Sun SPARC Enterprise™ M4000/M5000 Servers Product Notes

For XCP Version 1091

Part No. 821-1036-11
May 2010, Revision A

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Contents

Preface

These product notes contain important and late-breaking information about the Sun SPARC Enterprise™ M4000/M5000 servers hardware, software, firmware, and documentation. This document is an update of the product notes for the XCP 1090 release, and covers both it and the XCP 1091 release. It is written for experienced system administrators with working knowledge of computer networks, and advanced knowledge of the Oracle Solaris Operating System.

Some references to server names are abbreviated for readability. For example, if you see a reference to the SPARC Enterprise M5000 server or simply the M5000 server, note that the full product name is the Sun SPARC Enterprise M5000 server.

Note – Generally, Product Notes content supersedes that of other product documentation because Product Notes are published with more frequency. However, in case of a conflict, compare the publication date on each document's title page.

Related Documentation

Related documents are listed in the following table. All are available online. See "Where to View Releated Documentation" on page ix.

Note – All glossaries in the following documents have been moved to the separate glossary document listed in the table.

Application	Title
Latest information	*Sun SPARC Enterprise M3000 Server Product Notes* *Sun SPARC Enterprise M4000/M5000 Servers Product Notes* *Sun SPARC Enterprise M8000/M9000 Servers Product Notes*
Overview	*Sun SPARC Enterprise M3000 Server Overview Guide* *Sun SPARC Enterprise M4000/M5000 Servers Overview Guide* *Sun SPARC Enterprise M8000/M9000 Servers Overview Guide*
Planning	*Sun SPARC Enterprise M3000 Server Site Planning Guide* *Sun SPARC Enterprise M4000/M5000 Servers Site Planning Guide* *Sun SPARC Enterprise M8000/M9000 Servers Site Planning Guide*
Safety/Compliance	*Sun SPARC Enterprise M3000 Server Safety and Compliance Guide* *Sun SPARC Enterprise M4000/M5000 Servers Safety and Compliance Guide* *Sun SPARC Enterprise M8000/M9000 Servers Safety and Compliance Guide*
Getting started	*Sun SPARC Enterprise M3000 Server Getting Started Guide* *Sun SPARC Enterprise M4000/M5000 Servers Getting Started Guide* *Sun SPARC Enterprise M8000/M9000 Servers Getting Started Guide* – Also provided in the shipping kit.
Planning/Installation	*Sun SPARC Enterprise Equipment Rack Mounting Guide (Sun Rack 1000, 900 and Sun Rack II)*
Installation	*Sun SPARC Enterprise M3000 Server Installation Guide* *Sun SPARC Enterprise M4000/M5000 Servers Installation Guide* *Sun SPARC Enterprise M8000/M9000 Servers Installation Guide* – Also provided in the shipping kit..
Service	*Sun SPARC Enterprise M3000 Server Service Manual* *Sun SPARC Enterprise M4000/M5000 Servers Service Manual* *Sun SPARC Enterprise M8000/M9000 Servers Service Manual*
Glossary	*Sun SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Glossary*
Software administration	*Sun SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User's Guide*

Application	Title
Software administration	*Sun SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF Reference Manual*
Software administration	*Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers Dynamic Reconfiguration (DR) User's Guide*
Software administration	*Sun Management Center (Sun MC) Software Supplement*
Capacity on Demand administration	*Sun SPARC Enterprise M4000/M5000/M8000/M9000 Servers Capacity on Demand (COD) User's Guide*

Where to View Releated Documentation

Hardware documents:

http://docs.sun.com/app/docs/prod/sparc.m3k~m3000-hw?l=en#hic
http://docs.sun.com/app/docs/prod/sparc.m4k~m4000-hw?l=en#hic
http://docs.sun.com/app/docs/prod/sparc.m5k~m5000-hw?l=en#hic
http://docs.sun.com/app/docs/prod/sparc.m8k~m8000-hw?l=en#hic
http://docs.sun.com/app/docs/prod/sparc.m9k~m9000-hw?l=en#hic

Software documents:

http://docs.sun.com/app/docs/prod/sparc.m9k~m9000-sw?l=en#hic

Oracle Solaris Operating System documents:

http://docs.sun.com

Documentation, Support, and Training

Sun Function	URL
Documentation	http://www.sun.com/documentation/
Support	http://www.sun.com/support/
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Sun SPARC Enterprise M4000/M5000 Servers Product Notes for XCP Version 1091, part number 821-1036-11

CHAPTER 1

Sun SPARC Enterprise M4000/M5000 Servers Product Notes for XCP 1091

This document covers changes introduced in the XCP 1090 and XCP 1091 firmware releases. This chapter contains the following sections:

What's New in XCP 1090 and 1091

- The XCP 1090 firmware is the first XCP release to support the XSCF command `showdateoffset`(8). For details, see the man page.
- The XCP 1090 firmware is the first XCP release to support the SPARC64 VII 2.53 GHz processor. Earlier XCP firmware releases do not support this faster version of the processor, which in other respects is functionally identical to all SPARC64 VII processors See "Minimum Required Firmware, Operating Systems and Browsers" on page 5.
- The XCP 1091 firmware introduces the Active Directory and LDAP over SSL features. See "Active Directory and LDAP over SSL" on page 2.

Active Directory and LDAP over SSL

The XCP 1091 release introduces support for the Active Directory and LDAP over SSL features.

- Active Directory is a distributed directory service from Microsoft™ Corporation. Like an LDAP directory service, it is used to authenticate users.
- LDAP over SSL offers enhanced security to LDAP users by way of Secure Socket Layer (SSL) technology. It uses LDAP directory service to authenticate users.

Active Directory and LDAP over SSL each provide both authentication of user credentials and authorization of the user access level to networked resources. They use authentication to verify the identity of users before they can access system resources, and to grant specific access privileges to users in order to control their rights to access networked resources.

User privileges are either configured on XSCF or learned from a server based on each user's group membership in a network domain. A user can belong to more than one group. Active Directory or LDAP over SSL authenticates users in the order in which the users' domains are configured. (A *user domain* is the authentication domain used to authenticate a user.)

Once authenticated, user privileges can be determined in the following ways:

- In the simplest case, users' privileges are determined directly through the Active Directory or LDAP over SSL configuration on the XSCF. There is a defaultrole parameter for both Active Directory and LDAP over SSL. If this parameter is configured or set, all users authenticated via Active Directory or LDAP over SSL are assigned privileges set in this parameter. Setting up users in an Active Directory or LDAP over SSL server requires only a password with no regard to group membership.
- If the defaultrole parameter is not configured or set, user privileges are learned from the Active Directory or LDAP over SSL server based on the user's group membership. On XSCF, the group parameter must be configured with the corresponding group name from the Active Directory or LDAP over SSL server. Each group has privileges associated with it which are configured on the XSCF. A user's group membership is used to determine the user's privileges once the user is authenticated.

Three types of groups can be configured: administrator, operator, and custom. To configure an administrator or operator group, only group name is required.

An administrator group has platadm, useradm, and auditadm privileges associated with it. An operator group has platop, and auditop privileges associated with it. To configure a custom group, both group name and privileges are required. For each type of group, up to five groups can be configured. A user assigned to more than one group receives the sum of all privileges associated with those groups.

To support these new features, two new configuration screens (`Active Directory` and `LDAP over SSL`) have been added to the `Settings` menu of the XSCF Web. Remote users can log in and use the XSCF Web once they have been authenticated by Active Directory or LDAP over SSL.

Configuring XSCF for Active Directory Support

The commands `setad`(8) and `showad`(8) let you set and view the Active Directory configuration from the command line.

By default, Active Directory support is disabled. To enable Active Directory support, use the following command:

```
XSCF> setad enable
```

To disable Active Directory support, use the following command:

```
XSCF> setad disable
```

To show if Active Directory support is enabled or disabled, enter: :

```
XSCF> showad
```

Use the `setad` command with its various parameters to configure Active Directory. For example, you can use it to set up one primary and five alternate Active Directory servers, assign group names and privileges, configure a particular user domain, control logging of diagnostic messages, and more. User domain can be configured explicitly through the `setad userdomain` command on XSCF, or entered at login prompt using the form, *user@domain*.

See the `setad`(8) and `showad`(8) man pages, and the note about these commands in TABLE 3-8.

Note – Once Active Directory has been configured and used, do not downgrade the firmware. If, however, you must downgrade to XCP 1090 or earlier, run the following command immediately after doing so: **`restoredefaults -c xscfu`**.

Configuring XSCF for LDAP over SSL Support

The commands `setldapssl`(8) and `showldapssl`(8) let you set and view LDAP over SSL configuration from the command line. These commands do for LDAP over SSL what the setad(8) and showad(8) commands do for Active Directory, and support many of the same parameters.

For more information, see the `setldapssl`(8) and `showldapssl`(8) man pages.

New `proxyuser` System Account

To support Active Directory and LDAP over SSL, this release features a new system account named `proxyuser`. Verify that no user account of that name already exists. If one does, use the `deleteuser`(8) command to remove it, then reset XSCF before using the Active Directory or LDAP over SSL feature.

Minimum Required Firmware, Operating Systems and Browsers

Note – This section was updated in May 2010.

The Solaris Operating System and Sun Java Enterprise System software are preinstalled on new Sun SPARC Enterprise M4000/M5000 servers.

TABLE 1-1 lists the first firmware and operating system (OS) versions that are required for SPARC64 VI and SPARC64 VII processors..

TABLE 1-1 Minimum Required Firmware and Operating System Versions

Processor Type	Minimum XCP Version	Minimum Operating System Version
SPARC64 VI processors	XCP 1040	Solaris 10 11/06 – with patches* required Solaris 10 10/08 – with no patches required
SPARC64 VII processors, 2.4 GHz	XCP 1070	Solaris 10 8/07 – with patches* required Solaris 10 10/08 – with no patches required
SPARC64 VII processors, 2.4 GHz with 8GB DIMMs	XCP 1081	Solaris 10 8/07 – with patches* required Solaris 10 10/08 – with no patches required
SPARC64 VII processors, 2.53 GHz	XCP 1090	Solaris 10 8/07 – with the Solaris 10 10/09 Patch Bundle required Solaris 10 10/09 – with no patches required

* See "Solaris Patch Requirements" on page 6.
Check `http://sunsolve.sun.com` for the latest patch revision.

Note – As for all releases, installation of the SunAlert Patch Cluster is recommended. Also, note that the Solaris 10 10/09 Patch Bundle is also known as MU8.

Many web browsers support the XSCF Web. The browsers in TABLE 1-2 have demonstrated compatibility with the XSCF Web through testing.

TABLE 1-2 Tested Web Browser Versions

Web Browser Application	Version
Firefox	2.0 and 3.0
Microsoft Internet Explorer	6.0, 7.0, and 8.0

Solaris Patch Requirements

This section lists mandatory patches, patch bundles, and SunAlert patch clusters for the M4000/M5000 servers. Always refer to the patch README for information about patch requirements and special installation instructions.

The patch identifiers listed in this section represent the *minimum* level of the patches that must be installed. The two-digit suffix represents the minimum revision level of the patch. Check `http://sunsolve.sun.com` for the latest patch revision. Apply patches in the order listed.

Solaris 10 5/09 with SPARC64 VII 2.53 GHz Processors

The Solaris 10 10/09 Patch Bundle is required, and the SunAlert Patch Cluster is recommended. See:

`http://sunsolve.sun.com/show.do?target=patches/patch-access`

Solaris 10 10/08 with SPARC64 VII 2.53 GHz Processors

The Solaris 10 10/09 Patch Bundle is required, and and the SunAlert Patch Cluster is recommended. See:

`http://sunsolve.sun.com/show.do?target=patches/patch-access`

Solaris 10 5/08 with SPARC64 VII 2.53 GHz Processors

The Solaris 10 10/09 Patch Bundle is required, and and the SunAlert Patch Cluster is recommended. See:

`http://sunsolve.sun.com/show.do?target=patches/patch-access`

Solaris 10 5/08 with SPARC64 VII 2.4 GHz Processors, SPARC64 VI Processors, or Both

Patch 137137-09 – SunOS 5.10: kernel patch.

Solaris 10 8/07 with SPARC64 VII 2.53 GHz Processors

- The Solaris 10 10/09 Patch Bundle is required and the SunAlert Patch Cluster is recommended. See:

  `http://sunsolve.sun.com/show.do?target=patches/patch-access`

- You cannot do a fresh install of the Solaris 10 8/07 OS on a domain that contains SPARC64 VII processors. The following two workarounds apply:
  - Create a fully patched image, then use Jumpstart.
  - Start the OS install on a domain that contains only SPARC64 VI processors, add the required patches, then add the SPARC64 VII processors to the domain.

Note – See `http://sunsolve.sun.com/search/document.do?assetkey=1-62-252447-1`

Solaris 10 8/07 with SPARC64 VII 2.4 GHz Processors

The following patches are required for Solaris 10 8/07 OS only on servers containing SPARC64 VII 2.4 GHz processors. Install them in the order listed:

1. 119254-51 - SunOS 5.10: Install and Patch Utilities Patch
2. 125891-01 - SunOS 5.10: libc_psr_hwcap.so.1 patch

3. 127755-01 - SunOS 5.10: Fault Manager patch
4. 127127-11 - SunOS 5.10: kernel patch

   Solaris 10 8/07 OS with patch 127127-11 might panic/trap during normal domain operation. (CR 6720261) To prevent this you must set the following parameter in the system specification file (`/etc/system`):

   ```
   set heaplp_use_stlb=0
   ```

   Then reboot the domain.

You cannot do a fresh install of the Solaris 10 8/07 OS on a domain that contains SPARC64 VII processors. The following two workarounds apply:

- Create a fully patched image, then use Jumpstart.
- Start the OS install on a domain that contains only SPARC64 VI processors, add the required patches, then add the SPARC64 VII processors to the domain.

Solaris 10 8/07 with SPARC64 VI Processors

None.

Solaris 10 11/06

Caution – For Sun SPARC Enterprise M4000/M5000 servers running the Solaris 10 11/06 OS, patches 123003-03 and 124171-06 must be installed on your system prior to using Sun Connection Update Manager. These patches can be downloaded from `http://sunsolve.sun.com.`

The following patches are required for Solaris 10 11/06 OS. Note that Solaris 10 11/06 does *not* support SPARC64 VII processors, even with these required patches. Install the patches in the order in which they are listed:

1. 118833-36 – Reboot your domain before proceeding.
2. 125100-10 – See the patch README file for a list of other patch requirements.
3. 123839-07
4. 120068-03
5. 125424-01
6. 118918-24

7. 120222-21
8. 125127-01 – Reboot your domain before proceeding.
9. 125670-02
10. 125166-05

Obtaining Solaris Patches

The Sun[sm] Connection Update Manager can be used to reinstall the patches if necessary or to update the system with the latest set of mandatory patches. For more information about the Sun Connection Update Manager, refer to the *Sun Update Connection System Administration Guide* at:

`http://docs.sun.com/app/docs/prod/updconn.sys`

Or visit:

`http://wikis.sun.com/display/SunConnection/Update+Manager`

Installation information and README files are included in the patch downloads.

There are two options available to register your system and to use the Sun Connection Update Manager to obtain the latest Solaris OS patches:

- Use the Update Manager GUI to obtain patches.

  For more information, refer to the Sun Update Connection documentation at the links mentioned previously.

- Use the `smpatch`(1M) command to obtain patches.

  For more information, refer to the `smpatch`(1M) man page or the reference manual collection for your version of the Solaris OS.

Caution – For Sun SPARC Enterprise M4000/M5000 servers running the Solaris 10 11/06 OS, patches 123003-03 and 124171-06 must be installed on your system prior to using Sun Connection Update Manager. These patches can be downloaded from `http://sunsolve.sun.com.`

Patches for Emulex PCI Express (PCIe) Cards

The following Emulex cards require drivers supplied in patch 120222-26:

- Sun StorageTek™ Enterprise Class 4-Gigabit Dual-Port Fiber Channel PCIe HBA (part SG-XPCIE2FC-EM4)
- Sun StorageTek Enterprise Class 4-Gigabit Single-Port Fiber Channel PCIe HBA (part SG-XPCIE1FC-EM4)

Patches for QLogic PCIe Cards

The following QLogic cards require drivers supplied in patch 125166-10:

- Sun StorageTek Enterprise Class 4-Gigabit Dual-Port Fiber Channel PCIe HBA (part SG-XPCIE2FC-QF4)
- Sun StorageTek Enterprise Class 4-Gigabit Single-Port Fiber Channel PCIe HBA (part SG-XPCIE1FC-QF4)

Upgrading to XCP 1090 or XCP 1091

You can upgrade to XCP 1090 or XCP 1091 from XCP version 1050 or higher. Refer to the *Sun SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User's Guide* for instructions.

Note – After updating the firmware to XCP 1090 or XCP 1091, use the `rebootxscf`(8) command to reset the XSCF.

Updating From a Version Earlier Than XCP 1050

If you are currently running a version earlier than XCP 1050, you cannot directly update to XCP 1090 or XCP 1091. You must first update to an interim version of XCP (between 1050 and 1070, inclusive). Contact your Oracle representative for access to older XCP releases.

Note – Use the `deleteuser`(8) command to delete any accounts named `admin` prior to updating to XCP 1050 or later. The `admin` account name is reserved starting in XCP 1050.

Domain Restart Required After Certain Type of XCP Upgrade

On a domain that has been in operation during the update to XCP 1090 or XCP 1091 from a version between XCP 1050 and 1070 (inclusive), when you perform dynamic reconfiguration (DR) to add or replace the SPARC64 VII processors, you need to update the OpenBoot PROM firmware. The OpenBoot PROM firmware is updated as you update the XCP and restart the domain. For this reason, restart all the domains after you update the firmware to the latest XCP release, regardless of whether you added or replaced the SPARC64 VII processors.

Functionality Issues and Limitations

This section describes known issues in this release.

Limitations for SPARC64 VII Processors

Caution – You must complete the upgrades to the XCP firmware and to the Solaris OS before inserting SPARC 64 VII processors into the chassis.

General Functionality Issues and Limitations

Caution – For dynamic reconfiguration (DR) and hot-plug issues, see "Solaris OS Issues and Workarounds" on page 23.

- The following functions displaying the power consumption and exhaust air are not supported on M4000/M5000 servers:
  - The `power` and `air` operands of the `showenvironment`(8) command
  - XSCF Web

Note – Invalid values will be displayed by executing the commands or menu. SNMP Agent Function obtains invalid values for power consumption and exhaust air.

- You cannot use the following user account names, as they are reserved for system use: `adm`, `admin`, `apache`, `bin`, `daemon`, `default`, `ldap`, `nobody`, `ntp`, `operator`, `proxyuser`, `root`, `rpc`, `rpcuser`, and `sshd`.
- Do not use the Service Processor (SP) as the Network Time Protocol (NTP) server. Using an independent NTP server provides optimal reliability in maintaining consistent time on the SP and the domains. For more information about NTP, see the Sun BluePrints™ document, *Using NTP to Control and Synchronize System Clocks*: `http://www.sun.com/blueprints/0701/NTP.pdf`
- When you use the external power control interface of the external power controller, the following notification signals are not supported:
  - The OS panic or the server hardware error signal (*CPUN/RTNU)
  - The server hardware error signal (power fail, temperature error, and fan error) (*ALARM)
- When you import XCP or update the firmware using the XSCF you might see Web session ID errors displayed on the web browser. When you specify the timeout period as over 30 minutes in the Autologout setting Internal Server Errors might be displayed. To reconnect to the XSCF Web, close the current browser and open the new browser.
- For this XCP release, the XSCF browser user interface (XSCF Web) does not support the External I/O Expansion Unit Manager feature.
- Contact your sales representative for tape drive unit options on SPARC Enterprise M4000/M5000 servers.
- Disable pop-up blocking and remove any plug-ins such as the search tool installed with the browser when you use the XSCF Web.
- XSCF-LAN is compliant with auto-negotiation. Set the network device which connects with XSCF-LAN to the auto-negotiation mode. Otherwise when you connect the XSCF-LAN and the network device (fixed to the full-duplex mode,

according to the IEEE 802.3 rule) the XSCF-LAN communicates in half-duplex mode and network communication speed might slow down or communication errors may occur.

- Due to DR and ZFS file system interoperability issues, M4000/M5000 servers are shipped pre-installed using the UFS file system. See CR 6522017 in TABLE 3-2.
- The M4000/M5000 servers are cold service machines. Hot-swapping of the CPU module (CPUM), memory board (MEMB), I/O unit (IOU), or XSCF unit is not supported.
- For information about I/O options and storage, such as the number of cards supported in a domain, see the Sun Cross Platform IO Support page:

  `http://wikis.sun.com/display/PlatformIoSupport/Home/`
- The use of the External I/O Expansion Unit to connect the host server to an external boot disk drive is not supported.
- The `setsnmp`(8) and `showsnmp`(8) commands do not notify the user of authorization failure. Upon such failure, confirm that the SNMP trap host is working and re-execute the command using the correct user name.

Additional Information and Procedures

This section describes additional known issues and limitations at the time of this release.

Logging In to the System

In addition to the standard *default* login, the servers are delivered with a temporary login called `admin` to enable remote initial login, through a serial port. The admin user privileges are fixed to `useradm` and cannot be changed. You cannot log in as temporary `admin` using the standard UNIX user name and password authentication or SSH public key authentication. The temporary `admin` account has no password, and one cannot be added for it.

The temporary `admin` account is disabled after someone logs in as the default user, or after someone logged in as temporary `admin` has successfully added the first user with valid password and privileges.

If, before the default login is used, you cannot log in as temporary `admin`, you can determine if someone else has done so by executing the `showuser -l` command.

Booting From a WAN Boot Server

The WAN boot installation method enables you to boot and install software over a wide area network (WAN) by using HTTP. To support booting the M4000/M5000 servers from a WAN boot server, you must have the appropriate `wanboot` executable installed and OpenBoot™ version 4.24 or above to provide the needed hardware support.

For information about WAN boot servers, refer to the *Solaris 10 Installation Guide: Network-Based Installations* for the version of Solaris 10 OS that you are using. You can find Solaris 10 OS documentation here:

http://docs.sun.com/app/docs/prod/solaris.10

If you do not upgrade the `wanboot` executable, the server will panic, with messages similar to the following:

```
krtld: load_exec: fail to expand cpu/$CPU
krtld: error during initial load/link phase
panic - boot: exitto64 returned from client program
```

Sun Java Enterprise System

The Sun Java™ Enterprise System is a comprehensive set of software and life cycle services that make the most of your software investment. For an overview and documentation, go to:

http://www.sun.com/service/javaes/index.xml

Note – Due to an issue that arises from the installation of the Java Enterprise System 5 Update 1 on your system (CR 6644798), it might be necessary to enable the Web Console SMF service.

▼ Enable the Web Console SMF Service

- **Log in to a terminal as `root`, then enable the service.**

```
# svcadm enable svc:/system/webconsole:console
```

If you have to reload the software, go to the following web site for download and installation instructions:

http://www.sun.com/software/preinstall

If you download a fresh copy of software, that software might not include patches that are mandatory for your server. After installing the software, refer to "Solaris Patch Requirements" on page 6 for information about checking for and installing required patches.

CHAPTER 2

Information About Hardware

This section describes the special instructions and the issues about the SPARC Enterprise M4000/M5000 server hardware.

Hardware Issues and Workarounds

Booting Multiple Systems From a Single J4200 JBOD Storage Array

Sun Storage J4200 SAS JBOD arrays have six general-purpose SAS connectors. With FW version 3A32 or higher, each of them can be connected to separate SAS initiators, therefore up to six systems can be connected to the array. Each system can use a different disk on the array as its boot device. J4200 arrays have 12 disks, so each boot device can be mirrored for higher reliability. J4200 arrays can be configured into multiple zones to provide a more secure environment.

For related information, see Sun StorageTek Common Array Manager Software documentation, at:
`http://docs.sun.com/app/docs/prod/stor.arrmgr#hic`

See especially:

- *Sun StorageTek Common Array Manager Software Release Notes 6.4.1*
- *Sun StorageTek Common Array Manager User Guide for Open Systems*

Sun Crypto Accelerator 6000 Cards

If you are not using the correct version of the Sun Crypto Accelerator (SCA) 6000 card driver, hot-plug operations on SCA 6000 cards can cause M4000/M5000 servers to panic or hang. Version 1.1 of the SCA6000 driver and firmware supports hot-plug operations after the required bootstrap firmware upgrade has been performed. Version 1.0 of the SCA6000 driver does not support hot-plug and should not be used.

Do not hot-plug a Sun Crypto Accelerator (SCA) 6000 card into slot 1.

U320 PCIe SCSI Card

U320 PCIe SCSI card, part numbers 375-3357-01/02, is not supported in PCI cassettes for Sun SPARC Enterprise M4000/M5000 servers. Customers must use part number 375-3357-03 at a minimum.

Hardware Documentation Updates

This section contains important and late-breaking hardware information and corrections that became known after the documentation set was published.

TABLE 2-1 Hardware Documentation Updates

Title	Page/Section Number	Update
SPARC Enterprise M4000/M5000 Servers Installation Guide	Section 2.2.2	Table 2-3 “Power Cords” The following note will be added, Note - For servers that have the B-type plug, confirm that a 20A overcurrent protection device is available outside the server. If one is not available, prepare an external 20A overcurrent protection that can be achieved by means of no-fuse breakers (NFBs) or fuses. The B-type plug refers to plugs other than grounding-type ones with two parallel blades, such as the NEMA L6-30, L6-20, L6-15, and L5-15.
	Section 3.3.2	"Initializing the XSCF Unit" will be changed. See “Initializing the XSCF Unit” on page 19.

Initializing the XSCF Unit

Procedures for initializing the XSCF unit found in Section 3.3.2 of the *Sun SPARC Enterprise M4000/M5000 Servers Installation Guide* will be updated with the information below.

To use full XSCF functionality, various settings need to be set.

1. **Set the required settings.**

   See section “Setting up XSCF” in the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User’s Guide* for details on how to set these settings.

   The following settings are required:

   - Registration of an XSCF user account and password and user privileges (`adduser`, `password`, `setprivileges`)
   - User account of a field engineer (FE) (for maintenance)
   - Date and time settings (setdate, settimezone)
   - Confirmation of XSCF host public key (`showssh`)

- SSH/telnet settings (setssh, settelnet)
- Network interface, routing, and DNS-related settings (setnetwork, setroute, setnameserver, etc.)

Note – Reset the XSCF unit with the `applynetwork` and `rebootxscf` commands.

- Domain to Service Processor Communications Protocol (DSCP) configuration (`setdscp`)
- Altitude setting (setaltitude)

Note – `setaltitude` must be followed by a `rebootxscf` to apply the altitude setting

---

- Dual power feed option setting (setdualpowerfeed)

Note – `setdualpowerfeed` requires a complete chassis power cycle (all power cords removed) to apply any changes. Make certain to allow 30 seconds before plugging the power cords back into the chassis.

To perform XSCF initial settings, use the XSCF default user account. Until user accounts for user environment is registered, log in with a default user account and default password. The privileges of the default user are `useradm` and `platadm`.

2. **Log in to the XSCF Shell using a user account and password set during Step 1.**

   See the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User's Guide* for details on how to log in to the user account.

CHAPTER 3

Information About Software

This section describes specific software and firmware issues and workarounds. It includes the following sections:

To obtain patches and to check for availability of new patches that fix these issues, go to:

`http://sunsolve.sun.com`

XCP Issues and Workarounds

TABLE 3-1 lists XCP issues and possible workarounds.

TABLE 3-1 XCP Issues and Workarounds *(1 of 2)*

ID	Description	Workaround
6760740 and 6894410	The XSCF might go down and require a reboot, or you might see console error messages and a core dump (`ereport.chassis.software.core`) when one of these conditions occurs: • A local account has been created with a user ID explicitly assigned to a value larger than 65536 (`adduser -u` *uid*). • An LDAP account has been used that has a UID value larger than 65536.	Use only user accounts with a user ID (UID) value between 100 and 60000. This is the range of auto-assigned UIDs for the XSCF command `adduser`.

TABLE 3-1 XCP Issues and Workarounds *(2 of 2)*

ID	Description	Workaround
6765468	When the timezone other than three characters has been set, the error logs cannot be displayed on XSCF Web "Error Log" page. In addition, XSCF Web "Panic Log" and "IPL Message Log" pages displays the date on the table with "---".	Use the `showlogs`(8) command on the XSCF shell.
6789066	In the `settimezone -c adddst` command, when you set eight or more letters to the abbreviation of time zone and the name of Daylight Saving Time, execution of the `showlogs` command induces a segmentation fault and results in an error.	Specify the abbreviation of time zone and the name of Daylight Saving Time in seven letters or less.
6851009	If certain changes occur on a standalone NTP server, the XSCF connection to the NTP server is lost, and XSCF uses instead its local clock. This problem occurs with a standalone NTP server, that is, with an NTP server that syncs the time with its own local clock (LCL), not with a higher-stratum NTP server. Changes that can trigger this change include: • Rebooting the NTP server • Modifying the date by even one second • Changing the NTP server stratum	Check whether the XSCF LCL and the NTP server are both set to 127.127.1.0. If so, change one of them. **Note -** Before making any changes, ensure that your change has no impact on other NTP clients. • To change the value on the NTP server, change the NTP host configuration file (`/etc/inet/ntp.conf`) to a different value, then reboot the XSCF to apply the changes. Other values include 127.127.1.1, 127.127.1.2, and 127.127.1.3. • To change the value on the XSCF side, use the `setntp` command. For example: `setntp -m localaddr=2` sets the value to 127.127.1.2
6870490	On M4000/M5000 and M8000/M9000 servers, changes in fan alarm conditions while XSCF is down are ignored on XSCF boot.	Invoke the `replacefru`(8) command for a dummy replacement on a normal fan, then use `showenvironment` *fan* to confirm the fan speed. See the `showenvironment`(8) man page.
6893578	Users who have been authenticated via Active Directory or LDAP over SSL can run the `console`(8) command to obtain a domain console. The `showconsolepath`(8) command displays such console users as `proxyuser` rather than as their real username.	There is no workaround.

Solaris OS Issues and Workarounds

This section contains information about Solaris OS issues. The following tables list issues you might encounter, depending upon which Solaris OS release you are using.

Solaris Issues for All Supported Releases

TABLE 3-2 lists Solaris OS issues that you might encounter in any Solaris release. If your domains are not running the latest Solaris release, also take notice of CRs fixed in releases later than yours, as noted in the tables that follow.

TABLE 3-2 Solaris OS Issues and Workarounds for All Supported Releases *(1 of 4)*

CR ID	Description	Workaround
4816837	System hangs when executing parallel hot-plug operation with SP DR in suspend phase.	There is no workaround.

6459540	The DAT72 internal tape drive might time out during tape operations.
	The device might also be identified by the system as a QIC drive.
		Add the following definition to `/kernel/drv/st.conf`:
		
		`tape-config-list=`
		`"SEAGATE DAT  DAT72-000",`
		`"SEAGATE_DAT____DAT72-000",`
		`"SEAGATE_DAT____DAT72-000";`
		`SEAGATE_DAT____DAT72-000=`
		`1,0x34,0,0x9639,4,0x00,0x8c,0x8c,`
		`0x8c,3;`
		
		There are four spaces between `SEAGATE DAT` and `DAT72-000`.

6522017	Domains using the ZFS file system cannot use DR.	Set the maximum size of the ZFS ARC lower. For detailed assistance, contact your authorized service representative.
6531036	The error message `network initialization failed` appears repeatedly after a boot net installation.	There is no workaround.

TABLE 3-2 Solaris OS Issues and Workarounds for All Supported Releases *(2 of 4)*

CR ID	Description	Workaround
6532215	`volfs` or `dscp` services might fail when a domain is booted.	Restart the service. To avoid the problem, issue the following commands. **# svccfg -s dscp setprop start/timeout_seconds=count: 300** **# svccfg -s volfs setprop start/timeout_seconds=count: 300** **# svcadm refresh dscp** **# svcadm refresh volfs**
6588650	On occasion, a M4000/M5000/M8000/M9000 server is unable to DR after an XSCF failover to or from backup XSCF	There is no workaround.
6592302	Unsuccessful DR operation leaves memory partially configured.	It might be possible to recover by adding the board back to the domain with an `addboard -d` command. Otherwise try `deleteboard`(8) again.

TABLE 3-2 Solaris OS Issues and Workarounds for All Supported Releases *(3 of 4)*

CR ID	Description	Workaround

6660168	If a `ubc.piowbeue-cpu` error occurs on a domain, the Solaris Fault Management cpumem-diagnosis module might fail, causing an interruption in FMA service.
	If this happens, you will see output similar to the following sample in the console log:
	
	`SUNW-MSG-ID: FMD-8000-2K, TYPE: Defect, VER: 1, SEVERITY: Minor`
	`EVENT-TIME: Fri Apr 4 21:41:57 PDT 2008`
	`PLATFORM: SUNW,SPARC-Enterprise, CSN: 2020642002, HOSTNAME: <hostname>`
	`SOURCE: fmd-self-diagnosis, REV: 1.0`
	`EVENT-ID: 6b2e15d7-aa65-6bcc-bcb1-cb03a7dd77e3`
	`DESC: A Solaris Fault Manager component has experienced an error that required the module to be disabled. Refer to http://sun.com/msg/FMD-8000-2K for more information.`
	`AUTO-RESPONSE: The module has been disabled. Events destined for the module will be saved for manual diagnosis.`
	`IMPACT: Automated diagnosis and response for subsequent events associated with this module will not occur.`
	`REC-ACTION: Use fmdump -v -u <EVENT-ID> to locate the module. Use fmadm reset <module> to reset the module.`
		If fmd service fails, issue the following command on the domain to recover:
		# **`svcadm clear fmd`**
		Then restart cpumem-diagnosis:
		# **`fmadm restart cpumem-diagnosis`**

6668237	After DIMMs are replaced, the corresponding DIMM faults are not cleared on the domain.	Use the `fmadm repair` *fmri*|*uuid* to record the repair. Then use the `fmadm rotate` command to clear out any leftover events.

TABLE 3-2 Solaris OS Issues and Workarounds for All Supported Releases *(4 of 4)*

CR ID	Description	Workaround

6674266	DR `deleteboard`(8) and `moveboard`(8) operations might fail.
	Example for messages on domain:
	`drmach: WARNING: Device driver failure: /pci`
	`dcs: <xxxx> config_change_state:`
	Hardware specific failure:
	`unconfigure SB1: Device driver failure: /pci`
		Try DR operations again.

6745410	Boot program ignores the `Kadb` option which causes the system not to boot.	Use `kmdb` instead of `kadb`.
6872501	Cores are not offlined when requested by the XSCF..	Use `fmdump`(1M) with its `-v` option on the Service Processor to identify the faulty core. Once identified, use `psradm`(8) on the domain to offline the core.
6888928	IPMP interface fails since probe packets are not sent through that interface. Problem occurs with M3000/M4000/M5000/M8000/M9000 servers running the Solaris 10 10/09 OS and IPMP, or any Solaris release running IPMP with Patch 141444-09 installed.	Disable probe-based failure detection. See InfoDoc 211105 (86869).

Solaris Issues Fixed in Solaris 10 10/09

TABLE 3-3 lists issues that have been fixed in the Solaris 10 10/09 OS. You might encounter them in earlier releases.

TABLE 3-3 Solaris OS Issues and Workarounds Fixed in Solaris 10 10/09 *(1 of 2)*

CR ID	Description	Workaround
6572827	The `prtdiag -v` command reports PCI bus types incorrectly. It reports “PCI” for PCI-X leaf devices and “UNKN” for legacy PCI devices.	There is no workaround.
6800734	deleteboard hang in a domain	There is no workaround.
6816913	The XSCF `showdevices` command displays the incorrect processor cache size for fractional processor cache sizes, such as displaying “5MB” when the correct display would be “5.5MB.”	Use the `prtdiag`(1M) command on the domain to report processor information.

TABLE 3-3 Solaris OS Issues and Workarounds Fixed in Solaris 10 10/09 *(2 of 2)*

CR ID	Description	Workaround
6821108	DR and "showdevices" don't work after XSCF reboot.	Reboot the XSCF service processor twice. Half the SAs are deleted the first time, half are deleted the second time, so the second addition succeeds and IPsec communication is reestablished.
6827340	DR and Memory patrol may fail due to SCF command error.	There is no workaround.

Solaris Issues Fixed in Solaris 10 5/09

TABLE 3-4 lists issues that have been fixed in the Solaris 10 5/09 OS. You might encounter them in earlier releases.

TABLE 3-4 Solaris OS Issues and Workarounds Fixed in Solaris 10 5/09

CR ID	Description	Workaround
6588555	Resetting the XSCF during a DR operation on permanent memory might cause domain panic.	Do not start an XSCF reset while a DR operation is underway. Wait for the DR operation to complete before starting the reset.
6623226	The Solaris command `lockstat`(1M) or the dtrace lockstat provider might cause a system panic.	Do not use the Solaris `lockstat`(1M) command or the dtrace lockstat provider.
6680733	Sun Quad-port Gigabit Ethernet Adapter UTP (QGC) & Sun Dual 10 GigE Fiber XFP Low Profile Adapter (XGF) NICs might panic under high load conditions.	If posible, use the card in x8 slot. Otherise, there is no workaround.
6689757	Sun Dual 10 GigE Fiber XFP Low Profile Adapter (XGF) with a single or improperly installed XFP optical transceivers might cause the following error to show on the console: `The XFP optical transceiver is broken or missing.`	Check and make sure that both XFP optical transceivers are firmly seated in the housing. Do not mix INTEL and Sun XFP optical transceivers in the same Adapter. Do NOT plumb a port with the `ifconfig` command if the port does not contain an XFP optical transceiver or it contains one but the transceiver is not in use.

Solaris Issues Fixed in Solaris 10 10/08

TABLE 3-5 lists issues that have been fixed in the Solaris 10 10/08 OS. You might encounter them in earlier releases.

TABLE 3-5 Solaris OS Issues and Workarounds Fixed in Solaris 10 10/08 *(1 of 3)*

CR ID	Description	Workaround
6511374	Memory translation warning messages might appear during boot if memory banks were disabled due to excessive errors.	After the system is rebooted, the `fmadm repair` command can be used to prevent a recurrence of the problem on the next boot.

TABLE 3-5 Solaris OS Issues and Workarounds Fixed in Solaris 10 10/08 *(2 of 3)*

CR ID	Description	Workaround

6533686	When XSCF is low on system resources, DR `deleteboard` or `moveboard` operations that relocate permanent memory might fail with one or more of these errors:
	`SCF busy`
	`DR parallel copy timeout`
	This applies only to Quad-XSB configured System Boards hosting multiple domains.
		Retry the DR operation at a later time.

6556742	The system panics when DiskSuite cannot read the `metadb` during DR. This bug affects the following cards: • SG-XPCIE2FC-QF4, 4-Gigabyte PCI-e Dual-Port Fiber Channel HBA • SG-XPCIE1FC-QF4, 4-Gigabyte PCI-e Single-Port Fiber Channel HBA • SG-XPCI2FC-QF4, 4-Gigabyte PCI-X Dual-Port Fiber Channel HBA • SG-XPCI1FC-QF4, 4-Gigabyte PCI-X Single-Port Fiber Channel HBA	Panic can be avoided when a duplicated copy of the `metadb` is accessible via another Host Bus Adaptor.
6589833	The DR `addboard` command might cause a system hang if you are adding a Sun StorageTek Enterprise Class 4-Gigabyte Dual-Port Fiber Channel PCI-E HBA card (SG-XPCIE2FC-QF4) at the same time that an SAP process is attempting to access storage devices attached to this card. The chance of a system hang is increased if the following cards are used for heavy network traffic: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter	There is no workaround.
6608404	Hot-plug of the X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP card in slot 1 might cause other network devices to fail.	To avoid the defect, do not install this card in slot 1.

TABLE 3-5 Solaris OS Issues and Workarounds Fixed in Solaris 10 10/08 *(3 of 3)*

CR ID	Description	Workaround
6614737	The DR `deleteboard`(8) and `moveboard`(8) operations might hang if any of the following conditions exist: A DIMM has been degraded. The domain contains system boards with different memory size.	Avoid performing DR operations if any of the following conditions exist: • *Degraded memory* – To determine whether the system contains degraded memory, use the XSCF command `showstatus`. • *Differing memory sizes* – To determine whether the domain contains system boards with different memory sizes, display the list of memory sizes using the XSCF command `showdevices` or the `prtdiag` command on the domain. If a DR command hangs, reboot the domain to recover.
6632549	`fmd service` on domain might fail to go into maintenance mode after DR operations.	Issue the following command on the domain: `# svcadm clear fmd`
6660197	DR might cause the domain to hang if either of the following conditions exist: • A domain contains 256 or more CPUs. • Memory error occurred and the DIMM has been degraded.	1. Set the following parameter in the system specification file (/etc/system): `set drmach:drmach_disable_mcopy = 1` 2. Reboot the domain.

6679370	The following message may be output on the console during system boot, addition of the External I/O Expansion Unit using hotplug, or an FMEMA operation by DR. .
	
	`SUNW-MSG-ID: SUN4-8000-75, TYPE: Fault, VER: 1, SEVERITY: Critical`
	`...`
	`DESC:`
	`A problem was detected in the PCIExpress subsystem.`
	`Refer to http://sun.com/msg/SUN4-8000-75 for more information.`
	`...`
		Add the following to `/etc/system` and then reboot the domain.
		`set pcie_expected_ce_mask = 0x2001`

6720261	If your domain is running Solaris 10 5/08 OS, the system might panic/trap during normal operation.	Set the following parameter in the system specification file (`/etc/system`): `set heaplp_use_stlb=0` Then reboot the domain.

Solaris Issues Fixed in Solaris 10 5/08

TABLE 3-6 lists issues that have been fixed in the Solaris 10 5/08 OS. You might encounter them in earlier releases.

TABLE 3-6 Solaris OS Issues and Workarounds Fixed in Solaris 10 5/08 *(1 of 4)*

CR ID	Description	Workaround
6348554	Using the `cfgadm -c disconnect` command on the following cards might hang the command: • SG-XPCIE2FC-QF – 4Sun StorageTek Enterprise Class 4-Gigabyte Dual-Port Fiber Channel PCI-E HBA • SG-XPCIE1FC-QF4 – Sun StorageTek Enterprise Class 4-Gigabyte Single-Port Fiber Channel PCI-E HBA • SG-XPCI2FC-QF4 – Sun StorageTek Enterprise Class 4-Gigabyte Dual-Port Fiber Channel PCI-X HBA • SG-XPCI1FC-QF4 – Sun StorageTek Enterprise Class 4-Gigabyte Single-Port Fiber Channel PCI-X HBA	Do not perform `cfgadm -c disconnect` operation on the affected cards.

6472153	If you create a Solaris Flash archive on a sun4u server other than an M4000/M5000/M8000/M9000 server, then install it on one of these servers, the console's TTY flags will not be set correctly. This can cause the console to lose characters during stress.	Just after installing Solaris OS from a Solaris Flash archive, telnet into the M4000/M5000/M8000/M9000 server to reset the console's TTY flags as follows:
		`# sttydefs -r console`
		`# sttydefs -a console -i "9600 hupcl opost \`
		`onlcr crtscts" -f "9600"`
		This procedure is required only once.

6522433	The incorrect motherboard might be identified by `fmdump` for cpu faults after reboot.	Check system status on XSCF.
6527811	The `showhardconf`(8) command on the XSCF cannot display PCI card information that is installed in the External I/O Expansion Unit, if the External I/O Expansion Unit is configured using PCI hot-plug.	There is no workaround. When each PCI card in the External I/O Expansion Unit is configured using PCI hot-plug, the PCI card information is displayed correctly.

TABLE 3-6 Solaris OS Issues and Workarounds Fixed in Solaris 10 5/08 *(2 of 4)*

CR ID	Description	Workaround

6536564	`showlogs`(8) and `showstatus`(8) command might report wrong I/O component.	To avoid this problem, issue the following commands on the domain.
		`# cd /usr/platform/SUNW,SPARCEnterprise/lib/fm/topo/plugins`
		`# mv ioboard.so ioboard.so.orig`
		`# svcadm restart fmd`
		
		Contact a service engineer if the following messages are displayed:
		`SUNW-MSG-ID: SUNOS-8000-1L, TYPE: Defect, VER: 1, SEVERITY: Minor`
		`EVENT-TIME: Sun May 6 18:22:24 PDT 2007`
		`PLATFORM: SUNW,SPARC-Enterprise, CSN: BE80601007, HOSTNAME: sparc`

6545143	There is a low probability that a system panic can occur during trap processing of a TLB miss for a user stack address. The problem can occur if the user stack is unmapped concurrently with the user process executing a flush windows trap (`ta 3`). The panic message will contain the following string: `bad kernel MMU trap at TL 2`	There is no workaround.
6545685	If the system has detected Correctable MemoryErrors (CE) at power-on self-test (POST), the domains might incorrectly degrade 4 or 8 DIMMs.	Increase the memory patrol timeout values used via the following setting in `/etc/system` and reboot the system: `set mc-opl:mc_max_rewrite_loop = 20000`
6546188	The system panics when running hot-plug (`cfgadm`) and DR operations (`addboard` and `deleteboard`) on the following cards: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter	There is no workaround.

TABLE 3-6 Solaris OS Issues and Workarounds Fixed in Solaris 10 5/08 *(3 of 4)*

CR ID	Description	Workaround
6551356	The system panics when running hot-plug (`cfgadm`) to configure a previously unconfigured card. The message "WARNING: PCI Expansion ROM is not accessible" will be seen on the console shortly before the system panic. The following cards are affected by this defect: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter	Use `cfgadm -c disconnect` to completely remove the card. After waiting at least 10 seconds, the card might be configured back into the domain using the `cfgadm -c configure` command.
6559504	Messages of the form `nxge: NOTICE: nxge_ipp_eccue_valid_check: rd_ptr = nnn wr_ptr = nnn` will be observed on the console with the following cards: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter	These messages can be safely ignored.
6563785	Hot-plug operation with the following cards might fail if a card is disconnected and then immediately reconnected: • SG-XPCIE2SCSIU320Z – Sun StorageTek PCI-E Dual-Port Ultra320 SCSI HBA • SGXPCI2SCSILM320-Z – Sun StorageTek PCI Dual-Port Ultra 320 SCSI HBA	After disconnecting a card, wait for a few seconds before re-connecting.
6564934	Performing a DR `deleteboard` operation on a board which includes Permanent Memory when using the following network cards results in broken connections: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter	Reconfigure the affected network interfaces after the completion of the DR operation. For basic network configuration procedures, refer to the `ifconfig` man page for more information.
6568417	After a successful CPU DR `deleteboard` operation, the system panics when the following network interfaces are in use: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10-Gigabit Ethernet Fiber XFP Low profile Adapter	Add the following line to `/etc/system` and reboot the system: `set ip:ip_soft_rings_cnt=0`

TABLE 3-6 Solaris OS Issues and Workarounds Fixed in Solaris 10 5/08 *(4 of 4)*

CR ID	Description	Workaround
6571370	Use of the following cards have been observed to cause data corruption in stress test under laboratory conditions: • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10-Gigabit Ethernet Fiber XFP Low profile Adapter	Add the following line in `/etc/system` and reboot the system: `set nxge:nxge_rx_threshold_hi=0`
6589546	`prtdiag` does not show all IO devices of the following cards: • SG-XPCIE2FC-EM4 Sun StorageTek Enterprise Class 4-Gigabyte Dual-Port Fiber Channel PCI-E HBA • SG-XPCIE1FC-EM4 Sun StorageTek Enterprise Class 4-Gigabyte Single-Port Fiber Channel PCI-E HBA	Use `prtdiag -v` for full output.
6663570	DR operations involving the lowest numbered CPU might cause the domain to panic.	Do not use DR to remove the system board that hosts the CPU with the lowest CPU ID. Use the Solaris `prtdiag` command to identify the CPU with the lowest CPU ID.

Solaris Issues Fixed in Solaris 10 8/07

TABLE 3-7 lists issues that have been fixed in the Solaris 10 8/07 OS. You might encounter them in earlier releases.

TABLE 3-7 Solaris OS Issues and Workarounds Fixed in Solaris 10 8/07 *(1 of 4)*

CR ID	Description	Workaround
6416224	System performance can degrade using a single NIC card with more than 5,000 connections.	Use multiple NIC cards to split network connections.
6441349	I/O error can hang the system.	There is no workaround.
6485555	On-board Gigabit Ethernet NVRAM corruption could occur due to a race condition. The window of opportunity for this race condition is very small.	There is no workaround.

TABLE 3-7 Solaris OS Issues and Workarounds Fixed in Solaris 10 8/07 *(2 of 4)*

CR ID	Description	Workaround

6496337	The "cpumem-diagnosis" module may fail to load after uncorrectable error(UE) panic. Systems will function correctly but events normally automatically diagnosed by FMA using this module will require manual diagnosis.
	Example:
	`SUNW-MSG-ID: FMD-8000-2K, TYPE: Defect, VER: 1, SEVERITY: Minor`
	`EVENT-TIME: Thu Feb 15 15:46:57 JST 2007`
	`PLATFORM: SUNW,SPARC-Enterprise, CSN: BE80601007, HOSTNAME: col2-ffem7-d0`
		If the problem has already occurred:
		1. Remove the `cpumemdiagnosis` file.
		# **`rm /var/fm/fmd/ckpt/cpumemdiagnosis/cpumem-diagnosis`**
		2. Restart `fmd service`.
		# **`svcadm restart fmd`**
		
		To avoid this problem in advance, add "`rm -f /var/fm/fmd/ckpt/cpumemdiagnosis/cpumem-diagnosis`" in the `/lib/svc/method/svc-dumpadm` file as below.
		`#`
		`savedev=none`
		`rm -f /var/fm/fmd/ckpt/cpumemdiagnosis/cpumem-diagnosis`
		`#`

6495303	The use of a PCIe Dual-Port Ultra320 SCSI controller card (SG-(X)PCIE2SCSIU320Z) in IOU Slot 1 on a Sun SPARC Enterprise M4000/M5000 server might result in a system panic.	Do not use this card in IOU Slot 1.
6498283	Using the DR `deleteboard` command while `psradm` operations are running on a domain might cause a system panic.	There is no workaround.

6499304	Unexpected message is displayed on console and CPU isn't offlined when numerous correctable error(CE) occur.
	Example:
	`SUNW-MSG-ID: FMD-8000-11, TYPE: Defect, VER: 1, SEVERITY: Minor`
	`EVENT-TIME: Fri Feb 2 18:31:07 JST 2007`
	`PLATFORM: SPARC-Enterprise, CSN: BE80601035, HOSTNAME: FF2-35-0`
		Check CPU status on XSCF.

TABLE 3-7 Solaris OS Issues and Workarounds Fixed in Solaris 10 8/07 *(3 of 4)*

CR ID	Description	Workaround
6502204	Unexpected error messages may be displayed on console on booting after CPU UE panic. Example: `SUNW-MSG-ID: FMD-8000-11, TYPE: Defect, VER: 1, SEVERITY: Minor EVENT-TIME: Tue Jan 9 20:45:08 JST 2007 PLATFORM: SUNW,SPARC-Enterprise, CSN: 2030636002, HOSTNAME: P2-DC1-16-d0`	If you see unexpected messages, use the `showdomainstatus`(8) command to check system status on XSCF.
6502750	Inserted or removed hotplugged PCI card may not output notification message.	There is no workaround.
6508432	A large number of spurious PCIe correctable errors can be recorded in the FMA error log.	To mask these errors, add the following entry to `/etc/system` and reboot the system: `set pcie:pcie_aer_ce_mask = 0x2001`
6508434	The domain may panic when an additional PCI-X card is installed or a PCI-X card is replaced using PCI hot-plug.	Do not insert a different type of PCI-X card on the same PCI slot by using PCI hot-plug.
6510861	When using the PCIe Dual-Port Ultra320 SCSI controller card (SG-(X)PCIE2SCSIU320Z), a PCIe correctable error causes a Solaris panic.	Add the following entry to `/etc/system` to prevent the problem: `set pcie:pcie_aer_ce_mask = 0x31c1`
6520990	When a domain reboots, SCF might not be able to service other domains that share the same physical board. DR operation can exceed the default timeout period and panic can occur.	Increase the DR timeout period by setting the following statement in `/etc/system` and reboot your system: `set drmach:fmem_timeout = 30`
6530178	DR `addboard` command can hang. Once the problem is observed, further DR operations are blocked. Recovery requires reboot of the domain.	There is no workaround.
6530288	`cfgadm`(1M) command may not correctly show Ap_Id format.	There is no workaround.
6534471	Systems might panic/trap during normal operation.	If a patch is not available, disable the kernel large page sTLB programming. In the file `/etc/system`, change the `heaplp_use_stlb` variable to 0: `set heaplp_use_stlb=0`
6535564	PCI hot-plug to PCI slot #0, #1 or External I/O Expansion Unit may fail on XSB added by DR.	Use DR instead of PCI hot plug if need to add or remove PCI card on the XSB.
6539084	There is a low probability of a domain panic during reboot when the Sun Quad GbE UTP x8 PCIe (X4447A-Z) card is present in a domain.	There is no workaround.

TABLE 3-7 Solaris OS Issues and Workarounds Fixed in Solaris 10 8/07 *(4 of 4)*

CR ID	Description	Workaround
6539909	Do not use the following I/O cards for network access when you are using the `boot net install` command to install the Solaris OS: • X4447A-Z/X4447A-Z, PCIe Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z/X1027A-Z, PCIe Dual 10-Gigabit Ethernet Fiber XFP	Use an alternative type of network card or onboard network device to install the Solaris OS via the network.
6542632	Memory leak in PCIe module if driver attach fails.	There is no workaround.

Documentation Updates

This section contains late-breaking information that became known after the documentation set was published or was very recently added.

TABLE 3-8 Documentation Updates

Document	Issue	Change
SPARC Enterprise M3000/M4000/M5000/ M8000/M9000 Servers XSCF Reference Manual and XSCF man pages	`setdualpowerfeed`(8) command	The following description was added to DESCRIPTION in the XCP 1091 release: The dual power feed mode cannot be used with 100V power on M4000/M5000 servers.
	`showdevices`(8) command	The following information was added in the XCP 1091 release: After a DR operation and subsequent domain power cycle, you must run the command `devfsadm -v` command before running `showdevices`. Otherwise, the resulting display from `showdevices` will be erroneous.
	`showenvironment`(8) command	The following information was added in the XCP 1091 release: The power operand is supported only on M3000 servers, and the air operand is supported only on M3000/M8000/M9000 servers. Neither is supported on M4000/M5000 servers.

TABLE 3-8 Documentation Updates

Document	Issue	Change
	`setad`(8) and `setldapssl`(8)	The following information has not yet been added to the `userdomain` description in the OPERANDS section of the `setad`(8) and `setldapssl`(8) man pages: A user domain can be configured explicitly through the `setad userdomain` command on XSCF, or entered at login prompt using the form, *user@domain*. • If a `userdomain` is specified at the login prompt – for example, `login`: **`ima.admin@dc01.example.com`** – it is used for this login attempt. Any pre-configured userdomains (as displayed by `showad userdomain`) are ignored. • If a `userdomain` is not specified at the login prompt – for example, `login`: **`ima.admin`** – the XSCF checks each of the pre-configured user domains, in turn, to authenticate the user.
SPARC Enterprise M3000/M4000/M5000/ M8000/M9000 Servers XSCF User's Guide	Active Directory and LDAP over SSL	The description of these features, described in "Active Directory and LDAP over SSL" on page 2, has not yet been added to the *XSCF User's Guide*.
	XSCF Unit/Firmware Updates, Chapter 8.1.10	The following information has not yet beed added to the document: Steps 2 and 3 should be replaced in these sections: • Confirming That the XSCF Firmware is Updated When the XSCF Unit is Replaced (in a System with a Single XSCF Unit or Both Replacement in a System with Redundant XSCF Units • Confirming That the XSCF Firmware is Updated When the MBU is Replaced (in the M3000 Server) The replacement steps are: 2. If the replacement unit and the replaced unit have different versions, a message is displayed. In this case, the firmware is not updated automatically. The operator must match the number of the firmware versions. 3. When you update, follow the procedure in "Updating XCP From External Media" or "Updating XCP from the Network." After updating, confirm the version.