Sun Netra™ CP3060 Blade Server Product Notes

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Contents

Netra CP3060 Blade Server Product Notes

The *Netra CP3060 Blade Server Product Notes* contain important and late-breaking information about the Sun Netra™ CP3060 blade server. This document includes information about upgrading to ATCA R3U3.

This document contains the following:

The most recent versions of the Netra CP3060 blade server and Sun Netra CT 900 server documentation are available at:

`http://docs.sun.com/app/docs/prod/cp3060.brd#hic`

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

Known Issues

The following known issues (priorities 1-3) exist in this release of the Netra CP3060 blade server hardware and software.

TABLE 1   Known Issues

Bug ID	Problem	Comments or Workaround
6465803	Memory leak in `openhpid` is exposed with excessive `sel` from the blade server.	
6473821	Extended fabric is cycled down and up when H8 is warm or cold reset on the blade server.	

Recognizing Erroneous Error Messages

The implementation of the Solaris™ Predictive Self-Healing (PSH) software provided on this release causes most systems to display a few erroneous error messages.

If this message occurs on a Sun Netra CT 900 server, it may be because a required parameter has not been set in the `/etc/system` file.

Have the error message ID and other information available when contacting Sun Services for a repair.

Message ID: SUN4-8000-0Y

Sometimes after the Solaris OS boot, the Message ID: SUN4-8000-0Y is displayed. This message might be indicating an internal parity error has occurred within the hostbridge, or the message might be erroneous.

Use the `fmdump -v -u EVENT_ID` command to determine if there is a faulty field-replaceable unit (FRU). As shown in the example below, the IOBD is identified as the failing component by the `FRU:` tag in the `fmdump` output.

```
fmdump -v -u f1ae0753-0981-6019-ca62-92125659ce6d
TIME                 UUID                                SUNW-MSG-ID
Dec 31 21:32:09.6466 f1ae0753-0981-6019-ca62-92125659ce6d SUN4-
8000-0Y
```

```
      100%   fault.io.fire.asic
   FRU: hc://product-id=SUNW,Sun-Netra-CT900/component=IOBD
   rsrc: hc:///ioboard=0/hostbridge=0/pciexrc=1
```

Message ID: SUN4-8000-FC

This message indicates a device connected to the hostbridge bus is faulty and might require service. The system attempts to disable the faulty device and allow the rest of the system to continue operation.

Use the `fmdump -v -u EVENT_ID` command to determine if there is a faulty field-replaceable unit (FRU). As shown in the example below, the IOBD is identified as the failing component by the `FRU:` tag in the `fmdump` output.

```
# fmdump -v -u 6999fd18-1feb-499f-acf7-cceb78deb18c
TIME                    UUID                              SUNW-MSG-ID
Nov 17 20:46:06.3294 6999fd18-1feb-499f-acf7-cceb78deb18c SUN4-
8000-FC
  100%   fault.io.fire.hbus
  FRU: hc://product-id=SUNW,Sun-Netra-CT900/component=IOBD
  rsrc: hc:///ioboard=0/hostbridge=0/pciexrc=0
```

▼ To Configure the System After a JumpStart Installation

This procedure describes how to configure the Sun Netra CP3060 blade server after a jumpstart installation so that erroneous fault messages are not reported.

1. **Install the mandatory patches on the server.**

2. **To the** `/etc/system` **file, add the following line.**

   ```
   set pcie:pcie_aer_ce_mask=0x1
   ```

3. **Use the** `fmadm faulty` **command to list the UUID of each erroneous fault.**

   ```
   # fmadm faulty
   ```

4. **Clear each fault that was listed in the preceding step.**

   ```
   # fmadm repair d79b51d1-aca0-c786-aa50-c8f35ea0fba3
   ```

5. **Clear the persistent logs as shown in the following example.**

```
# cd /var/fm/fmd
# rm e* f* c*/eft/* r*/*
```

6. **Reset the Solaris PSH modules as shown.**

```
# fmadm reset cpumem-diagnosis
# fmadm reset cpumem-retire
# fmadm reset eft
# fmadm reset io-retire
```

If faults continue to be reported, the server might have a faulty component.

Enhancement

IPMC configuration variables are now retained across firmware upgrades and downgrades, as long as the version being downgraded to supports this feature.

IPMC has a group of parameters that are stored in SEEPROM (NV Storage). All variables are part of one data structure. Each of these variables performs a function and can be set or read via commands. These variables are stored across IPMC resets. However, previously, these variables were reset to default values when new or upgraded firmware was installed.

This enhancement retains any custom values you configured for the following variables.

TABLE 0-1   IPMC Variables for Which You Can Retain Configurations

Variable	Description
log_level	Controls the log level of the debug messages.
Payload timeout	Controls the timeout for payload response. IPMC, after sending payload alert, expects OS to respond within this time. Used in graceful reboot and graceful shutdown features.
Payload shutdown timeout	Controls the payload shutdown timeout as described in the graceful reboot/shutdown specification. This is the time that an OS would take to shutdown its applications before IPMC shuts it down or resets the payload.

TABLE 0-1   IPMC Variables for Which You Can Retain Configurations

Variable	Description
Verbosity	Controls the debug mode verbosity of the messages. Selectively, messages from/to a particular interface can be enabled/disabled. Used for debugging only.
AMC power up timeout	Controls the time it would take for the AMCs/ARTM to come up before the payload is brought to M4 state.
IPMC Control	Reflects IPMC's control bits. Currently two bits, Bit 0 and Bit 1 control LED2 and LED1 on the blade servers.

If you want to reset these variables to their default, use the new Reset IPMC configuration variables command.

For detailed command information, refer to the *Netra CT 900 Server Administration and Reference Manual* (819-1177).

Solaris Operating System Versions

The Netra CP3060 blade server supports the Solaris 10 (6/06) OS and subsequent compatible versions, with supported Sun Netra patches. The Solaris OS software can be downloaded from the Sun 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 the Sun Documentation web site at:

http://www.docs.sun.com

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.

```
# sum Netra_CP3060_S10U2_RR.cpio
1795 5823104 Netra_CP3060_S10U2_RR.cpio
```

After checking the package, open it by using the cpio(1) command. The following is an example.

```
# cpio -idum -I ../Netra_CP3060_S10U2_RR.cpio
5823104 blocks
# ls
Copyright                    Solaris_10
JDS-THIRDPARTYLICENSEREADME  installer
#
```

Firmware Versions

The Sun Netra CP3060 blade server firmware should be at the versions listed in the README.

▼ To Display Firmware Versions

Use one of the following methods.

- From the OpenBoot PROM, enter the following user commands as shown in the following example.

```
{1}ok .version
Release 4.22.13 created 2007/06/15 16:48
OBP 4.22.13 2007/06/15 16:48 Netra CP3060
OBDIAG 4.x.0 2007/06/15 17:00
POST 4.22.10 2007/06/15 17:12
XBUS CPLD Version 1
{1} ok dev /ipmc
{1} ok .properties
firmware-version          H8 Firmware Version 1.0.1
```

- From the ShMM prompt, enter the following command as shown in the example.

```
# clia ipmc <ipmb_addr_of_node>
IPM Sentry Shelf Manager Command Line Interpreter
IPM Sentry Shelf Manager ver. 3.1.1
IPM Sentry is a trademark of Pigeon Point Systems.
Copyright (c) 2002-2007 Pigeon Point Systems
Build date/time: June 15 2007 16:39:37
All rights reserved
#
```

Upgrading the Software and Firmware

This release contains 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 blade servers and systems with known issues.

Note – R3U1 includes changes from previous releases.

Upgrading to R3U3

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 CP3060 blade servers and Sun Netra CT 900 servers, refer to the Netra CP3060 blade server README files and *Sun Netra CT 900 Server Product Notes*.

Be sure to follow the upgrade sequence documented in the README files.

Upgrading Systems and Blade Servers

To display current version information, preview required upgrades, and to perform an upgrade of the Sun Netra CT 900 system and installed blade servers, invoke the autofwupgrade command from the ShMM. The command syntax is as follows.

```
autofwupgrade [-h] [ [-vp] -f <FTP-server-IP-address>:<release-
archive-root-dir>[:<user-name>:<password>] [-s <board-slot-
number>] [-t board-type] ]
```

Tip – We recommend that you use the -p option to preview the required updates before performing the upgrade.

Upgrading Blade Servers Only

For users who do not have access to the ShMM or who want manual control of the FW upgrade process, use upgrade tools such as upgradefw and others instead of the ShMM autofwupgrade. Refer to the README for instructions.

Applying Patches

This section provides information on the Sun Netra patches that you must download from the SunSolve℠ web site for the Netra CP3060 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 – 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 Netra CP3060 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 10.

- If you are applying patches to a network installation image for diskless clients, go to the applicable procedure in this section.

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 on screen agreement.**

2. **Locate and download the Solaris 10 OS patches listed in** TABLE 2.

   TABLE 2   Sun Netra Patches Required for the Solaris 10 OS

Patch ID	Patch Location
122813-01	http://www.sun.com/sunsolve/
122814-02	http://www.sun.com/sunsolve/
122815-04	http://www.sun.com/sunsolve/
122816-02	http://www.sun.com/sunsolve/
123156-01	http://www.sun.com/sunsolve/
123157-02	http://www.sun.com/sunsolve/
123275-01	http://www.sun.com/sunsolve/
123937-01	http://www.sun.com/sunsolve/

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 CP3060 Blade Server User's Guide* (819-4967).

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 patches listed in** TABLE 3**.**

TABLE 3   Patches Required for a Solaris 10 Diskless Service

Patch ID	Patch Location
122813-01	http://www.sun.com/sunsolve
122814-02	http://www.sun.com/sunsolve
122815-04	http://www.sun.com/sunsolve
122816-02	http://www.sun.com/sunsolve
123156-01	http://www.sun.com/sunsolve
123157-02	http://www.sun.com/sunsolve
123275-01	http://www.sun.com/sunsolve/point
123937-01	http://www.sun.com/sunsolve/point

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/119578-15 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/118822-27 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/121556-01 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/121557-01 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/121558-01 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/121559-01 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/120277-05 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/120278-03 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/120736-02 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/120921-01 -m
   # ./smosservice patch -u root -p root-password -- -a patch-download-dir/120924-02 -m -U
   ```

6. **Refer to the instructions in the** *Sun Netra CP3060 Blade Server User's Guide* (819-4967) **to complete the installation procedures for diskless clients.**

Removing and Installing Blade Servers

To remove and replace a blade server safely, manually shut down Solaris from the Solaris prompt. For detailed instructions, refer to the Solaris Operating System documentation and the *Sun Netra CP3060 Blade Server User's Guide* (819-4965).

```
sync;halt
```

When the shutdown is completed, the `ok` prompt is displayed.