

**SPARC Enterprise M3000/M4000/M5000/
M8000/M9000 Servers**

Product Notes for XCP Version 1112



Part No.: E29470-02
October 2012

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Using This Documentation

These product notes contain important and late-breaking information about the SPARC Enterprise M3000/M4000/M5000/M8000/M9000 servers – sometimes called M-Series servers – from Oracle Corporation and Fujitsu Limited. It covers hardware, software, firmware, and documentation related to the XCP 1112 firmware release.

Some references to server names and document names are abbreviated for readability. For example, if you see a reference to the M9000 server, note that the full product name is the SPARC Enterprise M9000 server. And if you see a reference to the *XSCF Reference Manual*, note that the full document name is the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF Reference Manual*.

Besides this document, you also should read, at minimum, the overview guide for your server, the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Administration Guide*, and the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User's Guide*.

At publication of this document, M-Series servers are shipping with XCP 1111 firmware supported or installed. That might no longer be the latest available version, or the version now installed. Always see the Product Notes that apply to the firmware on your server, and those that apply to the latest firmware release.

- [“Related Documentation” on page x](#)
- [“Feedback” on page xi](#)
- [“Access to Oracle Support” on page xii](#)

Related Documentation

Documentation	Links
Sun Oracle software-related manuals (Oracle Solaris OS, and so on)	http://www.oracle.com/documentation
Oracle M-series server documents	http://www.oracle.com/technetwork/documentation/sparc-mseries-servers-252709.html

The following table lists related M-Series documents. All are online only unless noted otherwise:

Related SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Documents

- SPARC Enterprise M3000 Server Getting Started Guide* (printed document)
 - SPARC Enterprise M4000/M5000 Servers Getting Started Guide* (printed document)
 - SPARC Enterprise M8000/M9000 Servers Getting Started Guide* (printed document)
 - SPARC Enterprise M3000 Server Overview Guide*
 - SPARC Enterprise M4000/M5000 Servers Overview Guide*
 - SPARC Enterprise M8000/M9000 Servers Overview Guide*
 - SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Important Legal and Safety Information* (printed document)
 - SPARC Enterprise M3000 Server Safety and Compliance Guide*
 - SPARC Enterprise M4000/M5000 Servers Safety and Compliance Guide*
 - SPARC Enterprise M8000/M9000 Servers Safety and Compliance Guide*
 - External I/O Expansion Unit Safety and Compliance Guide*
 - SPARC Enterprise M4000 Server Unpacking Guide* (printed document)
 - SPARC Enterprise M5000 Server Unpacking Guide* (printed document)
 - SPARC Enterprise M8000/M9000 Servers Unpacking Guide* (printed document)
 - SPARC Enterprise M3000 Server Installation Guide*
 - SPARC Enterprise M4000/M5000 Servers Installation Guide*
 - SPARC Enterprise M8000/M9000 Servers Installation Guide*
 - SPARC Enterprise M3000 Server Service Manual*
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Related SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Documents

SPARC Enterprise M4000/M5000 Servers Service Manual

SPARC Enterprise M8000/M9000 Servers Service Manual

External I/O Expansion Unit Installation and Service Manual

SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Administration Guide

SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User's Guide

SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF Reference Manual

SPARC Enterprise M4000/M5000/M8000/M9000 Servers Dynamic Reconfiguration (DR) User's Guide

SPARC Enterprise M4000/M5000/M8000/M9000 Servers Capacity on Demand (COD) User's Guide

SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Product Notes (beginning with XCP 1100)

SPARC Enterprise M3000 Server Product Notes (pre-XCP 1100)

SPARC Enterprise M4000/M5000 Servers Product Notes (pre-XCP 1100)

SPARC Enterprise M8000/M9000 Servers Product Notes (pre-XCP 1100)

External I/O Expansion Unit Product Notes

SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Glossary

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Introduction

This document describes the XCP 1112 firmware release as supported on M-Series (M3000/M4000/M5000/M8000/M9000) servers. Except where noted otherwise, the information in this document applies to all of these servers.

Note – XCP 1112 firmware is required for all M-Series servers. See [“Mandatory Upgrade to XCP Version 1112”](#) on page 5.

This chapter contains important information that applies to firmware, hardware and software as of this firmware release. Other sections describe matters limited to firmware, software, or hardware.

Note – Oracle publishes Product Notes for regular firmware releases, such as XCP 1100, but for only some updates, such as XCP 1112. Always check the Oracle firmware download site for the latest available firmware and its associated README file.

Generally, Product Notes content supersedes that of other product documentation because Product Notes are published more frequently. However, in case of a conflict, compare the publication date on each document’s title page. And note that online man pages are sometimes updated more frequently than printed documents, including Product Notes.

Hardware, Firmware, and Software Compatibility



Caution – Before installing any processor – such as the SPARC64 VII+ processor – verify that your server satisfies all requirements for that processor type. Such requirements include minimum required XCP firmware and Oracle Solaris OS versions, and all required patches.

You can find current information about Oracle Solaris and XCP at:

<http://myoraclesupport.com>

For **XCP compatibility information**, see MOS Article ID 1002631.1, *Sun SPARC Enterprise M3000, M4000, M5000, M8000, M9000 XSCF Control Package (XCP) Firmware Image Software Version Matrix Information*. The matrix lists XCP configurations and download packages.

For **Oracle Solaris compatibility information**, see MOS Article ID 1145383.1, *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Server Matrix for Hardware, Firmware and Software*.

Obtaining Oracle Solaris Patches

Always refer to a patch's README for information about patch requirements and special installation instructions. The two-digit suffix of each patch represents the minimum revision level of the patch. Check <http://myoraclesupport.com> for the latest patch revision. Apply patches in the order listed.

The Oracle Sun 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.oracle.com/cd/E19107-01/>

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

Two options are available to register your system and to use the Oracle Sun Connection Update Manager to obtain the latest Oracle 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 Oracle Solaris OS.



Caution – For SPARC Enterprise M4000/M5000 servers running the Oracle 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://myoraclesupport.com>. Note that Oracle Solaris 10 11/06 does not support SPARC64 VII processors.

Information About XCP 1112 Firmware

This chapter covers updates to XCP firmware in this release as well as other notable changes.

Note – This release is an update of the XCP 1100 firmware. For more information about the XCP 1100 release, see the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Product Notes for XCP Version 1100*.

Mandatory Upgrade to XCP Version 1112

XCP Version 1112 includes a required upgrade that prevents a fail or halt due to Berkeley DataBase corruption.

For details, log in to My Oracle Support (MOS) and search the Knowledge Base for MOS Doc ID 1458754.1 at:

<https://support.oracle.com>

XCP Support for RAID-Capable IOUA Cards in M8000/M9000 Servers

XCP Version 1112 supports RAID-capable IOUA cards on M8000/M9000 servers. (XCP Version 1111 was the first XCP release to support RAID-capable IOUA cards on M8000/M9000 servers.) System displays identify RAID-capable IOUA cards as “Type:2”.

Use of these cards carries certain Oracle Solaris OS and patch requirements. For details, log in to My Oracle Support (MOS) and search the Knowledge Base for MOS Doc ID 1401119.1 at:

<https://supporthtml.oracle.com>

Upgrading and Downgrading XCP

XCP Compatibility

For current XCP compatibility information, see “[Hardware, Firmware, and Software Compatibility](#)” on page 2.

Upgrading to This Release

For information about upgrading your firmware, see the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers XSCF User’s Guide*.

Note – After upgrading XCP firmware, use the `rebootxscf(8)` command to reset the XSCF.

Updating the OpenBoot PROM Firmware

To complete updating the OpenBoot PROM (OBP) firmware in the target domain, restart the domain as soon as possible after completing the update.

Upgrading From a Version Earlier Than XCP 1050

If your server is running firmware older than XCP 1050, you cannot directly upgrade to this XCP release. You must first upgrade 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.

Upgrading an M8000/M9000 Server From a Version Earlier Than XCP 1082

If your M8000/M9000 server is running firmware older than XCP 1082, execute the `rebootxscf(8)` command from the Active XSCF to reset both it and the Standby XSCF before upgrading to this XCP release.

Domain Restart Required After Certain Type of XCP Upgrade

On a domain that has been in operation during an update from an XCP 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.

Downgrading XCP Firmware

Downgrading your XCP firmware to an earlier release would remove improvements and corrections provided in the latest release and could lead to a system failure due to mismatched dependencies. However, if you must downgrade your XCP release, execute the following command afterward to clear old-style audit logs:

```
XSCF> restoredefaults -c xscfu
```

XCP Functionality Issues and Limitations

This section describes known XCP firmware issues.

Note – 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, refer to the Sun Blueprint document, *Using NTP to Control and Synchronize System Clocks* at the following site:

<https://wikis.oracle.com/display/CommSuite/Messaging+Server+NFS+Guidelines+and+Requirements>

TABLE 2-1 XCP Functionality Issues and Limitations

M3000	M4000 M500	M8000 M9000	Description
o	o	o	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. See “Remote Initial Login” on page 15.
o	o	o	An XSCF user account user name cannot match an LDAP user name, and an XSCF user account number (UID) cannot match an LDAP UID number.
o	o	o	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.
o	o	o	Before using the XSCF Web, disable pop-up blocking and remove any plug-ins such as the search tool installed with the browser.
o	o	o	XSCF-LAN is compliant with auto-negotiation. Set the network device that 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 might occur.

TABLE 2-1 XCP Functionality Issues and Limitations (Continued)

M3000	M4000 M500	M8000 M9000	Description
	o	o	For this XCP release, the XSCF browser user interface (XSCF Web) does not support the External I/O Expansion Unit Manager feature.
	o	o	Due to DR and ZFS file system interoperability issues, M4000/M5000 servers are shipped pre-installed using the UFS file system. See “CR 6660168” on page 22.
o	o	o	The XCP 1093 release was the first XCP release to support a domain running Oracle Solaris 10 9/10 with the processor groups observability feature enabled. Please refer to Oracle Solaris 10 9/10 OS Product Notes for more information.

XCP Known Issues (CRs) and Workarounds

This section lists significant CRs and, if available, suggested workarounds.

TABLE 2-2 XCP Issues and Workarounds

CR ID	M3000	M4000 M500	M8000 M9000	Description	Workaround
7009084	o	o	o	If <code>setpasswordpolicy -r</code> is set to 0, existing XCSF users are unable to change their password and get the error message, <code>password: Operation failed</code> .	Do not execute the command, <code>setpasswordpolicy -r 0</code> .
7018644	o	o	o	Faults marked as REPAIRED/RESOLVED on a domain are resent to the XSCF each time the domain is rebooted or the XSCF is rebooted. If the XSCF is not replaced, this is not a problem and no new fault is generated. However, if the XSCF on M4000/M5000 servers or the MBU on M3000 servers is replaced, a new fault for the resolved problem might be generated.	When a new fault is generated after the XSCF or MBU is replaced, check the <code>solaris -u uid()</code> in <code>fmdump -V</code> output to determine if the fault is genuine.
7025452	o	o	o	If one or more domains experience a significant amount of hardware related failures and the affected domains reboot often, the fault data can accumulate, using up system memory resources and causing a service processor failover.	There is no workaround. Reboot the service processor to recover.
7081753	o	o	o	Executing <code>setldap -p</code> with a password that contains a colon (:) causes a problem with the LDAP configuration.	There is no workaround. To recover, execute <code>restoreconfig(8)</code> to restore the last working LDAP configuration.

TABLE 2-2 XCP Issues and Workarounds (Continued)

CR ID	M4000			Description	Workaround
	M3000	M500	M8000 M9000		
7087056	o	o	o	After regenerating XSCF host public key with <code>setssh -c genhostkey</code> , other connected XSCF users might encounter a “permission denied” error when executing the XSCF command line.	XSCF reboot is required after generating the XSCF host key.
7115294	o	o	o	The depleted life (lifetime) of the energy storage module (ESM) on a Sun Flash Accelerator F20 PCIe card might be inaccurately reported or cannot be displayed. A depleted ESM might not be reported.	None.
7145253	o	o	o	When the XSCFU is monitored by Ops Center, the service processor can sometimes reset or failover unexpectedly.	Disable Ops Center monitoring of the XSCFU.

Information About Software

This chapter describes Oracle Solaris software issues and workarounds as related to this XCP firmware release.

Your server was shipped with the Oracle Solaris Operating System and Java Enterprise System software preinstalled.

Software Compatibility

For current Oracle Solaris compatibility information, see [“Hardware, Firmware, and Software Compatibility”](#) on page 2.

Capacity on Demand (COD)

The Capacity on Demand (COD) feature has not changed in this release. The information in this section might be of interest only to those updating from an earlier XCP release.

The XCP 1100 firmware release introduced support for the `showcodactivationhistory(8)` command, which lets you view or transfer COD activation history.

COD Changes in XCP 1101

The XCP 1101 firmware introduced a new release of the Capacity on Demand (COD) feature. See the latest version of the *SPARC Enterprise M4000/M5000/M8000/M9000 Servers Capacity on Demand (COD) User's Guide*. Changes include:

- Support has been added for the new, streamlined process for acquiring COD keys through Oracle's E-Delivery process. Any old-style keys in the COD database continue to work, even when new-style keys are present.

Note – New-style keys will not work with versions of XCP prior to 1101.

- Support has been added for COD keys that are not assigned to a server's individual Chassis HostID. However, note that when a COD Activation Permit is purchased, it can only be used on the server for which it was purchased.
- Support has been ended for the headroom feature. If you have any COD processors running on headroom, either uninstall the number of COD processors from domains equal to the number in violation or purchase and install COD Hardware Activation Options for those COD resources in use but not yet purchased. Then execute `setcod 0` to set headroom to zero, and power the domain off then on to ensure only authorized COD resources are installed.

COD Changes in XCP 1102

COD Headroom

The XCP 1101 firmware ended support for the headroom feature on Oracle M-Series servers. Beginning with the XCP 1102 firmware, a non-zero headroom value resulted in a COD violation. If you have any COD processors running on headroom, either uninstall the number of COD processors from domains equal to the number in violation, or purchase and install COD Hardware Activation Options for those COD resources in use but not yet purchased. Then execute `setcod 0` to set headroom to zero, and power the domain off then on to ensure only authorized COD resources are installed.

COD Warning and Violation Messages

Beginning with XCP 1102 firmware, if the COD headroom value is greater than zero when the server is upgraded, the COD software automatically resets it to zero and records a warning message stating so in the monitor log (viewable by `showlogs(8)`). However, each time the XSCF is initialized, the warning appears again. To avoid

future warnings, execute `setcod 0` to persistently set headroom to zero. In addition, if your server is employing headroom to use COD processors on powered-on domains, COD violations are logged and `showcod(8)` displays `VIOLATION` status. To stop the warning and violation messages, execute the procedures described in COD Headroom, above.

Sun Flash Accelerator F20 PCIe Card

The XCP 1102 firmware introduced a fix for CR 6999483, changing the alarm threshold from two years to three years for the Sun Flash Accelerator F20 PCIe card. If your M4000/M5000 or M8000/M9000 server has any F20 cards and is running an older version of XCP firmware, update your server to the latest firmware release – or at least the XCP 1102 firmware – as soon as possible.

Remote Initial Login

In addition to the standard *default* login, M-Series 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 logged in as the default user or as temporary `admin` has successfully added the first user with valid password and privileges.

Also note that 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`.

Fault Management

Fault management software does not differentiate between SPARC64 VII+ and SPARC64 VII processors. Ereport/fault event strings display SPARC64 VII for both processor types, for example:

```
fault.chassis.SPARC-Enterprise.cpu.SPARC64-VII.core.ce
```

However, the FRU field of the fault does contain the correct part number, allowing you to identify the processor type. For example:

```
XSCF> fmdump -v
Nov 19 00:58:18.6244 1147afbe-d006-4d46-8cf2-d9b6e5a893dc SCF-8007-AR
100% fault.chassis.SPARC-Enterprise.cpu.SPARC64-VII.way.ce

Problem in: hc:///chassis=0/cmu=1/cpu=0
Affects: hc:///chassis=0/cmu=1/cpu=0
FRU: hc//:product-id=SPARC Enterprise M8000:chassis-id= \e
2030638006:server-id=aaa-dc1-3-sf0:serial=PP1032026V:part=CA06620-D061 B1 \e
371-4929-02:revision=0a01/component=/CMU#1/CPUM#0
Location: /CMU#1/CPUM#0
```

Identifying Degraded Memory in a System

▼ To Identify Degraded Memory in a System

1. Log in to XSCF.
2. Type the following command:

```
XSCF> showstatus
```

The following example reveals that DIMM number 0A on the motherboard unit has degraded memory

```
XSCF> showstatus  
MBU_A Status: Normal;  
MEM#0A Status:Degraded
```

Sun Java Enterprise System

The Sun Java Enterprise System software is a comprehensive set of software and life cycle services that make the most of your software investment. It might not include patches that are mandatory for your server.

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

Enabling the Web Console SMF Service

▼ To 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://myoraclesupport.com>

If you download a fresh copy of software, that software might not include patches that are mandatory for your server. After installing the software, verify that all required patches are installed and install any that are not.

Software Functionality Issues and Limitations

This section describes software functionality issues and limitations in this release.

TABLE 3-1 Software Functionality Issues and Limitations

M3000	M4000 M5000	M8000 M9000	Issue
o	o	o	The Remote Cabinet Interface (RCI) function is not supported on Oracle M-series servers.
	o	o	On occasion, a M4000/M5000/M8000 /M9000 server is unable to DR after an XSCF failover to or from the backup XSCF. This rare occurrence was once designated as CR 6588650. There is no workaround.
o	o	o	The <code>setsnmp(8)</code> and <code>showsnp(8)</code> 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.
	o		The following functions, which display power consumption, are not supported on M4000/M5000 servers. Any values displayed are invalid: <ul style="list-style-type: none"> • The <code>power</code> operand of the <code>showenvironment(8)</code> command. • XSCF Web.
o	o	o	In the <code>settimezone -c addst</code> command, when you set eight or more letters to the abbreviation of time zone and the name of Daylight Saving Time, execution of the <code>showlogs</code> command induces a segmentation fault and results in an error. [CR 6789066]. Workaround: Specify the abbreviation of time zone and the name of Daylight Saving Time in seven or fewer letters.
o			The M3000 server does not support External I/O Expansion Units.
o	o	o	Only M3000 servers with a SPARC64 VII+ (2.86 GHz) processor let you use the <code>raidctl(1M)</code> command to create a hardware RAID volume using the onboard SAS/LSI controller. All M-Series servers support use of the <code>raidctl(1M)</code> command to view disk/controller status, and on any PCI host bus adapter (HBA) installed in the system. The RAID-creation limitation was once designated as CR 6723202. There is no workaround.

Oracle Solaris OS Issues (CRs) and Workarounds

This section contains information about Oracle Solaris OS issues known at time of publication. The following tables list issues you might encounter, depending in part on which Oracle Solaris OS release you are using.

Known Issues in All Supported Oracle Solaris Releases

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

TABLE 3-2 Known Oracle Solaris Issues and Workarounds

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
4816837		o	o	System hangs when executing parallel hot-plug operation with SP DR in suspend phase.	There is no workaround.
6459540		o	o	The DAT72 internal tape drive connected to M4000/M5000/M8000/M9000 servers might time out during tape operations. The device might also be identified by the system as a QIC drive.	Add the following definition to <code>/kernel/drv/st.conf</code> s: <pre>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;</pre> There are four spaces between SEAGATE DAT and DAT72-000.
6522017		o	o	Domains using the Oracle ZFS file system cannot use DR.	Set the maximum size of the ZFS ARC lower. For detailed assistance, contact your authorized service representative.

TABLE 3-2 Known Oracle Solaris Issues and Workarounds (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6531036	o	o	o	The error message <code>network initialization failed</code> appears repeatedly after a boot net installation.	There is no workaround.
6532215	o	o	o	<code>volfs</code> or <code>dscp</code> services might fail when a domain is booted.	Restart the service. To avoid the problem, issue the following commands. <pre># svccfg -s dscp setprop \ start/timeout_seconds=count: 300 # svccfg -s volfs setprop \ start/timeout_seconds=count: 300 # svcadm refresh dscp # svcadm refresh volfs</pre>
6588650		o	o	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.
6589644			o	When XSCF switchover happens on an M8000/M9000 server after the system board has been added using the <code>addboard(8)</code> command, the console is no longer available.	Press <code>CTRL-q</code> to recover.
6592302		o	o	Unsuccessful DR operation leaves memory partially configured.	It might be possible to recover by adding the board back to the domain with an <code>addboard -d</code> command. Otherwise try <code>deleteboard(8)</code> again.
6611966		o	o	DR <code>deleteboard(8)</code> and <code>moveboard(8)</code> operations might fail. Example for messages on domain: <code>drmach: WARNING: Device driver failure: /pcidcs: <xxx></code> <code>config_change_state:</code> Hardware specific failure: <code>unconfigure SB1: Device driver failure: /pci</code>	Try DR operations again.

TABLE 3-2 Known Oracle Solaris Issues and Workarounds (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6660168	o	o	o	See “CR 6660168” on page 22. It was removed from this table due to the length of the description.	
6674266		o	o	This CR is a duplicate of CR 6611966.	
6745410	o	o	o	Boot program ignores the <code>Kadb</code> option which causes the system not to boot.	None.
7009469	o			Creating a RAID configuration using the <code>raidctl(1M)</code> command generates a warning message on initial process. Subsequent RAID configurations do not.	None.
7135497			o	On systems with the RAID-capable IOUA card and running Oracle Solaris 11, after a RAID volume is deleted using <code>raidctl -d</code> , the <code>format</code> utility does not display the disk.	Execute <code>cfgadm(1M)</code> : <code>cfgadm -c unconfigure cn</code> where <code>cn</code> is the controller number.

CR 6660168

If a `abc.piowbeue-cpu` error occurs on a domain, the Oracle 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 Oracle 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.

RECACTION: Use `fmdump -v -u <EVENT-ID>` to locate the module. Use `fmadm reset <module>` to reset the module.

Workaround: If `fmd` service fails, issue the following command on the domain to recover:

```
# svcadm clear fmd
```

Then restart `cpumem-diagnosis`:

```
# fmadm restart cpumem-diagnosis
```

Issues Fixed in Oracle Solaris 10 8/11

TABLE 3-3 lists issues that have been fixed in the Oracle Solaris 10 8/11 OS. You might encounter them in earlier releases.

TABLE 3-3 Issues Fixed in Oracle Solaris 10 8/11

CR ID	M3000	M4000		M8000	
		M500	M9000	Description	Workaround
6794630	o	o	o	An attempt to use the GUI to install Oracle Solaris in a domain larger than 2TB might fail.	Use the command-line interface to install the Oracle Solaris OS.

Issues Fixed in Oracle Solaris 10 9/10

TABLE 3-4 lists issues that have been fixed in the Oracle Solaris 10 9/10 OS. You might encounter them in earlier releases.

TABLE 3-4 Issues Fixed in Oracle Solaris 10 9/10

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6888928	o	o	o	The IPMP interface fails since probe packets are not sent through that interface. Problem occurs with M3000/M4000/M5000/M8000/M9000. Seen on servers running the Oracle Solaris 10 10/09 OS and IPMP, or any Oracle Solaris release running IPMP with Patch 141444-09 installed.	Disable probe-based failure detection. See <i>IPMP Link-based Only Failure Detection with Solaris 10 Operating System (OS)</i> (Doc ID 1008064.1)
6668237	o	o	o	After DIMMs are replaced, the corresponding DIMM faults are not cleared on the domain.	Use the command <code>fmadm repair fmri uuid</code> to record the repair. Then use the command <code>fmadm rotate</code> to clear out any leftover events.
6872501	o	o	o	Cores are not offlined when requested by the XSCF. This CR affects only Oracle Solaris 10 5/09 and Oracle Solaris 10 10/09 releases.	Use <code>fmddump(1M)</code> with its <code>-v</code> option on the Service Processor to identify the faulty core. Once identified, use <code>psradm(8)</code> on the domain to offline the core.

Issues Fixed in Oracle Solaris 10 10/09

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

TABLE 3-5 Issues Fixed in Oracle Solaris 10 10/09

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6572827	o	o	o	The <code>prtdiag -v</code> command reports PCI bus types incorrectly. It reports "PCI" for PCI-X leaf devices and "UNKN" for legacy PCI devices.	There is no workaround.
6724307			o	Scheduler decisions are occasionally unbalanced. Sometimes two threads will be on one core (causing both to run at about half speed) while another core is idle. For many OpenMP and similar parallel applications, the application performance is limited by the speed of the slowest thread. Uneven scheduling is not common, perhaps 1 in 50 or 1 in 100 decisions. But if there are 128 threads running, then the application might have at least one uneven schedule event.	Use processor sets to prevent uneven threads to core assignment.
6800734		o	o	<code>deleteboard</code> hangs in a domain	There is no workaround.
6816913		o	o	The XSCF <code>showdevices(8)</code> 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 Oracle Solaris command <code>prtdiag(1M)</code> on the domain to report processor information.
6821108		o	o	DR and <code>showdevices(8)</code> don't work after XSCF reboot.	Reboot the XSCF service processor twice. Half the SAs (security associations) are deleted the first time, half are deleted the second time, so the second addition succeeds and IPsec communication is reestablished.
6827340	o	o	o	DR and Memory patrol might fail due to SCF command error.	There is no workaround.

Issues Fixed in Oracle Solaris 10 5/09

TABLE 3-6 lists issues that have been fixed in the Oracle Solaris 10 5/09 OS. You might encounter them in earlier releases.

TABLE 3-6 Issues Fixed in Oracle Solaris 10 5/09

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6588555		o	o	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	o	o	o	The Oracle Solaris command <code>lockstat(1M)</code> or the <code>dtrace lockstat</code> provider might cause a system panic.	Do not use the Oracle Solaris <code>lockstat(1M)</code> command or the <code>dtrace lockstat</code> provider.
6680733	o	o	o	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 possible, use the card in x8 slot. Otherwise, there is no workaround.
6689757	o	o	o	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.	Verify 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 Oracle Solaris command <code>ifconfig(1M)</code> if the port does not contain an XFP optical transceiver or it contains one but the transceiver is not in use.
6725885	o			The XCP command <code>cfgadm(8)</code> displays non-existent M3000 system boards (SB1 to SB15).	The <code>cfgadm</code> output for SB1-SB15 can be ignored.

Issues Fixed in Oracle Solaris 10 10/08

TABLE 3-7 lists issues that have been fixed in the Oracle Solaris 10 10/08 OS. You might encounter them in earlier releases.

TABLE 3-7 Issues Fixed in Oracle Solaris 10 10/08 (Sheet 1 of 4)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6511374		o	o	Memory translation warning messages might appear during boot if memory banks were disabled due to excessive errors.	After the system is rebooted, the <code>fmadm repair</code> command can be used to prevent a recurrence of the problem on the next boot.
6533686		o	o	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: <code>SCF busy</code> <code>DR parallel copy timeout</code> This applies only to Quad-XSB configured System Boards hosting multiple domains.	Retry the DR operation at a later time.
6535018			o	In Oracle Solaris domains that include SPARC64 VII processors, workloads that make heavy use of the Oracle Solaris kernel might not scale as expected when you increase the thread count to a value greater than 256.	For Oracle Solaris domains that include SPARC64 VII processors, limit domains to a maximum of 256 threads.
6556742	o	o	o	The system panics when DiskSuite cannot read the metadb during DR. This bug affects the following cards: <ul style="list-style-type: none"> • SG-XPCIE2FC-QF4, 4-Gigabit PCI-eDual-Port Fiber Channel HBA • SG-XPCIE1FC-QF4, 4-Gigabit PCI-eSingle-Port Fiber Channel HBA • SG-XPCI2FC-QF4, 4-Gigabit PCI-XDual-Port Fiber Channel HBA • SG-XPCI1FC-QF4, 4-Gigabit PCI-XSingle-Port Fiber Channel HBA 	Panic can be avoided when a duplicated copy of the metadb is accessible via another Host Bus Adapter.

TABLE 3-7 Issues Fixed in Oracle Solaris 10 10/08 (Sheet 2 of 4) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6589833		o	o	<p>The DR addboard command might cause a system hang if you are adding a Sun StorageTek Enterprise Class 4-Gigabit 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:</p> <ul style="list-style-type: none"> • X4447A-Z, PCI-e Quad-port GigabitEthernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter 	There is no workaround.
6608404		o	o	<p>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.</p>	To avoid the defect, do not install this card in slot 1.
6614737		o	o	<p>The DR deleteboard(8) and moveboard(8) operations might hang if any of the following conditions exist:</p> <ul style="list-style-type: none"> • A DIMM has been degraded. • The domain contains system boards with different memory size. 	<p>Avoid performing DR operations if any of the following conditions exist:</p> <ul style="list-style-type: none"> • Degraded memory – To determine whether the system contains degraded memory, use the XSCF command showstatus(8). • 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(8) or the Oracle Solaris command prtdiag(1M) on the domain. If a DR command hangs, reboot the domain to recover.

TABLE 3-7 Issues Fixed in Oracle Solaris 10 10/08 (Sheet 3 of 4) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6619224			o	For Oracle Solaris domains that include SPARC64 VII processors, a single domain of 256 threads or more might hang for an extended period of time under certain unusual situations. Upon recovery, the uptime command will show extremely high load averages.	For Oracle Solaris domains that include SPARC64 VII processors, do not exceed a domain size of 256 virtual processors in a single Oracle Solaris domain. This means a maximum of 32 CPUs in a single domain configuration (maximum configuration for an M8000 server).
6632549		o	o	<code>fmd</code> service on domain might fail to go into maintenance mode after DR operations.	Issue the following command on the domain: <code># svcadm clear fmd</code>
6660197		o	o	DR might cause the domain to hang if either of the following conditions exist: <ul style="list-style-type: none"> • A domain contains 256 or more CPUs. • Memory error occurred and the DIMM has been degraded. 	<ol style="list-style-type: none"> 1. Set the following parameter in the system specification file <code>(/etc/system):set: set drmach:drmach_disable_mcopy=1</code> 2. Reboot the domain.
6679370		o	o	The following message might 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.	Add the following to the <code>/etc/system</code> file, then reboot the domain. <code>set pcie_expected_ce_mask=0x2001</code>

TABLE 3-7 Issues Fixed in Oracle Solaris 10 10/08 (Sheet 4 of 4) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6720261	o	o	o	If your domain is running Oracle 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.
6737039	o			WAN boot of an M3000 server fails intermittently with a panic early in the boot process. Sample output: ERROR: Last Trap: Fast Data Access MMU Miss %TL:1 %TT:68 %TPC:13aacc %TnPC:13aad0 %TSTATE:1605 %PSTATE:16 (IE:1 PRIV:1 PEF:1) DSFSR:4280804b (FV:1 OW:1 PR:1E:1 TM:1 ASI:80 NC:1 BERR:1) DSFAR:fda6f000 DSFPAR:401020827000 D- TAG:6365206f66206000	Power the chassis off then on, then retry the operation.

Issues Fixed in Oracle Solaris 10 5/08

TABLE 3-8 lists issues that have been fixed in the Oracle Solaris 10 5/08 OS. You might encounter them in earlier releases.

TABLE 3-8 Issues Fixed in Oracle Solaris 10 5/08 (Sheet 1 of 5)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
5076574			o	A PCIe error can lead to an invalid fault diagnosis on a large M8000/M9000 domain.	Create a file <code>/etc/fm/fmd/fmd.conf</code> containing the following lines: <pre>setprop client.buflim 40m setprop client.memlim 40m</pre>
6348554		o	o	Using the <code>cfgadm -c disconnect</code> command on the following cards might hang the command: <ul style="list-style-type: none"> • SG-XPCIE2FC-QF – Sun StorageTek Enterprise Class 4-Gigabit Dual-Port Fiber Channel PCI-E HBA • SG-XPCIE1FC-QF4 – Sun StorageTek Enterprise Class 4-Gigabit Single-Port Fiber Channel PCI-E HBA • SG-XPCI2FC-QF4 – Sun StorageTek Enterprise Class 4-Gigabit Dual-Port Fiber Channel PCI-X HBA • SG-XPCI1FC-QF4 – Sun StorageTek Enterprise Class 4-Gigabit Single-Port Fiber Channel PCI-X HBA 	Do not perform the <code>cfgadm -c disconnect</code> operation on the affected cards.
6402328			o	If more than six IOUA (Base I/O Card) cards are used in a single domain, a panic might occur under high I/O stress.	Limit the maximum number of IOUAs in a single domain to 6.

TABLE 3-8 Issues Fixed in Oracle Solaris 10 5/08 (Sheet 2 of 5) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6472153		o	o	If you create a Oracle 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 Oracle Solaris OS from a Oracle Solaris Flash archive, telnet into the M4000/M5000/M8000/M9000 server to reset the console's TTY flags as follows: <pre># sttydefbs -r console # sttydefbs -a console -i "9600hupcl opost onlcr crtsects" -f "9600"</pre> This procedure is required only once.
6505921			o	Correctable error on the system PCIe bus controller generates an invalid fault.	Create a file /etc/fm/fmd/fmd.conf containing the following lines: <pre>setprop client.buflim 40m setprop client.memlim 40m</pre>
6522433	o		o	The incorrect motherboard might be identified by fmdump for CPU faults after reboot.	Check system status on XSCF.
6527811	o		o	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.
6536564	o		o	showlogs(8) and showstatus(8) command might report wrong I/O component.	To avoid this problem, issue the following commands on the domain. <pre># cd /usr/platform/SUNW,SPARCEnterprise/lib/fm/topo/plugins # mv ioboard.so ioboard.so.orig # svcadm restart fmd</pre> 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

TABLE 3-8 Issues Fixed in Oracle Solaris 10 5/08 (Sheet 3 of 5) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6545143		o	o	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		o	o	If the system has detected correctable memory errors (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 <code>/etc/system</code> and reboot the system: <pre>set mc- opl:mc_max_rewrite_loop = 20000</pre>
6546188		o	o	The system panics when running hot-plug (<code>cfgadm</code>) and DR operations (<code>addboard</code> and <code>deleteboard</code>) on the following cards: <ul style="list-style-type: none"> • 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.
6551356		o	o	The system panics when running hot-plug (<code>cfgadm</code>) 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: <ul style="list-style-type: none"> • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10 Gigabit Ethernet Fiber XFP Low profile Adapter 	Use <code>cfgadm -c disconnect</code> to completely remove the card. After waiting at least 10 seconds, the card might be configured back into the domain using the <code>cfgadm -c configure</code> command.

TABLE 3-8 Issues Fixed in Oracle Solaris 10 5/08 (Sheet 4 of 5) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6559504		o	o	<p>Messages of the form <code>nxge:</code> <code>NOTICE:</code> <code>nxge_ipp_eccue_valid_check:</code> <code>rd_ptr = nnn wr_ptr = nnn</code> will be observed on the console with the following cards:</p> <ul style="list-style-type: none"> • 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		o	o	<p>Hot-plug operation with the following cards might fail if a card is disconnected and then immediately reconnected:</p> <ul style="list-style-type: none"> • SX-PCIE2SCSIU320Z – 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		o	o	<p>Performing a DR <code>deleteboard</code> operation on a board that includes Permanent Memory when using the following network cards results in broken connections:</p> <ul style="list-style-type: none"> • 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 <code>ifconfig</code> man page for more information.
6568417		o	o	<p>After a successful CPU DR <code>deleteboard</code> operation, the system panics when the following network interfaces are in use:</p> <ul style="list-style-type: none"> • X4447A-Z, PCI-e Quad-port Gigabit Ethernet Adapter UTP • X1027A-Z1, PCI-e Dual 10-Gigabit Ethernet Fiber XFP Low profile Adapter 	<p>Add the following line to <code>/etc/system</code> and reboot the system:</p> <pre>set ip:ip_soft_rings_cnt=0</pre>

TABLE 3-8 Issues Fixed in Oracle Solaris 10 5/08 (Sheet 5 of 5) (Continued)

CR ID	M3000	M4000 M5000	M8000 M9000	Description	Workaround
6571370		o	o	Use of the following cards have been observed to cause data corruption in stress test under laboratory conditions: <ul style="list-style-type: none"> • 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 <code>/etc/system</code> and reboot the system: <pre>set nxge:nxge_rx_threshold_hi=0</pre>
6584984			o	The <code>busstat(1M)</code> command with <code>-w</code> option might cause M8000/M9000 server domains to reboot.	There is no workaround. Do not use the <code>busstat -w</code> command on <code>pcmu_p</code> .
6589546		o	o	<code>prtdiag</code> does not show all IO devices of the following cards: <ul style="list-style-type: none"> • SG-XPCIE2FC-EM4 Sun StorageTek Enterprise Class 4-Gigabit Dual-Port Fiber Channel PCI-E HBA • SG-XPCIE1FC-EM4 Sun StorageTek Enterprise Class 4-Gigabit Single-Port Fiber Channel PCI-E HBA 	Use <code>prtdiag -v</code> for full output.
6663570		o	o	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 Oracle Solaris <code>prtdiag</code> command to identify the CPU with the lowest CPU ID.

Issues Fixed in Oracle Solaris 10 8/07

TABLE 3-9 lists issues that have been fixed in the Oracle Solaris 10 8/07 OS. You might encounter them in earlier releases.

TABLE 3-9 Issues Fixed in Oracle Solaris 10 8/07 (Sheet 1 of 3)

CR ID	M4000 M5000	M8000 M9000	Description	Workaround
6303418		o	M9000 server with a single domain and 11 or more fully populated system boards might hang under heavy stress.	Do not exceed 170 CPU threads. Limit the number of CPU threads to one per CPU core by using the Oracle Solaris <code>psradm</code> command to disable the excess CPU threads. For example, disable all odd-numbered CPU threads.
6416224	o	o	System performance can degrade using a single NIC card with more than 5,000 connections.	Use multiple NIC cards to split network connections.
6441349	o	o	I/O error can hang the system.	There is no workaround.
6485555	o	o	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.
6496337	o	o	The “cpumem-diagnosis” module might 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 <code>cpumemdiagnosis</code> file <pre># rm /var/fm/fmd/ckpt\ /cpumemdiagnosis/ cpumem-diagnosis</pre> 2. Restart <code>fmd</code> service: <pre># svcadm restart fmd</pre> To avoid this problem in advance, add the following line in the file: <pre>/lib/svc/method/svc-dumpadm: # savedev=none rm -f /var/fm/fmd/ckpt/cpumemdiagnosis is /cpumem-diagnosis #</pre>
6495303	o	o	The use of a PCIe Dual-Port Ultra320 SCSI controller card (SG-(X)PCIE2SCSIU320Z) in IOU Slot 1 on a SPARC Enterprise M4000/M5000 server might result in a system panic.	Do not use this card in IOU Slot 1.

TABLE 3-9 Issues Fixed in Oracle Solaris 10 8/07 (Sheet 2 of 3) (Continued)

CR ID	M4000 M5000	M8000 M9000	Description	Workaround
6498283	o	o	Using the DR <code>deleteboard</code> command while <code>psradm</code> operations are running on a domain might cause a system panic.	There is no workaround.
6499304	o	o	Unexpected message is displayed on console and CPU isn't offlined when numerous correctable errors (CEs) 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.
6502204	o	o	Unexpected error messages might 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 <code>showdomainstatus(8)</code> command to check system status on XSCF.
650275	o	o	Inserted or removed hot-plugged PCI card might not output notification message.	There is no workaround.
6508432	o	o	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 <code>/etc/system</code> and reboot the system: <pre>set pcie:pcie_aer_ce_mask = 0x2001</pre>
6508434	o		A domain might 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 in the same PCI slot by using PCI hot-plug.
6510861	o	o	When using the PCIe Dual-Port Ultra320 SCSI controller card (SG-(X)PCIE2SCSIU320Z), a PCIe correctable error causes a Oracle Solaris panic.	Add the following entry to <code>/etc/system</code> to prevent the problem: <pre>set pcie:pcie_aer_ce_mask = 0x31c1</pre>

TABLE 3-9 Issues Fixed in Oracle Solaris 10 8/07 (Sheet 3 of 3) (Continued)

CR ID	M4000 M5000	M8000 M9000	Description	Workaround
6520990	o	o	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 <code>/etc/system</code> and reboot your system: <code>set drmach:fmem_timeout = 30</code>
6527781		o	The <code>cfgadm</code> command fails while moving the DVD/DAT drive between two domains.	There is no workaround. To reconfigure DVD/Tape drive, execute <code>reboot -r</code> from the domain exhibiting the problem.
6530178	o	o	The DR <code>addboard</code> command can hang. Once the problem is observed, further DR operations are blocked. Recovery requires reboot of the domain.	There is no workaround.
6530288	o	o	The <code>cfgadm(1M)</code> command might not correctly show <code>Ap_Id</code> format.	There is no workaround.
6534471	o	o	Systems might panic/trap during normal operation.	If a patch is not available, disable the kernel large page sTLB programming. In the file <code>/etc/system</code> , change the <code>heaplp_use_stlb</code> variable to 0: <code>set heaplp_use_stlb=0</code>
6535564	o	o	PCI hot-plug to PCI slot #0, #1 or External I/O Expansion Unit might fail on XSB added by DR.	Use DR instead of PCI hot plug if you need to add or remove PCI card on the XSB.
6539084	o	o	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.
6539909	o	o	Do not use the following I/O cards for network access when you are using the boot net install command to install the Oracle Solaris OS: <ul style="list-style-type: none"> • 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 Oracle Solaris OS via the network.
6542632	o	o	Memory leak in PCIe module if driver attach fails.	There is no workaround.

Software Documentation Updates

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

Updates for Man Pages

Note – Online man pages generally are updated more frequently than the *SPARC Enterprise M3000/M4000/M5000/ M8000/M9000 Servers XSCF Reference Manual*. In case of a conflict, check the Last Modified date at the bottom of the man page.

TABLE 3-10 Changes to Man Pages

Man Page	Change
addcodactivation(8), setcod(8), showcod(8), showcodusage(8)	These man pages still describe the COD headroom feature, which is no longer supported. See “Capacity on Demand (COD)” on page 13.
setupfru(8)	The following description in the man page also applies to M4000/M5000 servers: Although a CMU with two CPUs can be configured into Quad-XSB mode on an M8000/M9000 server, the server generates a “configuration error” message for those XSBs that do not have a CPU and memory.

Updates for Software Manuals

TABLE 3-11 Changes to Software Manuals

Document Title	Change
<i>SPARC Enterprise M4000/M5000/M8000/M9000 Servers Capacity on Demand (COD) User's Guide</i>	This document does not yet include instructions about setting headroom to zero before upgrading to XCP 1101 firmware. See "Capacity on Demand (COD)" on page 13.
<i>SPARC Enterprise Mx000 Servers Administration Guide</i>	The <i>SPARC Enterprise Mx000 Servers Administration Guide</i> was updated in June 2012.

Information About Hardware

This describes issues about M3000/M4000/M5000/M8000/M9000 server hardware as related to this XCP release.

Important Notes, Issues and Workarounds – All M-Series Servers

Hardware Compatibility

For current **hardware compatibility information**, see “[Hardware, Firmware, and Software Compatibility](#)” on page 2.

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 4.24.10 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 Oracle Solaris 10 OS that you are using. You can find Oracle Solaris 10 OS documentation here:

<http://www.oracle.com/technetwork/documentation/index.html>

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
```

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://www.oracle.com/technetwork/documentation/disk-device-194280.html#hic>

See especially:

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

Notes on the Use of USB Memory

To execute the `dumpconfig(8)`, `restoreconfig(8)` or `snapshot(8)` command, if you specify USB memory as the destination to store data, prepare the USB memory as a medium in advance.

The data stored will include the information about the system. To use USB memory, you need to pay attention to the management of the USB memory in which the data is stored, from the data security viewpoint.

Proper operation and connectivity to the XSCF of every USB memory currently on the market cannot be guaranteed. Depending on the USB memory in use, defects such as the XSCF firmware error or reset might occur. In case such defects occurred, stop the use of USB memory immediately.

To connect the USB memory to the USB port for the XSCF, connect the USB memory directly to the USB port. If connected through the USB hub or USB extension, it might cause errors.

Hardware Functionality Issues and Limitations

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)

For information about I/O options and storage, such as the number of cards supported in a domain, see the Oracle Cross Platform IO Support page:

<https://wikis.oracle.com/display/SystemsComm/Cross+Platform+IO+Support>

Important Notes, Issues and Workarounds – M3000 Servers Only

Patches for Emulex PCI Express (PCIe) Cards

The following Emulex cards require drivers supplied in patch 120222-27:

- XSEFC402AF Sun StorageTek Enterprise Class 4-Gigabit Dual-Port Fiber Channel PCIe HBA
- XSEFC401AF Sun StorageTek Enterprise Class 4-Gigabit Single-Port Fiber Channel PCIe HBA

Hardware Functionality Issues and Limitations

This section describes known issues in this release.

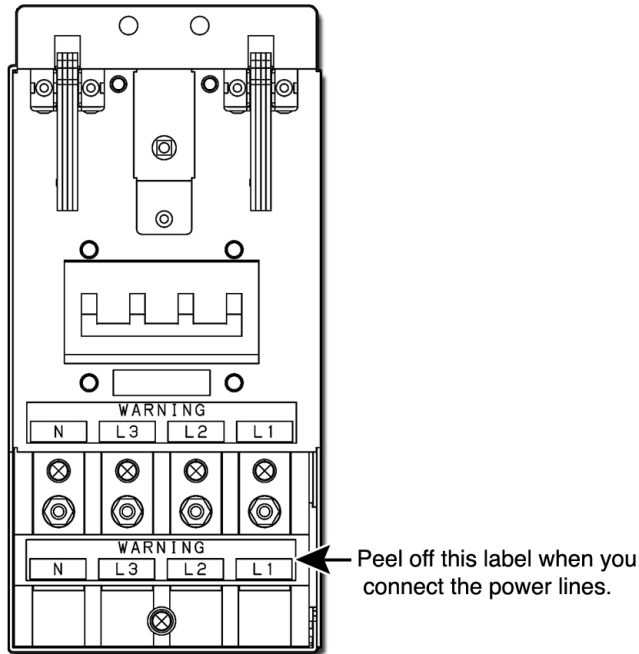
- For power-on after power-off, wait at least 30 seconds before turning the system power back on by using the main line switch or the circuit breakers on the distribution panel.

- For servers that have the B-type plug, confirm that a 15A overcurrent protection device is available outside the server. If one is not available, prepare an external 15A 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.
- Connecting a SAS device containing multiple SAS targets to the onboard external SAS interface is not supported. Instead, use a Sun StorageTek Host Bus Adaptor (SG-XPCIE8SAS-E-Z).

Important Notes, Issues and Workarounds – M4000/M5000 and M8000/M9000 Servers Only

Warning Label on M9000 Server AC Section

The warning label on the AC section indicates that the terminal connection sequence has been changed. Connect in accordance with the terminal sequence described on the warning label.



RAID-Capable IOUA

M8000/M9000 servers can now support RAID under certain conditions. See [“XCP Support for RAID-Capable IOUA Cards in M8000/M9000 Servers”](#) on page 6 for more information.

RAID information for M8000/M9000 servers has been added to the June 2012 versions of the *SPARC Enterprise M8000/M9000 Servers Service Manual* and the *SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Administration Guide*.

DVD Drives and `cfgadm`

The Oracle Solaris `cfgadm(1M)` command does not always unconfigure a DVD drive from a domain on SPARC Enterprise M8000/M9000 servers.

Disable the Volume Management Daemon (`vold`) before unconfiguring a DVD drive with the `cfgadm(1M)` command. To disable `vold`, stop the daemon by issuing the command `/etc/init.d/volmgt stop`. After the device has been removed or inserted, restart the daemon by issuing the command `/etc/init.d/volmgt start`.

F20 PCIe Cards

This release supports Sun Flash Accelerator F20 PCIe cards on M4000/M5000 and M8000/M9000 servers. These cards are not supported on M3000 servers.

On M4000/M5000 servers, configure the F20 card only in slots 1 and 3. This restriction does not apply to M8000/M9000 servers.

For more information see the F20 documentation:

<http://www.oracle.com/technetwork/documentation/index.html>

Note – The External I/O Expansion Unit does not support F20 cards.

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 SPARC Enterprise M8000/M9000 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.

U320 PCIe SCSI Card

The U320 PCIe SCSI card, part number 375-3357-01/02, is not supported in PCI cassettes for SPARC Enterprise M8000/M9000 servers. Customers must use part number 375-3357-03 at a minimum.

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)

Patches for Emulex PCI Express (PCIe) Cards

The following Emulex cards require drivers supplied in patch 120222-27:

- 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)

Hardware Functionality Issues and Limitations

This section describes known issues in this release.

- The use of the External I/O Expansion Unit to connect the host server to an external boot disk drive is not supported
- Do not use the CD-RW/DVD-RW drive unit and the TAPE drive unit at the same time.
- Power cables are not redundant on single power feed servers without the dual power feed option. All power cables must be connected and powered on at all times.
- DR operations on an M8000/M9000 server might fail with a misleading message regarding the board being unavailable for DR after the `addfru(8)` or `replacefru(8)` command has been used for active replacement. This happens when the active replacement is done without the diagnostic test in the maintenance menu. Execute the diagnosis in the maintenance menu of the `addfru(8)` or `replacefru(8)` command to avoid this problem. To recover, execute the `testsb(8)` command or delete the CPU/memory board unit using the `deletefru(8)` command and then retry the `addfru(8)` command.
- Contact your sales representative for tape drive unit options.
- 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.

Hardware Documentation Updates for the M3000 Server

The M3000 server hardware documentation was updated in March 2012.

This section contains late-breaking hardware information that became known after the documentation set was published and the following corrections apply to the M3000 server hardware documentation.

TABLE 4-1 Hardware Documentation Updates

Title	Page Number	Update
<i>SPARC Enterprise M3000 Server Service Manual</i>	B-1	Table B-1 "FRU List" Footnote should be added: "Do not remove or swap non-FRU components such as MEMR and DDCs as this interferes with the repair depot's ability to diagnose and repair field returns."

Hardware Documentation Updates for the M4000/M5000 Servers

This section contains late-breaking hardware information that became known after the documentation set was published and corrections in the M4000/M5000 servers hardware documentation.

TABLE 4-2 Hardware Documentation Updates

Title	Page Number	Update
<i>SPARC Enterprise M4000/M5000 Servers Installation Guide</i>	2-8	"B-type plug" in the Note in "2.2.2 Cable Connections" should be substituted with "the plug with lock function."
<i>SPARC Enterprise M4000/M5000 Servers Service Manual</i>	B-2	The description for CPU Module in Table B-1 will add the following: "At least one CPU Module (CPUM) is required on each eXtended System Board (XSB). The XSB includes the CPU, memory, and optional I/O. The XSB can be set to one of two logical configurations: uni-XSB or quad-XSB mode. In the uni-XSB mode, the M4000 server has one configurable XSB and the M5000 server has two separate configurable XSBs. For more information on the rules for system configuration, refer to the SPARC Enterprise M3000/M4000/M5000/M8000/M9000 Servers Administration Guide."

Hardware Documentation Updates for the M8000/M9000 Servers

The M8000/M9000 servers hardware documentation was updated in October 2012.

This section contains late-breaking hardware information that became known after the M8000/M9000 servers hardware documentation was published.

TABLE 4-3 Hardware Documentation Updates

Title	Page Number	Update
<i>SPARC Enterprise M8000/M9000 Servers Overview Guide</i>	1-6	<p>The topic "Hardware RAID function" in section "1.1 Product Overview" will add the following:</p> <p>Two hard disks which are connected to the IOU onboard device card (IOUA) can be constructed as a single logical volume. The mirrored configuration of the constructed logical volume can secure the data redundancy, as well as achieve the improvement in system fault tolerance.</p> <p>NOTE - Hardware RAID is supported only on the M8000/M9000 servers on which a RAID-capable onboard device card (IOUA) is mounted. The RAID-capable IOUA requires a minimum XSCF firmware with applicable Oracle Solaris OS patches. See the latest Product Notes for this information.</p> <p>NOTE - When the onboard device card is RAID-capable, the <code>showhardconf(8)</code> command displays Type 2 in the output.</p>
<i>SPARC Enterprise M8000/M9000 Servers Site Planning Guide</i>	3-22	<p>FIGURE 3-9, A warning label was attached to an M9000 server AC section to indicate a change in the terminal connection sequence.</p>
<i>SPARC Enterprise M8000/M9000 Servers Installation Guide</i>	3-32	<p>FIGURE 3-28, A warning label was attached to an M9000 server AC section to indicate a change in the terminal connection sequence.</p>
<i>SPARC Enterprise M8000/M9000 Servers Service Manual</i>	18-10	<p>Step 10, Additional instructions were added regarding a warning label that was attached to an M9000 server AC section.</p>