Sun Netra CP3270 ATCA Blade Server

Product Notes

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Sun Netra CP3270 ATCA Blade Server Product Notes

This document contains important and late-breaking information about Oracle's Sun Netra CP3270 ATCA blade server. This document includes information about upgrading ATCA software and firmware, including instructions for upgrading to ATCA R3U3.

This document contains the following:

- "Known Issues" on page 2
- "Related Documentation" on page 3
- "Additional Copyright Information" on page 3
- "System Components" on page 4
- "Upgrading Your Firmware and Software" on page 7
- "Installing the Blade Server" on page 12

The most recent versions of the Sun Netra CP3270 ATCA blade server and Sun Netra CT 900 server documentation are available at:

`http://docs.sun.com/app/docs/prod/cp3270.brd?l=en#hic`

`http://docs.sun.com/app/docs/prod/n900.srvr#hic`

Known Issues

The following known issues exist in this release of the Sun Netra CP3270 ATCA blade server hardware and software.

TABLE 1 Known Issues

ID	Problem	Workaround
6902304	During a SunVTS internal loopback test of the `ixgbe` interface on the Sun Netra CP3270, the test may fail and display error messages.	The `netlbtest` with `ixgbe` driver behaves differently when connected to a 1G switch versus a 10G switch. When working properly, `netlbtest` (internal) should not have any dependency on the switch it's connected to. This error has only been observed during internal loopback testing. Please retry the test. If the problem persists, call your authorized Oracle service provider.
6902317	The ixgbe driver does not work with the 1G switch.	1Gbps speeds are not currently supported on the extended fabric interface.
6952407	During a SunVTS external loopback test of either the `igb2` or `igb3` interface on the Sun Netra CP3270, the following error message may appear for the interface being tested: `igb: [ID 611667 kern.warning] WARNING: igb2: Failed to initialize hardware genunix: [ID 408114 kern.info] /pci@0,0/pci8086,3b42@1c/pci108e,450b@0 (igb2) down`	The error is intermittent and has only been observed during SunVTS external loopback testing. Subsequent initialization of the interface as part of SunVTS succeeds, and the SunVTS test will complete without failure. If the failure is seen during an interface plumb, replumb the interface and continue. If the problem persists, please call your authorized Oracle service provider.
6954554	During a SunVTS internal loopback test of `igb`, the loopback test fails.	Stop SunVTS internal loopback test, and let the NIC card work in normal mode.
9916419	Sun Netra CP3270 ATCA blade server panics while attempting to boot xen kernel under OVM 2.2.1.	Add "`cpuidle=off` "to the hypervisor command line in the `grub.conf` file. The fix for this issue is in version xen-3.4.0-0.1.21 (and newer) of hypervisor errata for OVM 2.2.1. After applying the fix, the workaround is no longer needed. Go to `http://linux.oracle.com` to learn how to update Oracle VM Server for x86 via Oracle Unbreakable Linux Network.

Related Documentation

The following documents ship with the blade server:

- *Important Safety Information for Sun Hardware Systems (821-1590)*
- *Sun Netra CP3270 ATCA Blade Server Start Here (821-0076)*

Refer to the *Sun Netra CP3270 ATCA Blade Server Start Here* for information on obtaining the rest of the Sun Netra CP3270 ATCA blade server documentation or go to the following web sites.

http://docs.sun.com/app/docs/prod/cp3270.brd?l=en#hic

http://docs.sun.com/app/docs/prod/n900.srvr#hic

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System Components

This section describes the system-level software and hardware components, required and optional, for the Sun Netra CP3270 ATCA blade server.

Required Software Components

An OS is required to operate the blade server. The Sun Netra CP3270 ATCA blade server has been tested for compatibility with the following OS software:

- Solaris 10 (10/09) Operating System and newer
- Oracle Enterprise Linux v5.5
- Windows 2008 R2

Additional OSs are being tested and will be supported after they are certified.

The Sun Netra CP3270 ATCA blade server supports the Solaris 10 (10/09) OS and subsequent compatible versions, with supported Sun Netra patches. The Solaris OS software can be downloaded from the download center at:

`http://www.sun.com/download`

For information on these versions of the Solaris OS, including installation, see the appropriate Solaris Documentation Collection at:

`http://docs.sun.com/app/docs/prod/solaris`

Note – Users might experience an incomplete download due to the 2.9 GB size of the Solaris 10 `netinstall` image file. If you are using a Mozilla browser, be sure to disable Mozilla's download manager, which prevents larger file downloads. To disable it, choose Edit->Preference->Navigator->Downloads. Next, uncheck the default "Open the download manager option."

After you download the Solaris OS, check the downloaded file to ensure that it downloaded correctly, where *xx* is the version number.

```
# sum Netra_CP3270_S10xx_RR.cpio
1795 5823104 Netra_CP3270_S10xx_RR.cpio
```

For information on the third-party operating systems, see the documentation that came with the operating system.

Refer to the appropriate vendor documentation for more information on your operating system. Web site URLs are as follows.

TABLE 0-1 Third-Party OS Web Sites for Downloading Software

Operating System	Web Site URL
Windows	http://www.windowsservercatalog.com/
Windriver Linux	http://www.windriver.com/products/linux/

Note – At the third-party OS web site, search for "Sun Netra CP3270" to find the download package(s).

Optional Software Components

The following optional software is compatible and supported:

- Oracle VM 2.2.1 (Oracle VM is an integrated virtualization solution to run and deliver the Oracle stack.)
- VMware (VMware is a server virtualization software application: http://www.vmware.com)
- SUSE Linux Enterprise Server (http://www.novell.com/products/server)

Required Hardware Components

The Sun Netra CP3270 ATCA blade server cannot be used as a stand-alone system. It is designed to be used in an ATCA chassis for 8U boards. The minimum hardware requirements needed to use the Sun Netra CP3270 ATCA blade server are as follows:

- ATCA system enclosure for 8U boards (includes shelf, backplane, hub/switch board, shelf manager and power supply)
- Console output device or serial terminal
- Boot device (such as hard drive, network, or Compact Flash card)
- Peripheral device for network access
- IPMC (built in)

- Cables for terminal and network connections
- Sun Netra CT 900 server fan tray upgrade kit (PN 594-4953-01). If you are installing the Sun Netra CP3270 ATCA blade server in a Sun Netra CT 900 server that has lower-speed fan trays, you must upgrade the Sun Netra CT 900 server fan trays to support the additional cooling needs of the Sun Netra CP3270 ATCA blade server. For more information on the Sun Netra CT 900 server fan tray upgrade kit (PN 594-4953-01), see the *Sun Netra CT 900 Server Upgrade Guide* (820-3255).

Caution – You can damage the Sun Netra CP3270 ATCA blade server components if you install the blade server in a chassis that does not provide sufficient cooling. For more information, see the *Sun Netra CP3270 ATCA Blade Server User's Guide* (821-0078).

Note – Use only serial cables that are less than 10 meters in length.

Optional Hardware Components

Oracle provides the following items for customer order:

- Compact Flash card
- AMC cards
- Sun Netra CP32x0 Quad GbE Dual-Fibre Channel, Advanced Rear Transition Module (ARTM-FC)
- Sun Netra CP32x0 10GbE Advanced Rear Transition Module (ARTM-10G)
- Sun Netra CP3240 switch
- Sun Netra CP32x0 SAS Storage Advanced Rear Transition Module (ARTM-HD)

  This ARTM is available in a single HD and a dual HD:

  - Single HD: XCP32X0-RTM-HD1-Z
  - Dual HD: XCP32X0-RTM-HD2-Z

Note – The Netra CP32x0 ARTM is optional and must be ordered separately from the Sun Netra CP3270 ATCA blade server. Different hard drive capacities are available for some ARTMs.

The optional ARTM enables rear system I/O access to the following:

- Network
- Boot device
- Hot-swappable SAS hard disk drives (optional)
- Console terminal

Upgrading Your Firmware and Software

New releases contain the most up-to-date features, enhancements, and bug fixes. Using an earlier release could limit your use of features and enhancements, and could affect your systems with known issues.

For detailed information and upgrade instructions, refer to these Product Notes and to the README files for the blade server and firmware.

Be sure to check for any updates that are available. If you are using Solaris OS, software updates, firmware updates, and support information for the Sun Netra CP3270 ATCA blade server and advanced rear transition modules can be found at the Download Center:

`http://www.sun.com/download`

For information on your specific configuration, contact your local Services representative.

`http://www.sun.com/service/contacting/solution.html`

Note – Be sure to download and install the `nxge` driver patch 138049-04 or newer.

Upgrade ATCA Firmware and Software

A single bundled software and firmware package is available to apply the applicable portions to your chassis and blade servers. To download the release package and upgrade your Sun Netra CP3270 ATCA blade server and Sun Netra CT 900 systems, refer to the Sun Netra CP3270 ATCA blade server README files and *Sun Netra CT 900 Server Product Notes*.

To upgrade your blade servers and Sun Netra CT 900 server at the same time, invoke the `autofwupgrade` command from the ShMM. For instructions, refer to the README and *Sun Netra CT 900 Server Product Notes*.

For users who want manual control of the firmware upgrade process, use upgrade tools such as `upgradefw` and others instead of the ShMM `autofwupgrade`. Refer to the README for instructions.

If you are using a third-party OS, see the applicable vendor's web site for updates.

Apply Solaris OS Patches

This section provides information on the patches that you must download from the SunSolve web site for the Sun Netra CP3270 ATCA blade server and instructions on how to apply these patches. If the Solaris OS was pre-installed on your system, these patches might already be installed; verify that they are present.

Note – Solaris OS patch 143355-02 is required. Download and install this patch with others that are available at the download site.

Note – Refer to the *System Administration Guide: Basic Administration* documentation for the Solaris OS that you are using for more information on managing and applying patches.

There are two types of patches to download:

- *Regular patches* are available on the main SunSolve web site, `http://www.sun.com/sunsolve`. If you specify the base Patch ID number (the first six digits) in the Search SunSolve window, you see the most recent version of the patch.
- *Point patches* are available on the point patch SunSolve web site, `http://www.sun.com/sunsolve/point`. If you specify the base patch ID number (the first six digits) in the SunSolve point patch web page, you can download the most recent version. Always install point patches *after* you have installed the regular patches.

Note – Whenever patches are updated, the revision number increases (117530-02, 117530-03, and so on). To find the latest version of a patch, perform the search without the revision number. For example, if this document asks you to download patch 117530-03, search for "117530" to find the most recent version of the patch.

Before you start downloading, identify or create a directory on your system for receiving the downloaded patches. This directory will be referred to as the *patch-download-dir* in the following procedures.

There are two procedures for downloading and installing patches for the Sun Netra CP3270 ATCA blade server.

- If you are applying patches to a boot device (if you installed Solaris onto an AMC disk, external hard drive, Compact Flash, or other bootable device), go to "Applying Sun Netra Patches to a Boot Device" on page 9.
- If you are applying patches to a network installation image for diskless clients, go to "Applying Sun Netra Patches to a Solaris 10 OS Boot Server for Diskless Clients" on page 10.

Applying Sun Netra Patches to a Boot Device

Following are the instructions for downloading and installing the patches on a boot device.

▼ To Apply Patches to a Boot Device

1. **Go to SunSolve web site and accept the onscreen agreement.**
2. **Locate and download the mandatory Solaris 10 (10/09) OS patches listed in** TABLE 2**.**

TABLE 2 Sun Netra Patches Required for the Solaris 10 OS

Patch ID	Patch Location
126143-01	`http://www.sun.com/sunsolve/`
128593-01	`http://www.sun.com/sunsolve/point`
118843-01	`http://www.sun.com/sunsolve/`
125416-05	`http://www.sun.com/sunsolve/`
142901-14	`http://www.sun.com/sunsolve/`
143355-02	`http://www.sun.com/sunsolve/`

Note – Solaris OS patch 143355-02 is required. Download and install this patch with others that are available at the download site.

3. **Use the `unzip` command on the patches that you downloaded to extract the contents of the downloaded zip files.**

   Refer to the `unzip(1)` man page for additional information.

4. **Review the patch README files for specific Install Instructions and follow those instructions.**

5. **To install a patch, become superuser and type the** `patchadd` **and the full path to the patch.**

```
# patchadd /patch-download-dir/patch-id
```

6. **Perform a** `patchadd` **for each of the patches in the order listed in** Step 2**.**

Caution – You *must* install the patches using the `patchadd` command in the order listed. Some of the patches require software that was added through previous patches, so installing the patches out of order could result in error messages and corrupted software.

Refer to the `patchadd(1M)` man page for instructions on using the command.

Applying Sun Netra Patches to a Solaris 10 OS Boot Server for Diskless Clients

These patches are required for the diskless client boot server installation process documented in the *Sun Netra CP3270 ATCA Blade Server User's Guide* (821-0078).

Note – Refer to the Solaris 10 OS *System Administration Guide: Basic Administration* documentation for more information on managing diskless services.

Following are the instructions for downloading and installing the Sun Netra patches that are being applied to a Solaris 10 OS diskless service.

▼ To Apply Patches to Solaris 10 OS Diskless Clients

1. **If you have not already done so, go to SunSolve web site and download the following mandatory patches listed in the following table.**

TABLE 3 Patches Required for a Solaris 10 Diskless Service

Patch ID	Patch Location
126143-01	`http://www.sun.com/sunsolve/`
128593-01	`http://www.sun.com/sunsolve/point`
118843-01	`http://www.sun.com/sunsolve/`

TABLE 3 Patches Required for a Solaris 10 Diskless Service *(Continued)*

Patch ID	Patch Location
125416-05	http://www.sun.com/sunsolve/
142901-14	http://www.sun.com/sunsolve/
143355-02	http://www.sun.com/sunsolve/

Note – Solaris OS patch 143355-02 is required. Download and install this patch with others that are available at the download site.

2. **Move the patch zip files into the** *patch-download-dir* **directory.**

   Where *patch-download-dir* is the path to the directory where the Solaris 10 OS patches are stored. The *patch-download-dir* directory might already contain patches that were copied during the OS installation.

3. **Use the** `unzip` **command on all of the patches that you downloaded to extract the contents of the downloaded zip files.**

   Refer to the `unzip(1)` man page for instructions on using the command.

4. **Change directories to the** `/usr/sadm/bin` **directory.**

```
# cd /usr/sadm/bin
```

5. **Install the required patches to the diskless service.**

   Use the `smosservice patch` command to install the patches to the installation image.

   Install the software patches on the server *in the order shown*, where *root-password* is the root password of the server and *patch-download-dir* is the path to the directory where the Solaris 10 OS patches are stored.

Note – Note that you must add an additional `-U` option when you install the last patch.

```
# ./smosservice patch -u root -p root-password -- -a patch-download-dir/126143-01 -m
# ./smosservice patch -u root -p root-password -- -a patch-download-dir/128593-01 -m
# ./smosservice patch -u root -p root-password -- -a patch-download-dir/118843-01 -m
# ./smosservice patch -u root -p root-password -- -a patch-download-dir/125416-05 -m -U
```

6. **Refer to the instructions in the** *Sun Netra CP3270 ATCA Blade Server User's Guide* (821-0078) **to complete the installation procedures for diskless clients.**

Installing the Blade Server

For complete instructions on installing and configuring the blade server, refer to the Sun *Netra CP3270 ATCA Blade Server User's Guide* (821-0078).

The Sun Netra CP3270 ATCA blade server does not ship with an onboard disk on which to install an operating system (OS). Install the OS on an advanced rear transition module (ARTM), or on another compatible device such as an Advanced Mezzanine Card, Bootable CompactFlash, or Bootable USB device.