle VM Software" on page 69

Setting Up an Operating System and Drivers

You can configure the preinstalled operating system (OS), or install a supported OS for your blade. The following table shows you how to access information about installing or configuring an OS.

Note – You might need to prepare the storage drives before installing an OS. See "Preparing the Storage Drives to Install an Operating System" on page 51

What do you want to do?	Which OS do you want to configure or install?	Use this tool or documentation
Configure a preinstalled OS	Oracle Solaris OS or Oracle VM	See "Configuring the Preinstalled Oracle Solaris OS" on page 61, and "Configuring Preinstalled Oracle VM Software" on page 69
Install an OS	Oracle VM, Windows, or Linux OS	Oracle System Assistant
	Oracle Solaris OS or VMware ESX	The installation guide for the OS
Install OS drivers	Any supported OS	The installation guide for the OS

Related Information

- "Set Up Software and Firmware (Oracle System Assistant)" on page 47

Preparing the Storage Drives to Install an Operating System

If you plan to install an operating system on the blade, you might need to prepare the hard drives by creating a volume using Oracle System Assistant. If you do not have Oracle System Assistant, you can prepare the drives manually using an LSI BIOS Configuration utility.

For information about creating RAID volumes after you have installed the OS, see the *Netra Blade X3-2B Administration Guide*.

Note – If you plan to configure a preinstalled operating system, you can skip this section and go to the section for the OS that is preconfigured on your blade.

This section provides information about preparing the blade hard drives for an OS:

Description	Links
Learn about the host bus adapters supported for the blade.	"Supported Host Bus Adapters" on page 51
Create a volume and set a boot drive (if needed) for the HBA.	"Prepare the Storage Drives (Oracle System Assistant)" on page 54
Make a virtual drive bootable for the SAS6-R-REM-Z HBA	"Make a Virtual Drive Bootable (LSI WebBIOS Utility)" on page 57

Supported Host Bus Adapters

The following sections contain information about the options for preparing hard drives. Go to the section that corresponds to the HBA that is installed on your blade:

- "SG-SAS6–REM-Z Host Bus Adapter" on page 52
- "SG-SAS6–R-REM-Z Host Bus Adapter" on page 53

SG-SAS6–REM-Z Host Bus Adapter

If you have the Sun Storage 6 Gb SAS REM HBA (SG-SAS6–REM-Z) host bus adapter (HBA) installed on your blade, this section contains information to help you prepare a storage drive for OS installation.

Note – For a drive connected to the SG-SAS6–REM-Z HBA, you can install the operating system on an individual disk without creating a RAID volume. The disk will show up in the system BIOS as a bootable disk. However, if you want to create a RAID volume with the disk before installing an operating system, follow the instructions in this section.

The following options are available for creating a RAID volume:

- "Oracle System Assistant" on page 52
- "LSI SAS 2 BIOS Configuration Utility" on page 52

Oracle System Assistant

Oracle System Assistant is the easiest way to create a RAID 0 volume. The following table shows the name that Oracle System Assistant uses for the HBA and support for the HBA in Oracle System Assistant.

Oracle System Assistant Name	Support in Oracle System Assistant
SGXSAS6INTZ	• Supports RAID 0 with two or more hard drives • Cannot display or set a bootable drive • Cannot display the state of a disk (good/bad/hotspare)

See "Prepare the Storage Drives (Oracle System Assistant)" on page 54

LSI SAS 2 BIOS Configuration Utility

The LSI SAS2 BIOS Configuration Utility resides in the HBA firmware.

You can use the LSI SAS2 BIOS Configuration Utility to create a RAID volume before installing and OS for the following reasons:

- You want to create a RAID volume before installing the OS on the disk.
- The blade does not have Oracle System Assistant or you prefer not to use Oracle System Assistant.

- You want to create RAID volume level 1 or 10 using the drives that you want to install the OS on (Oracle System Assistant supports only RAID 0 for the SG-SAS6–REM-Z).

The following LSI document has instructions for creating a volume with the LSI SAS2 BIOS Configuration Utility: *SAS Integrated RAID Solutions User's Guide*. This document is available at:

`http://www.lsi.com/sep/Pages/oracle/sg_x_sas6-rem-z.aspx`

SG-SAS6–R-REM-Z Host Bus Adapter

If you have the Sun Storage 6 Gb SAS REM RAID HBA (SG-SAS6–R-REM-Z) HBA installed on your blade, this section contains information to help you prepare a storage drive for OS installation.

Note – When using the SG-SAS6–R-REM-Z HBA, you *must* create a volume before installing an OS. The system BIOS does not recognize a drive connected to SG-SAS6–R-REM-Z unless it is part of a volume. If there is more than a single volume on the HBA, the volume that the OS will be installed on must be set as the boot device.

The following options are available for preparing the storage drive:

- "Oracle System Assistant" on page 53
- "LSI WebBIOS Configuration Utility" on page 54

Oracle System Assistant

Oracle System Assistant is the easiest way to prepare the disk for operating system installation. The following table shows the name that Oracle System Assistant uses for the HBA and support in Oracle System Assistant.

Oracle System Assistant Name	Support in Oracle System Assistant
Sun Storage 6 Gb SAS PCIe RAID HBA	• Supports RAID 0 with one or more hard drives or RAID 1 with two or more hard drives per volume • Can set volume as a boot device • Can display if a volume is the boot device • Can display the state of a disk (good, bad, hotspare)

See "Prepare the Storage Drives (Oracle System Assistant)" on page 54

LSI WebBIOS Configuration Utility

The LSI WebBIOS Configuration Utility resides on the HBA firmware.

You can use the LSI WebBIOS Configuration Utility to prepare the storage drive for the following reasons:

- The blade does not have Oracle System Assistant or you prefer not to use Oracle System Assistant.
- You want to create a RAID volume level 5, 6, 10, 50, 60 using the disk on which you plan to install the OS (Oracle System Assistant supports only RAID 0 and 1 for SAS6–R-REM-Z).

See the following high-level steps for preparing the storage drives for OS installation using the LSI WebBIOS Configuration utility:

1. Create one or more RAID volumes (virtual drives).

   See *MegaRAID SAS Software User's Guide* (link on the web page is Software User's Guide) This document is available at:

   `http://www.lsi.com/sep/Pages/oracle/sg_x_sas6-r-rem-z.aspx`

2. If you create more than one virtual drive, select one virtual drive as the boot volume. See "Make a Virtual Drive Bootable (LSI WebBIOS Utility)" on page 57

   The *MegaRAID SAS Software User's Guide* does not include instructions for making a drive bootable.

▼ Prepare the Storage Drives (Oracle System Assistant)

You can use the Oracle System Assistant RAID Configuration task to prepare the blade hard drives for an OS installation. The task enables you to create a bootable volume using RAID 0 for SGXSAS6INTZ and RAID 0 or 1 for SG-SAS6?R-REM-Z.

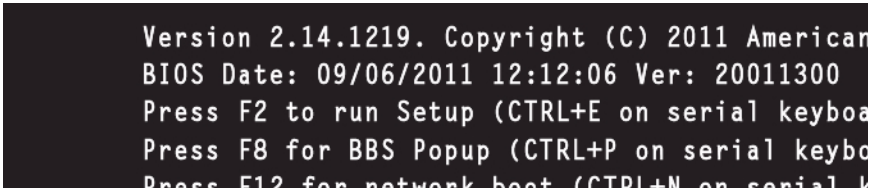
Oracle System Assistant supports two disk controllers. RAID configuration is different for each one. Use this procedure to prepare the hard disks for OS installation.

- Set up your installation method:

- For information about how to set up the cabling to run Oracle System Assistant locally, see "Cabling the Blade" on page 17
- For information about how to set up the Oracle ILOM Remote Console, see "Accessing the Blade Console Through Oracle ILOM" on page 39

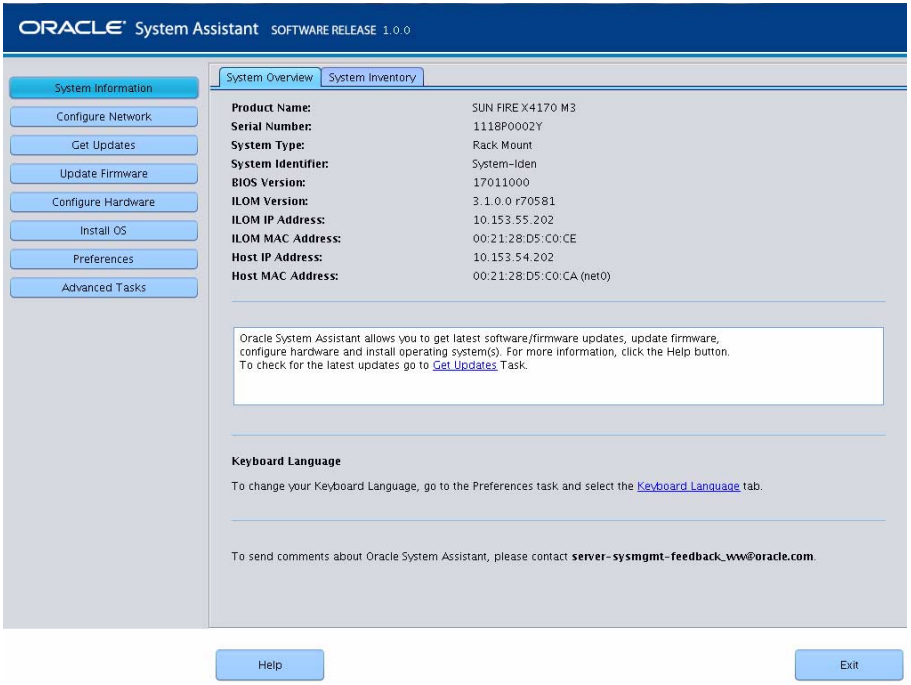
- Review supported HBAs. (See "Supported Host Bus Adapters" on page 51.)

1. **Ensure that the blade is in standby power mode.**
2. **Boot the blade and watch the video monitor or Remote Console screen for the prompt to press the F9 key to start Oracle System Assistant.**



3. **When the prompt is displayed, press the F9 key.**

   The Oracle System Assistant System Overview screen is displayed.



4. **Click Configure Hardware.**

   The Configure Hardware RAID Configuration screen is displayed.

5. **From the HBA drop-down list, select the host bus adapter (HBA).**

   Netra Blade X3-2B supports the following storage drive controllers:

   - SG-SAS6–REM-Z
   - SG-SAS6–R-REM-Z

   For more information about supported HBAs, see "Supported Host Bus Adapters" on page 51

6. **Select the RAID level.**

   Oracle System Assistant supports only RAID 0 and 1.

7. **From the list in the Available Disks section, select the disks to include in the volume.**

8. **Click Create Volume.**

   After the volume is created, the volume is displayed in the list in the Created Volumes section.

9. **Click Volume Details.**

   Type a name for the volume.

10. **For the SG-SAS6–R-REM-Z HBA (Sun Storage 6 Gb SAS PCIe RAID HBA), set the volume as bootable.**

    - **In the Created Volumes section, select the volume that you just created.**
    - **Click Set Volume for Boot.**

Note – You do not need to set the boot disk for the SG-SAS6–REM-Z HBA The system BIOS automatically recognizes the disk as bootable.

---

11. **Install an OS using the instructions in the appropriate OS installation guide:**

    - *Netra Blade X3-2B Installation Guide for ESX Software*
    - *Netra Blade X3-2B Installation Guide for Linux Operating Systems*
    - *Netra Blade X3-2B Installation Guide for the Oracle Solaris Operating System*
    - *Netra Blade X3-2B Installation Guide for Oracle VM Operating System*
    - *Netra Blade X3-2B Installation Guide for Windows Operating Systems*

▼ Make a Virtual Drive Bootable (LSI WebBIOS Utility)

Use this procedure to make a virtual drive bootable when you have created more than one virtual drive (RAID volume) with an SG-SAS6–R-REM-Z HBA using the LSI BIOS Configuration Utility.

You do *not* need to follow this procedure if any of the following is true:

- You used Oracle System Assistant to create a volume and make the volume bootable.
- You have an SG-SAS6–REM-Z HBA.
- You have created only one virtual drive using the LSI BIOS Configuration Utility.

Create at least one virtual drive on the SG-SAS6–R-REM-Z HBA using the LSI BIOS Configuration Utility.

1. **Ensure the blade is in standby power mode.**
2. **Access the WebBIOS main menu in the LSI SG-SAS6–R-REM-Z HBA BIOS.**

Note – If you just finished creating a virtual drive, you might already be at the WebBIOS screen. If you have exited the WebBIOS utility, follow Step 2 and Step 3 to reach the WebBIOS main menu.

- If your system BIOS is running in Legacy mode:

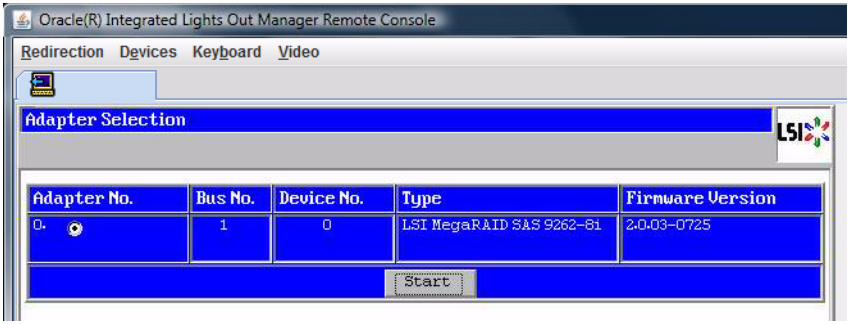
  a. **Boot the system, watch the messages as they appear on the screen, and wait for the LSI banner.**

  b. **When prompted on the banner page, press the Control+H key combination.**

- If your system BIOS is running in UEFI mode, access the LSI BIOS through the system BIOS Setup utility.

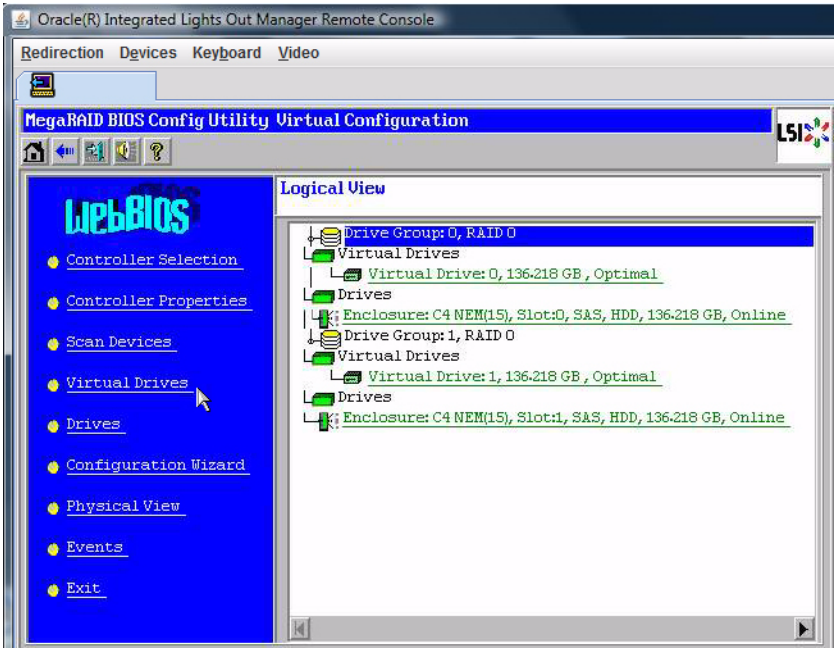
  See the *Netra Blade X3-2B Administration Guide* for more information.

The Adapter Selection screen is displayed.



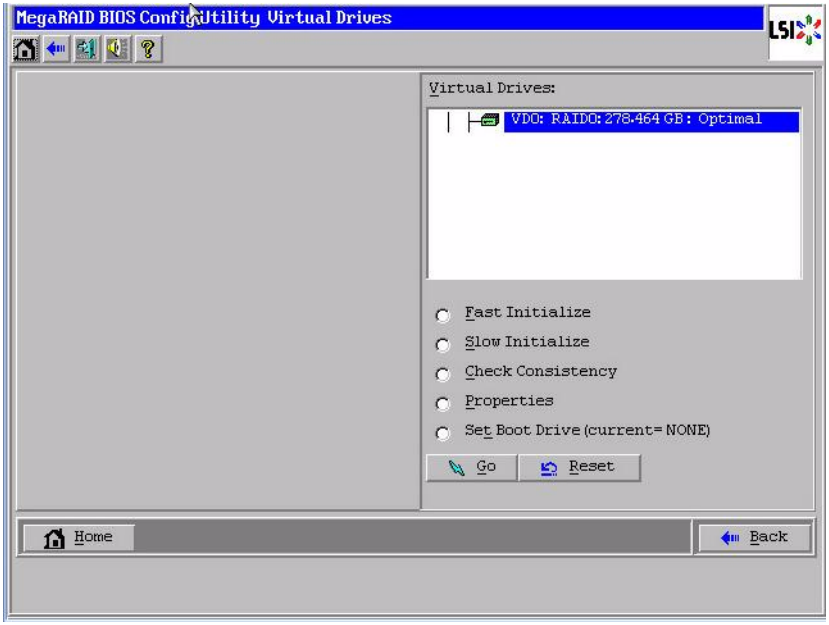
3. **In the Adapter Selection screen, click Start.**

   The MegaRAID BIOS Configuration Utility Virtual Configuration screen is displayed.



4. **In the LSI BIOS Config Utility Virtual Configuration screen, click Virtual Drives.**

   The Virtual Drives screen is displayed.



5. **Select the virtual drive that you want to make bootable.**
6. **Click Set Boot Drive, then click Go.**

   When the operation is successfully completed, the Set Boot Drive value for this virtual drive shows (current=selected VD).
7. **Install an OS using the instructions in the appropriate OS installation guide:**
   - *Netra Blade X3-2B Installation Guide for ESX Software*
   - *Netra Blade X3-2B Installation Guide for Linux Operating Systems*
   - *Netra Blade X3-2B Installation Guide for the Oracle Solaris Operating System*
   - *Netra Blade X3-2B Installation Guide for Oracle VM Operating System*
   - *Netra Blade X3-2B Installation Guide for Windows Operating Systems*

Configuring the Preinstalled Oracle Solaris OS

If you purchased an optional preinstalled Oracle Solaris OS image for your blade, finish the installation by configuring the preinstalled Solaris OS. The Solaris OS image contains all of the necessary drivers for your blade model.

Note – See the supported operating systems section in *Netra Blade X3-2B Product Notes* for information about available versions of preinstalled Oracle operating systems.

The following table describes the tasks necessary for configuring the preinstalled Oracle Solaris OS.

Step	Task	Link
1	Review the Solaris OS documentation.	"Oracle Solaris OS Documentation" on page 61
2	Fill out the configuration worksheet for your blade environment.	"Configuration Worksheet" on page 62
3	Configure preinstalled Oracle Solaris.	"Configure Preinstalled Oracle Solaris 11" on page 65

Oracle Solaris OS Documentation

For information about using your Oracle Solaris operating system, go to:
http://www.oracle.com/technetwork/server-storage/solaris11/documentation/index.html

Configuration Worksheet

Gather the following information, and have it ready for when you begin the configuration process. You need to collect only the information that applies to your organization and network environment.

Required Installation Information	Description	Your Answers—an asterisk (*) identifies the default
Language	Select from the list of available languages for the OS.	English*
Locale	Select your geographic region from the list of available locales.	English (C - 7-bit ASCII)*
Terminal	Select the type of terminal that you are using from the list of available terminal types.	
Network connection	Is the system connected to a network?	• Networked • Non-networked*
DHCP	Can the system use Dynamic Host Configuration Protocol (DHCP) to configure its network interfaces?	• Yes • No*
If you are not using DHCP, supply the network information	Supply a static IP address for the system. Example: 129.200.9.1	
	Supply the netmask of the subnet. Example: 255.255.0.0	255.255.0.0*
	Enable IPv6 on this machine?	• Yes • No*
Host name	Choose a host name for the system.	
Kerberos	Do you want to configure Kerberos security on this machine? If yes, gather this information: • Default realm • Administration server • First KDC • Additional KDCs (optional)	• Yes • No*

Required Installation Information	Description	Your Answers—an asterisk (*) identifies the default
Name service	If applicable, which name service should this system use?	• NIS+ • NIS • DNS • LDAP • None*
	Provide the name of the domain in which the system resides.	
	If you chose NIS+ or NIS, do you want to specify a name server, or let the installation program find one?	• Specify one • Find one*
	If you chose DNS, provide the 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:	
	If you chose LDAP, provide the following information about your LDAP profile: • Profile name • Profile server If you specify a proxy credential level in your LDAP profile, gather the following information: • Proxy-bind Distinguished Name • Proxy-bind password	

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

Related Information

- "Configure Preinstalled Oracle Solaris 11" on page 65

▼ Configure Preinstalled Oracle Solaris 11

Gather the necessary organizational and network environment information needed to configure the OS. See "Configuration Worksheet" on page 62

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

   See "Logging In to Blade SP Oracle ILOM" on page 35

2. **Power on or restart the blade:**

   - To power on the blade use *one* of the following methods:
     - From the Oracle ILOM web interface, click Host Management > Power Control, and then select Power On from the menu.
     - From the Oracle ILOM CLI, type the following command from the Oracle ILOM prompt:

       -> **start /System**

       When prompted, type **y** to confirm:

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

   - To restart the blade, use *one* of the following methods:
     - From the Oracle ILOM web interface, click Host Management > Power Control, and then select Reset from the menu.

       See "Connect to the Blade (Remote Console)" on page 40 for more information about connecting to the Oracle ILOM console web interface.
     - From the Oracle ILOM CLI, type the following command from the Oracle ILOM prompt:

       -> **reset /System**

       When prompted, type **y** to confirm:

```
Are you sure you want to reset /System (y/n)? y
Performing hard reset on /System
```

   The blade begins the host boot process.

   See "Connect to the Blade (Serial Console)" on page 40 for more information about connecting to the Oracle ILOM console CLI.

3. **From Oracle ILOM, start the host console using *one* of the following methods:**

   - From the Oracle ILOM web interface, click Remote Control > Launch Remote Console.

     After the blade boots, the GRUB menu is displayed.

   - From the Oracle ILOM CLI, type:

     ```
     -> start /HOST/console
     ```

     When prompted, type **y** to confirm:

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

After the blade boots, the GRUB menu is displayed.

Note – If you do not press a key within 10 seconds, the default selection (serial port) will be used. Press the up or down arrow to pause at the GRUB menu.

```
GNU GRUB Version 0.97 (607K lower / 2087168K)
Oracle Solaris 11 11/11 X86 - Serial Port (ttya)
Oracle Solaris 11 11/11 X86 - Graphics Adapter
```

4. **From the GRUB menu, use the up and down arrow keys to select a display option, and press Enter.**

   You can choose whether you want to continue to direct the display to the serial port or direct the display to a device connected to the video port.

   - To display output to the serial port:

```
Oracle Solaris 11 11/11 X86 - Serial Port (tty)
```

   - To display output to the video port:

```
Oracle Solaris 11 11/11 X86 - Graphics Adapter
```

Note – If you choose to display output to the video port, you must connect a VGA display and input device (USB keyboard and mouse) to a multiport (dongle) cable attached to the blade's UCP port. See "Cabling the Blade" on page 17

---

5. **Follow the Oracle Solaris 11 installer onscreen prompts to configure the software using the information you collected earlier about your organization and network environment.**

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

6. **When installation is complete, end your console session using *one* of the following methods:**
   - From the Oracle ILOM web interface, close the Remote Console window, and then log out of Oracle ILOM.
   - From the Oracle ILOM CLI, press Esc followed by the (character (Shift+9), then log out of Oracle ILOM.

Related Information

- "Oracle Solaris OS Documentation" on page 61
- "Configuration Worksheet" on page 62

Configuring Preinstalled Oracle VM Software

If you purchased an optional preinstalled Oracle VM software image on your blade, finish the installation by configuring the preinstalled software. The pre-installed software image contains all of the necessary drivers for your server model.

Note – See the supported operating systems section in *Netra Blade X3-2B Product Notes* for information about available versions of Oracle pre-installed operating systems.

The following table describes the tasks necessary for configuring the pre-installed Oracle VM.

Step	Task	Link
1	Fill out the Oracle VM Server configuration worksheet for your blade environment.	"Oracle VM Server Configuration Worksheet" on page 70
2	Configure preinstalled Oracle VM software.	"Configure the Preinstalled Oracle VM Server" on page 71
3	Update the Oracle VM software.	"Updating Oracle VM Software" on page 74
4	Use the Oracle VM operating system.	"Getting Started With Oracle VM" on page 74

Oracle VM Server Configuration Worksheet

Gather the following information and have it ready for when you begin the configuration process. You need to collect only the information that applies to your organization and network environment.

Required Installation Information	Description	Your Answers
Oracle VM Server passwords	• Choose a root password; there are no restrictions on the characters or length. • Choose an Oracle VM agent password; password must be at least six characters.	
Network interface	Supply the interface to be used to manage the server.	
Network configuration	Supply the IP address for the server. *A static IP address is required.* Example: 172.16.9.1 If the server is part of a subnet, supply the netmask of the subnet. Example: 255.255.0.0 If the server is accessed through a gateway, supply the IP address of the gateway. Supply the IP address for the domain name server (DNS). *One (and only one) DNS is required.*	
Host name	Supply the fully qualified domain name for the server. Example: *hostname*.oracle.com	

Related Information

- "Configure the Preinstalled Oracle VM Server" on page 71

▼ Configure the Preinstalled Oracle VM Server

These instructions describe how to configure only the preinstalled Oracle VM Server on your blade. Oracle VM also has other components, such as Oracle VM Manager, that must be installed or already up and running to support the virtual machine environment.

Gather the necessary organizational and network environment information needed to configure the software. See "Oracle VM Server Configuration Worksheet" on page 70

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

   See "Logging In to Blade SP Oracle ILOM" on page 35

2. **From Oracle ILOM, start the host console using *one* of the following methods:**

   - From the Oracle ILOM web interface, click Remote Control > Launch Remote Console.

     After the blade boots, the GRUB menu is displayed.

     See "Connect to the Blade (Remote Console)" on page 40

   - From the Oracle ILOM CLI, type:

     ```
     -> start /HOST/console
     ```

     When prompted, type **y** to confirm:

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

     After the blade boots, the GRUB menu is displayed.

     See "Connect to the Blade (Serial Console)" on page 40

Note – If you do not press a key within five seconds, the default selection (serial port) will be used. Press the up or down arrow to pause at this menu.

---

3. **Power on or restart the blade:**

   - To power on the blade use *one* of the following methods:
     - From the Oracle ILOM web interface, click Host Management > Power Control, and then click Power On from the menu.

- From the Oracle ILOM CLI, type the following command from the Oracle ILOM prompt:

  -> **start /System**

  When prompted, type **y** to confirm:

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

- To restart the blade, use *one* of the following methods:
  - From the Oracle ILOM web interface, click Host Management > Power Control, and then select Reset from the menu.
  - From the Oracle ILOM CLI, type the following command from the Oracle ILOM prompt:

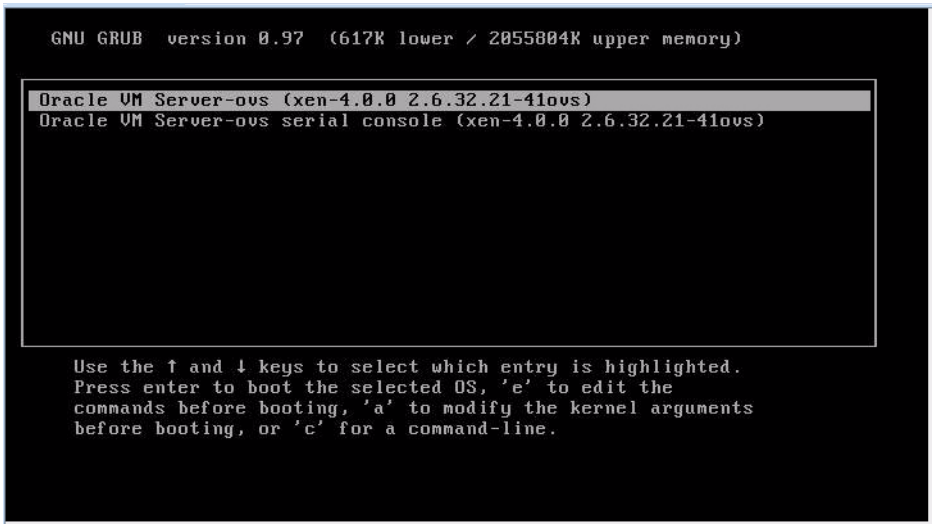
    -> **reset /System**

    When prompted, type **y** to confirm:

```
Are you sure you want to reset /System (y/n)? y
Performing hard reset on /System
```

The blade begins the host boot process. After the blade boots, the GRUB menu is displayed.

Note – If you do not press a key within five seconds, the GRUB menu disappears from the screen and the display is by default directed to the serial port. To pause at the GRUB menu, press any key other than Enter. Then select the option you want to use and press Enter to continue.



4. **From the GRUB menu, use the up and down arrow keys to select a display option, and press Enter.**
   - To display output to the video port, select the first option on the list and press Enter:

```
Oracle VM Server - ovs (xen-4.0.0 2.6.32.32-41ovs)
```

   - To display output to the serial port, select the second option on the list and press Enter:

```
Oracle VM Server - ovs serial console (xen-4.0.0
2.6.32.21-41ovs)
```

Note – If you choose to display output to the video port, you must connect a VGA display and input device (USB keyboard and mouse) to a multiport (dongle) cable attached to the blade's UCP port. See "Connecting to Oracle ILOM" on page 23

---

5. **Follow the Oracle VM installer onscreen prompts to configure the software using the organization and network information you collected earlier.**
6. **When installation is complete, end your console session using *one* of the following methods:**
   - From the Oracle ILOM web interface, close the Remote Console window, and then log out of Oracle ILOM.

- From the Oracle ILOM CLI, press Esc followed by the (character (Shift+9) to terminate the serial redirect session, and then log out of Oracle ILOM.

7. **Update your Oracle VM software, if necessary.**

   See "Updating Oracle VM Software" on page 74

Related Information

- Obtaining Oracle VM Server software: http://edelivery.oracle.com/linux
- Obtaining Oracle VM Templates: http://www.oracle.com/technetwork/server-storage/vm/templates-101937.html

Updating Oracle VM Software

If you use the Oracle VM Server software that is preinstalled on your system, you must ensure that it is compatible with the version of Oracle VM Manager that you use to manage your Oracle VM infrastructure. If necessary to achieve compatibility, upgrade your Oracle VM Server or Oracle VM Manager so that they are the same version.

For information about upgrading the Oracle VM software, see the Oracle VM documentation at the following web sites:

http://www.oracle.com/technetwork/documentation/vm-096300.html

http://download.oracle.com/docs/cd/E20065_01/index.htm

Getting Started With Oracle VM

For complete information about using Oracle VM, see the Oracle VM documentation available at the following location:

http://www.oracle.com/technetwork/documentation/vm-096300.html

http://download.oracle.com/docs/cd/E20065_01/index.htm

Here are some tips on setting up your Oracle VM environment:

- Two VMs are installed on the blade as part of the preinstalled software configuration process: Oracle Solaris and Oracle Linux.

- The default root password for the Oracle Linux VM is `ovsroot`.

  You configure the root password for the Oracle Solaris VM as part of the Oracle Solaris installation procedure.

- The default console password for both VMs is `oracle`.

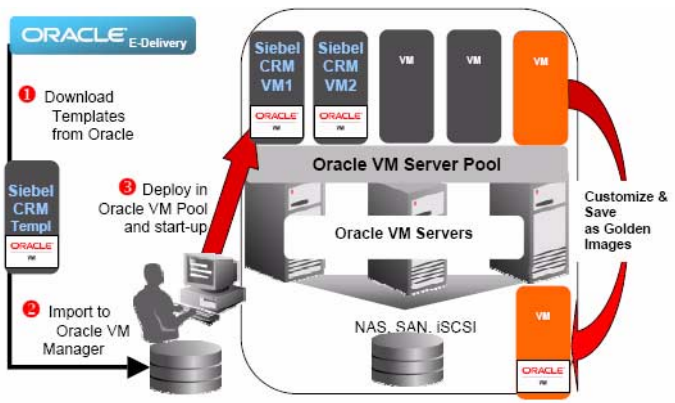
- Adding your blade to an existing server pool or creating a new one.

  In a typical Oracle VM deployment, multiple Oracle VM Servers are grouped into server pool. Every server has access to external shared storage. With Oracle VM Server software pre-installed, you can quickly place your blade in a pool with shared storage.

  For Oracle VM 3.0, more information about storage and server pools can be found in the Oracle VM documentation.

- Downloading and installing the appropriate Oracle VM Templates for your guest VMs.

  Oracle provides templates that can be used to easily deploy a prebuilt, preconfigured, pre-patched guest virtual machine (or multiple machines depending on the application). Templates are downloaded from Oracle and deployed through Oracle VM Manager.



  Templates can contain a complete Oracle software solution, such as Siebel CRM or Oracle Database, including the operating system (Oracle Enterprise Linux) and internally developed or third-party software. Templates can also be customized for your specific environment. For more information, go to:

  `http://www.oracle.com/technetwork/server-storage/vm/templates-101937.html`

Related Information

- "Oracle VM Server Configuration Worksheet" on page 70
- "Configure the Preinstalled Oracle VM Server" on page 71

Troubleshoot Installation Issues

This section describes how to troubleshoot installation issues.

The following table describes the tasks related to troubleshooting the blade.

Task	Link
Power off the blade for orderly shutdown.	"Powering Off the Blade for Graceful Shutdown" on page 77
Power off the blade for emergency shutdown. **Note -** If you use any of these procedures to shut down the blade, any unsaved data will be lost.	"Powering Off the Blade for Immediate Shutdown" on page 79
Reset the blade.	"Resetting the Blade" on page 81
Identify server faults.	"Identifying Blade Faults" on page 82
Troubleshoot blade power states.	"Troubleshooting Blade Power States" on page 82
Record blade information before contacting Service.	"Technical Support Information Worksheet" on page 84
Locate the system serial number before contacting Service.	"Locating the System Serial Number" on page 84

Powering Off the Blade for Graceful Shutdown

Use the procedures in one of the following sections to perform an orderly shutdown. These procedures cause ACPI-enabled operating systems to perform an orderly shutdown of the operating system. Blades not running ACPI-enabled operating systems shut down to standby power mode immediately.

- "Use the Power Button" on page 78
- "Use the Oracle ILOM (CLI)" on page 78
- "Use the Oracle ILOM (Web)" on page 79

▼ Use the Power Button

- **Press and release the Power button on the front panel of the blade.**

Note – To completely power off the blade, you must remove the blade from the chassis.

Related Information

- "Resetting the Blade" on page 81
- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84

▼ Use the Oracle ILOM (CLI)

1. **Log in to the Oracle ILOM CLI for the blade SP or CMM.**
2. **Use one of the following commands for orderly system shutdown:**
   - From the blade SP CLI, use the following command:

     `stop /System`
   - From the CMM CLI, use the following command:

     `stop /CH/BL`*n*`/System`

     where *n* is the chassis slot that the blade is installed in.

Related Information

- "Resetting the Blade" on page 81
- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84
- "Locating the System Serial Number" on page 84

▼ Use the Oracle ILOM (Web)

1. **Log in to the Oracle ILOM web interface for the blade SP or CMM.**
2. **Click Host Management > Power Control.**

   The Power Control page is displayed.
3. **Use one of the following commands for orderly system shutdown:**
   - From the blade SP web interface Actions menu, select Graceful Shutdown and Power Off.
   - From the CMM web interface, click the radio button next to /CH/BL*n*/System, and select Graceful Shutdown and Power Off from the Actions list.

     Where *n* is the chassis slot that the blade is installed in.

Related Information

- "Resetting the Blade" on page 81
- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84

Powering Off the Blade for Immediate Shutdown

Use one of the following procedures to perform an emergency shutdown. This method will cause unsaved data on the blade to be lost.

- "Use the Power Button" on page 79
- "Use the Oracle ILOM (CLI)" on page 80
- "Use the Oracle ILOM (Web)" on page 80

▼ Use the Power Button

Caution – Immediate shutdown will cause unsaved data on the blade to be lost.

- **Press and hold the Power button for five seconds to force power off and to enter standby power mode.**

Note – To completely power off the blade, you must remove the blade from the chassis.

Related Information

- "Resetting the Blade" on page 81
- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84

▼ Use the Oracle ILOM (CLI)

Caution – Immediate shutdown will cause unsaved data on the blade to be lost.

1. **Log in to the Oracle ILOM CLI for the blade SP or CMM.**
2. **Use one of the following commands for orderly system shutdown:**
   - From the blade SP CLI, use the following command:

     `stop –force /System`
   - From the CMM CLI, use the following command:

     `stop -force /CH/BL`*n*`/System`**

     where *n* is the chassis slot that the blade is installed in.

Related Information

- "Resetting the Blade" on page 81
- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84
- "Locating the System Serial Number" on page 84

▼ Use the Oracle ILOM (Web)

Caution – Immediate shutdown will cause unsaved data on the blade to be lost.

1. **Log in to the Oracle ILOM web interface for the blade SP or CMM.**

2. **Click Host Management > Power Control.**

   The Remote Power Control page is displayed.

3. **Use one of the following commands for orderly system shutdown:**
   - From the blade SP web interface, select Immediate Power Off from the Actions list.
   - From the CMM web interface, click the radio button next to /CH/BL*n*/System, and select Immediate Power Off from the Actions list.

     where *n* is the chassis slot that the blade is installed in.

Related Information

- "Resetting the Blade" on page 81
- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84

Resetting the Blade

It is not necessary to power the blade off and on to simply reset the blade.

The procedures in the following sections describe how to reset the blade.

- "Use the Oracle ILOM CLI to Reset the Blade" on page 81
- "Use the Oracle ILOM Web Interface to Reset the Blade" on page 82

▼ Use the Oracle ILOM CLI to Reset the Blade

1. **Log in to the Oracle ILOM CLI for the blade or CMM.**
2. **Use one of the following commands for orderly system shutdown:**
   - From the blade SP CLI, use the following command:

     `reset /System`
   - From the CMM CLI, use the following command:

     `reset /CH/BL`*n*`/System`**

     where *n* is the chassis slot that the blade is installed in.

Related Information

- "Troubleshooting Blade Power States" on page 82

- "Technical Support Information Worksheet" on page 84

▼ Use the Oracle ILOM Web Interface to Reset the Blade

1. **Log in to the Oracle ILOM web interface for the blade SP or CMM.**
2. **Click Host Management > Power Control.**

   The Power Control page is displayed.
3. **Use one of the following commands for orderly system shutdown:**
   - From the blade SP web interface, select Reset from the Actions menu.
   - From the CMM web interface, click the radio button next to /CH/BL*n*, and select Reset from the Actions list.

     where *n* is the chassis slot that the blade is installed in.

Related Information

- "Troubleshooting Blade Power States" on page 82
- "Technical Support Information Worksheet" on page 84
- "Locating the System Serial Number" on page 84

Identifying Blade Faults

If the Server Action Required LED lights when the blade is powered on, check Oracle ILOM for system faults.

For more information about identifying blade faults, see the *Netra Blade X3-2B Service Manual*.

Troubleshooting Blade Power States

Each time a blade powers on in a Sun Netra 6000 modular system, it queries the CMM to ensure that there is enough power available from the power supply units (PSUs) to power on the blade.

If there is not enough power to power on the blade, the CMM prevents the blade from receiving main power. If this situation occurs, the OK/Power LED on the front panel of the blade remains at standby blink.

To troubleshoot this power issue, follow these guidelines:

- Review the Oracle ILOM event log messages to determine whether the blade has permission to power on. An event message is recorded in the log any time there is inadequate amount of power available from the chassis PSUs to power on a blade.

  For more information about the Oracle ILOM event log or monitoring power consumption, see the Oracle Integrated Lights Out Manager (ILOM) 3.1 documentation library.

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

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

- To avoid power loss, use the *default* CMM power management settings in Oracle ILOM for power supplies.

  For more information about power management, see the Oracle ILOM 3.1 documentation.

Note – When power-on permissions become available, the OK/Power LED on the front panel of the blade illuminates a standby blink.

- As needed, see the *Oracle x86 Server Diagnostics Guide* for instructions on how to run the start up diagnostic tools provided with the blade.

Related Information

- "Powering Off the Blade for Graceful Shutdown" on page 77
- "Powering Off the Blade for Immediate Shutdown" on page 79
- "Technical Support Information Worksheet" on page 84
- "Locating the System Serial Number" on page 84

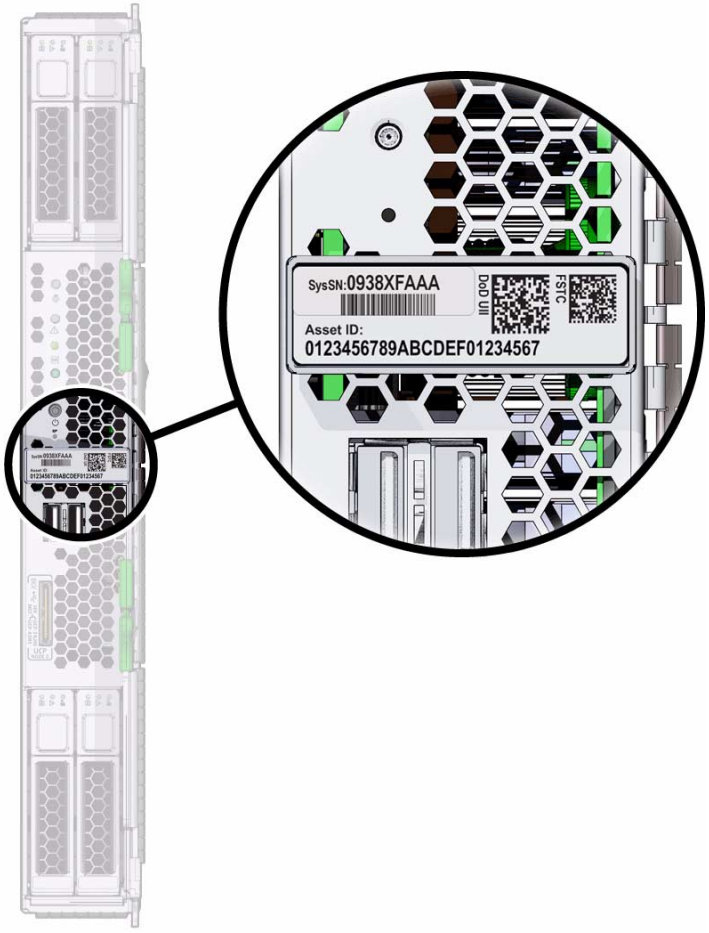
Technical Support Information Worksheet

If the troubleshooting information fails to solve your problem, use the following table to collect information that you might need to communicate to the support personnel.

System Configuration Information Needed	Your Information
Service contract number	
System model	
Operating system	
System serial number	
Peripherals attached to the system	
Email address and phone number for you and a secondary contact	
Street address where the system is located	
Superuser password	
Summary of the problem and the work being done when the problem occurred	
IP address	
Server name (system host name)	
Network or Internet domain name	
Proxy server configuration	

Locating the System Serial Number

If you ever need Oracle warranty support for your blade, you must have your serial number. The serial number is located on a label on the front panel of the blade.



Also, you might need the chassis serial number.

Note – The blade and chassis serial number can also be viewed from the Oracle ILOM CMM. For more information about using Oracle ILOM CMM, see "Oracle ILOM Overview" on page 23

To view support and warranty information for your product, go to:

`http://support.oracle.com`

Related Information

- "Additional Components" on page 12

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