

Sun Netra 6000 Modular System

Product Notes



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Using This Documentation

This document provides late-breaking information and known issues for the Sun Netra 6000 modular system from Oracle:

- “Related Documentation” on page v
- “Feedback” on page vi
- “Support and Accessibility” on page vi

Related Documentation

Documentation	Link
Netra 6000 modular system	http://www.oracle.com/goto/SN6000/docs
Fabric Expansion Modules (FEMs)	http://www.oracle.com/technetwork/documentation/oracle-net-sec-hw-190016.html
RAID Expansion Modules (REMs)	http://www.oracle.com/technetwork/documentation/oracle-storage-networking-190061.html
Network Express Modules (NEMs)	http://www.oracle.com/technetwork/documentation/oracle-blade-sys-190001.html
Oracle Integrated Lights Out Manager (ILOM)	http://www.oracle.com/goto/ILOM/docs
Sun Netra X6270 M2 server module	http://www.oracle.com/pls/topic/lookup?ctx=Sun_Netra_X6270_M2
Netra Blade X3-2B	http://www.oracle.com/pls/topic/lookup?ctx=NetraBladeX3-2B

Documentation	Link
Netra SPARC T5-1B server module	http://www.oracle.com/goto/NETRA-T5-1B/docs
Netra SPARC T4-1B server module	http://www.oracle.com/pls/topic/lookup?ctx=Netra_SPARCT4-1B
Netra SPARC T3-1B server module	http://www.oracle.com/pls/topic/lookup?ctx=Netra_SPARCT3-1B
Oracle Solaris 11 OS	http://www.oracle.com/goto/Solaris11/docs
Oracle Solaris 10 OS	http://www.oracle.com/goto/Solaris10/docs
Oracle VTS software	http://www.oracle.com/goto/VTS/docs
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Late-Breaking Information

These sections provide important information and late-breaking news about the Sun Netra 6000 modular system from Oracle:

- [“NEBS Level 3 Certification”](#) on page 1
- [“Identifying the Netra Chassis Models”](#) on page 2
- [“Supported Products”](#) on page 3
- [“Supported CMM and ILOM Software and Firmware Versions”](#) on page 3
- [“Downloading Software Updates and Patches”](#) on page 5
- [“Available Power and Power Calculator”](#) on page 7
- [“Configuring DC Power Supply Active Inputs”](#) on page 7
- [“Changing NEBS Thermal Thresholds with High-Altitude Mode”](#) on page 8
- [“Known Issues”](#) on page 10

NEBS Level 3 Certification

The Sun Netra 6000 modular system is NEBS Level 3 Certified. The chassis supports both SPARC and x86 based blade server modules and other approved components. The Netra 6000 chassis monitoring module (CMM) software checks the installed blades and only allows the Netra blades to power on.

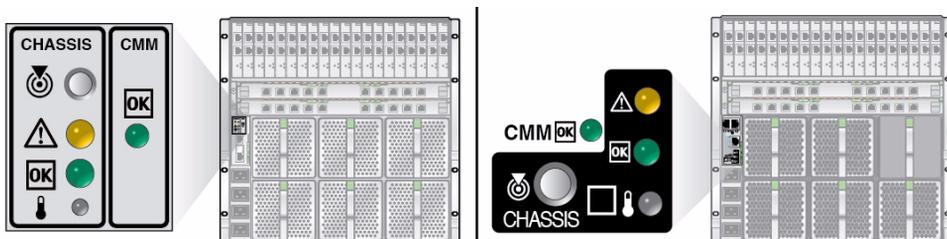
Installation of any Sun Blade 6000 component that is not part of the Sun Netra 6000 NEBS Level 3 Certification negates the NEBS Level 3 Certification and is not supported.

Identifying the Netra Chassis Models

This section also replaces similar information in the service manual. There are four Netra 6000 chassis models. Two are AC and two are DC. Some server modules and some components will only work together in a certain chassis, and that information is also provided in these product notes.

Commercial Sun Blade 6000 Modular System	Netra 6000 Modular System Chassis Marketing Number	CMM ILOM Firmware
A90-B	N6000-AC 594-6438	3.x
A90-B	N6000-DC 594-6726	3.x
A90-D	N6000-AC (M2) 7100418 7068384	4.x
A90-D	N6000-DC (M2) 7100417 7068385	4.x

The most visible difference between the two chassis models is the CMM on the rear of the chassis:



- Left: CMM (501-7379) on the N6000-AC, and N6000-DC chassis
- Right: CMM (511-1531) on the 7100417 and 7100418 chassis
- Right: CMM Product Part Number 7019286 or higher on the 7100417 (DC) chassis and the 7100418 (AC) chassis. (This CMM is required to support the Sun Blade 6000 Virtualized 40GbE Network Express Module)

Supported Products

There are a number of server modules, storage modules, PCIe ExpressModules (PCIe EMs), and Network ExpressModules (NEMs) available for the Sun Netra 6000 modular system.

For information on the supported products, refer to the Sun Netra 6000 Modular System Products web page at:

<https://wikis.oracle.com/display/SystemsComm/Sun+Netra+6000+Modular+System+Products>

Supported CMM and ILOM Software and Firmware Versions

Chassis software containing CMM ILOM firmware is preinstalled at the factory. Always obtain the latest firmware at:

<http://www.oracle.com/technetwork/systems/patches/firmware>

Note – Make sure that you download the software release that is supported with your chassis and server modules.

Note – For a list of supported operating systems, please refer to the specific server module product notes.

Understanding Firmware and Software Updates

The firmware is incorporated into new chassis, blade server module, and network express module (NEM) products at the factory. However, it is updated periodically in packages called either “software updates” or “firmware updates.”

All references to software in these product notes may mean both firmware and software, or software only.

Server Module and CMM Compatibility

This table shows the first supported versions of CMM ILOM 3.x and 4.x software packages for each server module.

Server Module	First Supported Version of Chassis CMM ILOM 3.x Software	First Supported Version of Chassis CMM ILOM 4.x Software
Netra X6270 M2	3.2.2	4.0
Netra SPARC T3-1B	3.2.5	4.0.2
Netra SPARC T4-1B	3.3.3	4.1.1
Netra Blade X3-2B*	3.3.4	4.2
Netra SPARC T5-1B	3.3.6	4.2.2

* Formerly Sun Netra X6270 M3

Patch IDs for Downloading CMM and ILOM Packages

This table shows the patch ID for downloading the CMM and ILOM software.

Netra CMM Software Version	ILOM Software Version	AC Chassis Patch ID	DC Chassis Patch ID
3.3.3	ILOM 3.0.12.11.b	13247351	13247336
3.3.4	ILOM 3.0.12.11.c	13485960	13485957
3.3.5	ILOM 3.0.12.11.d	13939222	13485957
3.3.6	ILOM 3.0.12.11.e	16305726	16305744
3.3.7	ILOM 3.0.12.11.f	18025765	18025776
4.0.2	ILOM 3.0.12.10	12671019	12671023
4.1.1	ILOM 3.0.16.14.a	13543725	13543748
4.2	ILOM 3.1.1.10	13939188	13939201
4.2.2	ILOM 3.1.1.10.b	16305688	16305665
4.2.3	LOM 3.1.1.10.c	18025729	18025742

Server Module Minimum System Firmware Versions

This table shows the minimum system firmware version for the server modules.

Server Module	Old Chassis	Patch	New Chassis	Patch
Netra X6270 M2	Netra 1.0	n/a	Netra 1.0.1	n/a
Netra SPARC T3-1B	Netra 8.2.0	148821-01	Netra 8.1.0	n/a
Netra SPARC T4-1B	Netra 8.1.3.a	147291-02	Netra 1.1 (8.2.0.a)	n/a
Netra Blade X3-2B*	Netra 1.0	138989966	Netra 1.0	138989966
Netra SPARC T5-1B	Netra 9.0.0.c	n/a	Netra 9.0.0.c	n/a

* Formerly Sun Netra X6270 M3

Downloading Software Updates and Patches

Patches and software updates are provided on the My Oracle Support site at:

<http://support.oracle.com/>

▼ Find and Download Software Updates

1. **Select a language and click the Sign In button.**
2. **Type your username and password, and click the Go button or press the Return or Enter key.**
3. **Click the Patches & Updates tab.**
The Patch Search menu is displayed.
4. **In the Patch Search menu, click Product or Family (Advanced Search).**
5. **In the Product field, start typing **Netra 6000 chassis** and select **Sun Netra 6000 chassis** on the dropdown menu.**
6. **In the Release field, click the arrow and select the desired Netra 6000 chassis release.**

7. **(Optional) Check the Exclude Superseded Patches box.**
8. **Click the Search button.**

The Netra 6000 patch names and descriptions are displayed in a table.
9. **Click on the desired patch name and select READ ME or Download from the pop-up menu.**

Refer to the patch README for detailed information and installation instructions.
10. **Select Download to download the patch.**

▼ Download Patches

1. **Select a language and click the Sign In button.**
2. **Type your username and password, and click the Go button or press the Return or Enter key.**
3. **Click the Patches & Updates tab.**

The Patch Search menu is displayed.
4. **In the Patch Search menu, select Number/Name or Bug Number (Simple).**
5. **Select Bug Number or Patch Name or Number field from the drop-down menu.**
6. **Either type the patch number or patch numbers separated by a comma, or type the bug number in the adjacent field to the right.**
7. **Click the Search button.**
8. **Click on the patch number and select README or Download from the pop-up menu.**

Refer to the patch README for detailed information and installation instructions.

Available Power and Power Calculator

Available power for the chassis is shown below.

AC Power Supplies				
PS0 Side 1	PS0 Side 2	PS1 Side 1	PS1 Side 2	Available Power with Input and Power Supply Redundancy
3,200 W	3,200 W	3,200 W	3,200 W	6,400 W

DC Power Supplies				
PS0	PS1	PS2	PS3	Available Power with Input and Power Supply Redundancy
2,790 W	2,790 W	2,790 W	2,790 W	8,370 W

The Sun Netra 6000 Modular System power calculator is available at:

<http://www.oracle.com/us/products/servers-storage/sun-power-calculators/calc/netra-6000-power-calculator-519736.html>

Configuring DC Power Supply Active Inputs

Chassis Software Release 3.3, and later, provides a feature that enables you to configure the active inputs of the DC power supplies.

Note – This feature only applies to the DC modular system.

Each DC power supply unit (PSU) has two inputs. The default active input for any PSU is determined by its location in the chassis. By default, PS0 and PS1 use input A, and PS2 and PS3 use input B.

▼ Configure DC Power Supply Active Inputs

You can change the default active inputs as described in the following procedure

1. Log in to the CMM ILOM.

Refer to the *Sun Integrated Lights Out Manager (ILOM) 3.0 Supplement for the Sun Netra 6000 Modular System* for details.

2. Type the command:

```
-> set /CMM/policy N6000_USE_PSn_INPUT_X=action
```

Where:

- *PSn* is PS0, PS1, PS2, or PS3
- *X* is the power supply input, A or B
- *action* is enabled or disabled

Examples:

- Changing the active input for PS0 from A to B

```
-> set /CMM/policy N6000_USE_PS0_INPUT_B=enabled
```

- Changing the active input for PS0 back to A:

```
-> set /CMM/policy N6000_USE_PS0_INPUT_B=disabled
```

Note – These options can also be configured using the CMM ILOM BI under CMM -> configuration -> policy.

Changing NEBS Thermal Thresholds with High-Altitude Mode

The SPARC T4 and T5 series CPUs include an automatic CPU throttling feature. If the CPU detects that temperature is too high, the CPU will reduce speed until the CPU temperature drops to an acceptable level.

Netra systems use a different thermal control mechanism than non-Netra products. The Sun Netra 6000 modular system fan control default allows the chassis to maintain acoustics levels within the NEBS guidelines.

The High-Altitude mode allows you to override the acoustic settings. If you use the High-Altitude mode, the CPUs will run hotter and the fans will automatically speed up. The system noise will exceed NEBS specifications.

If you want to maintain optimal CPU performance at high altitude and cool the Netra system, you must use the High Altitude settings in Netra CMM software version 4.1.1 (or newer). The system fan control policy can be changed either by CMM CLI or with the ILOM GUI.

▼ Change the System Fan Control Policy by CMM Command Line Interface

1. Log in to the CMM ILOM.
2. Change to the policy directory.
3. Enable the High Altitude policy.

```
-> cd /CMM/policy
/CMM/policy
-> pwd
Current default target: /CMM/policy
-> show
  /CMM/policy
  Targets:
  Properties:
  HIGH_ALTITUDE_FAN_POLICY = disabled

-> set HIGH_ALTITUDE_FAN_POLICY=enabled
Set 'HIGH_ALTITUDE_FAN_POLICY' to 'enabled'
```

▼ Change the System Fan Control Policy Using the CMM Graphical User Interface

1. Type the CMM IP address in a browser location bar.
2. Log in.
3. Select CMM in the left column.
4. Select the Configuration tab.
5. Select the Policy sub-tab.
6. Select the radio button for the high altitude fan policy.
7. Select action Enable from the drop down menu at the bottom of the page.

8. Select Yes to the confirmation question in the dialog box.

Known Issues

To check for availability of patches that fix software- and firmware-related issues, go to:

<https://support.oracle.com>

Reseat REMs and FEMs Prior to Installing Server Modules

If you receive server modules with REMs or FEMs preinstalled, or if you move server modules outside of the chassis environment, the REMs or FEMs might become unseated from the server module.

To ensure successful product functionality, reseat all REMs and FEMs before installing the server module into the modular system chassis and before applying power to the server module.

Switched NEM Limitations in NEBS Modular Systems

The following limitations apply to the Sun Blade 6000 Ethernet Switched NEM 24p 10GbE when installed in a Sun Netra 6000 modular system chassis.

- Sun Blade 6000 Ethernet Switched NEM 24p 10GbEs cannot be installed in a Sun Netra 6000 modular system chassis with any other type of NEM. If any other type of NEM is installed in a Sun Netra 6000 modular system chassis, remove those NEMs before installing the Sun Blade Ethernet Switched NEM 24p 10GbE.
- External SAS functionality has been disabled on the Sun Blade 6000 Ethernet Switched NEM 24p 10GbE.
- In NEBS environments, only optical links to QSFP ports on this NEM are supported. Using optical links ensures that NEBS thermal limits are met.

For additional details, refer to the *Sun Blade 6000 Ethernet Switched NEM 24p 10GbE Product Notes*, at:

<http://www.oracle.com/goto/SB6K-24p-10GbE/docs>

Cable Requirements for Sun StorageTek HBA ExpressModule

Sun Netra 6000 modular system configurations that use the Sun StorageTek Dual 8Gb FC Dual GbE HBA ExpressModule (SG-XPCIEFCGBE-Q8-Z) running at 4Gb/sec must use shielded twisted pair (STP) on the card's Ethernet ports to meet regulatory emissions requirements. 8Gb/sec and 2Gb/sec operation may use either shielded twisted pair or unshielded twisted pair.

