Fujitsu M10/SPARC M10 Systems

Product Notes for XCP Version 2051

FUJITSU

ORACLE

Contents

Preface

This document describes the latest information about XSCF Control Package (XCP) and the important and latest information regarding hardware, firmware, software, and documents of SPARC M10 Systems.

Note - If a newer version of XCP than the version supported in this document is released, only the document supporting the latest version of XCP is updated. In addition to reading this document, visit the following websites to see the document supporting the latest version of XCP. Check the contents and usage to confirm whether there are any corrections in the documents related to XCP version that you use.

- Japanese site
http://jp.fujitsu.com/platform/server/sparc/manual/
- Global site
http://www.fujitsu.com/global/services/computing/server/sparc/downloads/manual/

Fujitsu M10 is sold as SPARC M10 Systems by Fujitsu in Japan.
Fujitsu M10 and SPARC M10 Systems are identical products.

This preface includes the following sections:
- Audience
- How to Use This Document
- Related Documentation
- Disposal and Recycling
- Documentation Feedback

Audience

This document is designed for system administrators with advanced knowledge of a computer network and Oracle Solaris.

How to Use This Document

This document supports all models of SPARC M10 Systems. Depending on the server you use, read the related items listed in the following table.

Chapter titles in this document	SPARC M10-1	SPARC M10-4	SPARC M10-4S
Chapter 1 Software Requirements	x	x	x
Chapter 2 XCP 2051-Related Information	x	x	x
Chapter 3 Information on Software	x	x	x
Chapter 4 Information on SPARC M10-1 Hardware	x		
Chapter 5 Information on SPARC M10-4 Hardware		x	
Chapter 6 Information on SPARC M10-4S Hardware			x
Chapter 7 Information on PCI Expansion Unit Hardware	x (when introduced)	x (when introduced)	x (when introduced)
Chapter 8 Contents of Revision of Documentation	x	x	x

The information about firmware and software, which are described in Chapter 1, Chapter 2, and Chapter 3, is common to all models. Some of the information are only related to a specific model. In such case, the applicable model name is indicated.

The information about hardware devices is provided in Chapter 4, Chapter 5, and Chapter 6 separately for each model. The contents common to all models are described in all chapters describing hardware. Therefore, when you check the hardware information about multiple models, you will find that some contents are duplicated in some chapters.

Check the information on the PCI expansion unit (Chapter 7) when the PCI expansion unit is introduced.

Contents of revision of documents (Chapter 8) are provided in each document. Check whether the contents of your document have been revised.

Related Documentation

All documents for your server are provided online.
- Sun Oracle software-related manuals (Oracle Solaris, and so on)
  http://www.oracle.com/documentation/

- Fujitsu documents
  Japanese site

  http://jp.fujitsu.com/platform/server/sparc/manual/

Global site

http://www.fujitsu.com/global/services/computing/server/sparc/downloads/manual/

Note - This document is given priority over the information in the SPARC M10 Systems-related documents.

The following table lists the documents related to the SPARC M10 Systems.
Read the related documents carefully when you use this product.

SPARC M10 Systems related documentation (*1)
Fujitsu M10/SPARC M10 Systems Getting Started Guide (*2)
Fujitsu M10/SPARC M10 Systems Quick Guide
Fujitsu M10/SPARC M10 Systems Important Legal and Safety Information (*2)
Software License Conditions for Fujitsu M10/SPARC M10 Systems
Fujitsu M10/SPARC M10 Systems Safety and Compliance Guide
Fujitsu M10/SPARC M10 Systems Security Guide
Fujitsu M10/SPARC M10 Systems/SPARC Enterprise/PRIMEQUEST Common Installation Planning Manual
Fujitsu M10/SPARC M10 Systems Installation Guide
Fujitsu M10-1/SPARC M10-1 Service Manual
Fujitsu M10-4/Fujitsu M10-4S/SPARC M10-4/SPARC M10-4S Service Manual
PCI Expansion Unit for Fujitsu M10/SPARC M10 Systems Service Manual
Fujitsu M10/SPARC M10 Systems PCI Card Installation Guide
Fujitsu M10/SPARC M10 Systems System Operation and Administration Guide
Fujitsu M10/SPARC M10 Systems Domain Configuration Guide
Fujitsu M10/SPARC M10 Systems XSCF Reference Manual
Fujitsu M10/SPARC M10 Systems RCIL User Guide (*3)
Fujitsu M10/SPARC M10 Systems Product Notes
Fujitsu M10/SPARC M10 Systems Glossary

*1 The listed manuals are subject to change without notice.
*2 The printed manual comes with the product.
*3 This document applies specifically to the FUJITSU M10 and FUJITSU ETERNUS storage system.

Documents provided on the DVD-ROM "SPARC Enterprise Software DVD

Note - Enhanced Support Facility (ESF) and Remote Customer Support System (REMCS) are supported only for SPARC M10 systems sold within Japan by Fujitsu.

Remote maintenance service
- Enhanced Support Facility User's Guide for REMCS (J2X1-7753-EN)

Information on firmware

This is information for customers of Fujitsu.

Obtain the firmware for your server from the following sources.
- Japanese site
  The customers who subscribed SupportDesk can obtain the firmware from the SupportDesk-Web.

- Global site
  For how to obtain the latest files of the firmware, contact your sales representatives.

The following files are provided.
- Firmware program file (XSCF Control Package (XCP) file)
- XSCF extended MIB (XSCF-SP-MIB) definition file

Note - XSCF Control Package (XCP): XCP is a packaged control program of the hardware that configures SPARC M10 Systems. An XCP file includes the XSCF firmware, OpenBoot PROM firmware, Power-On Self Test firmware, and Hypervisor firmware.

Disposal and Recycling

Note - This information is applicable to SPARC M10 systems sold within Japan by Fujitsu.

For product disposal and recycling (paid service), contact your sales representatives.

Documentation Feedback

If you have any comments or requests regarding this document, please take a moment to share it with us by indicating the manual code, manual title, and page, and stating your points specifically through the following websites:
- Japanese site
  http://jp.fujitsu.com/platform/server/sparc/manual/

- Global site
  http://www.fujitsu.com/global/services/computing/server/sparc/downloads/manual/

Chapter 1

Software Requirements

This chapter describes the software requirements for using SPARC M10 Systems.

- XCP/Oracle Solaris and Essential SRU/Patch
- How to Obtain XCP and Oracle Solaris SRU/Patch/Oracle VM Server for SPARC
- Web Browser

XCP/Oracle Solaris and Essential SRU/Patch

The following lists XCP, Oracle Solaris, and essential SRU/patch supported on SPARC M10 Systems.

Table 1-1   XCP/Oracle Solaris and essential SRU/patch support list

Server	XCP	Oracle Solaris	Required packages (*4) Required products (*5)	Essential SRU (*4) Essential patch (*5)
SPARC M10-1	2012 or later	Oracle Solaris 11.1	system/ldoms(*1) system/ldoms/ldomsmanager(*2)	SRU1.4 or later (*3)
		Oracle Solaris 10 1/13	Oracle VM Server for SPARC 3.0 or later (*3)	No
SPARC M10-4	2012 or later	Oracle Solaris 11.1	system/ldoms(*1) system/ldoms/ldomsmanager(*2)	SRU1.4 or later (*3)
		Oracle Solaris 10 1/13	Oracle VM Server for SPARC 3.0 or later (*3)	No
SPARC M10-4S (Direct inter-cabinet connection)	2031 or later	Oracle Solaris 11.1	system/ldoms(*1) system/ldoms/ldomsmanager(*2)	SRU1.4 or later (*3)
		Oracle Solaris 10 1/13	Oracle VM Server for SPARC 3.0 or later (*3)	No

Table 1-1 XCP/Oracle Solaris and essential SRU/patch support list *(continued)*

Server	XCP	Oracle Solaris	Required packages (*4) Required products (*5)	Essential SRU (*4) Essential patch (*5)
SPARC M10-4S (Connection through crossbar box)	2043 or later	Oracle Solaris 11.1	system/ldoms(*1) system/ldoms/ldomsmanager(*2)	SRU1.4 or later (*3)
		Oracle Solaris 10 1/13(*6)	Oracle VM Server for SPARC 3.0 or later (*3)	No

*1: Required for the control domain and the guest domain. Included in group/system/solaris-large-server and group/system/solaris-small-server.
*2: Required only for the control domain. Included in group/system/solaris-large-server and group/system/solaris-small-server.
*3: Required only for the control domain.
*4: For Oracle Solaris 11.
*5: For Oracle Solaris 10.
*6: If Oracle Solaris 10 1/13 is to be run in the control domain, the CPUs that can be assigned to the control domain are those CPUs that are mounted on logical system boards with LSB numbers 0 to 7. There are no LSB number limitations on the CPUs that can be assigned to the guest domain. If the Oracle Solaris 10 1/13 is run in the guest domain, however, up to 1024 CPUs (vcpus) can be assigned to a single guest domain.

Note **-** When installing or booting Oracle Solaris 11.1 from the DVD media in a SPARC M10 system, the following two types of messages appear. Ignore these messages because they have no impact on installation work.

[Message example 1]
```
Dec 21 02:18:22 solaris genunix: NOTICE: core_log: ldmd[1978]
core dumped: /tmp/core
Dec 21 02:18:22 solaris svc.startd[9]: ldoms/ldmd:default failed
fatally: transitioned to maintenance (see 'svcs -xv' for details)
```

[Message example 2]
```
SUNW-MSG-ID: SMF-8000-YX, TYPE: defect, VER: 1, SEVERITY: major
EVENT-TIME: Fri Dec 21 02:18:50 UTC 2012
PLATFORM: ORCL,SPARC64-X, CSN: 2081210008, HOSTNAME: solaris
SOURCE: software-diagnosis, REV: 0.1
EVENT-ID: 5cf4edb8-0613-cbe0-acb1-a9a28a2fac10
DESC: A service failed - a start, stop or refresh method failed.
AUTO-RESPONSE: The service has been placed into the maintenance
state.
IMPACT: svc:/ldoms/ldmd:default is unavailable.
REC-ACTION: Run 'svcs -xv svc:/ldoms/ldmd:default' to determine
the generic reason why the service failed, the location of any
logfiles, and a list of other services impacted. Please refer to
the associated reference document at http://support.oracle.com/
msg/SMF-8000-YX for the latest service procedures and policies
regarding this diagnosis.
```

> **Note -** When Oracle Solaris 11.1 is installed in SPARC M10 Systems, the following message appears at the start of Oracle Solaris.
>
> [Example of message]
> ```
> WARNING: failed to instantiate provider ldmd for process 753
> WARNING: failed to instantiate provider ldmd for process 753
> Sep 24 06:15:59 svc.startd[11]: svc:/ldoms/ldmd:default: Method
> "/opt/SUNWldm/bin/ldmd_start" failed with exit status 95.
> Sep 24 06:15:59 svc.startd[11]: ldoms/ldmd:default failed fatally:
> transitioned to maintenance (see 'svcs -xv' for details)
> ```
>
> After Oracle Solaris 11.1 is installed, apply SRU1.4 or later.
> Then, the Oracle VM Server for SPARC package is updated to the version supporting SPARC M10 Systems, and such message will no longer be output.

For other information about Oracle Solaris, see "Problems with Oracle Solaris and Workarounds."

How to Obtain XCP and Oracle Solaris SRU/Patch/Oracle VM Server for SPARC

The customers who subscribed SupportDesk can obtain the latest XCP firmware and Oracle Solaris SRU/patch/Oracle VM Server for SPARC from the SupportDesk-Web.

Web Browser

Table 1-2 lists the web browsers on which the XSCF Web operation is confirmed. For other information about XSCF Web, see "Notes and restrictions on XSCF Web."

Table 1-2   Version of web browser of which operation has been confirmed

Web browser	Version
Microsoft Internet Explorer	8.0 and 9.0
Firefox	10.0 or later

Chapter 2

XCP 2051-Related Information

This chapter provides XCP 2051-related information.

- Latest Information on XCP 2051
- Notes and Restrictions
- XCP 2051 Problems and Workarounds

Latest Information on XCP 2051

This section describes newly added functions for XCP 2051.

Improvement of trouble relating USB-SSD (RTIF2-130717-001)

Notes and Restrictions

This section describes notes and restrictions that are known as of this release.

Notes on OpenBoot PROM

- If you execute the sendbreak(8) command after the OpenBoot PROM banner appears on the domain console but before OpenBoot PROM startup is completed, the following error message is output. In this case, the boot command becomes unable to be executed.
  ```
  FATAL: OpenBoot initialization sequence prematurely
  terminated.
  ```
  In this case, set the OpenBoot PROM environment variable auto-boot? to false at the ok prompt, and execute the reset-all command. When OpenBoot PROM is restarted, set auto-boot? to true, and execute the boot command.

- When you use the XSCF firmware setpparparam(8) command to set an OpenBoot PROM environment variable, such as nvramrc, the maximum number of characters that can be set is 254.
  If you want to set a string of 255 or more characters in an OpenBoot PROM environment variable, such as nvramrc, do so in the OpenBoot PROM or Oracle Solaris environment. Note that, however, the maximum number of characters is 1024.

- The OpenBoot PROM device aliases disk and net are not created for Oracle VM Server for SPARC disks and logical domains to which no network is assigned. To execute disk boot or network boot by specifying the device alias disk or net, set the device aliases disk and net by using the OpenBoot PROM nvalias command.

Notes on maintenance for CPU memory unit and motherboard unit

The setting information of the CPU core activation and the CPU core activation key may be deleted when the CPU Memory Unit lower (CMUL) or the Mother Board Unit (MBU) is replaced. To restore the setting information of CPU core activation and the CPU core activation key, it is necessary to save the setting information of the CPU core activation and CPU core activation key beforehand, using the dumpconfig(8) command and restore them with the restoreconfig(8) command.

Notes on CPU core activation

- If the XSCF setting information is initialized by executing the restoredefaults(8) command in XCP 2032 or earlier, the information of the CPU core activation key is also initialized.
  When executing the restoredefaults(8) command, save the CPU core activation key in advance before restoring it or register the key again.

- If you execute the restoredefaults -c xscf command on XCP 2041 or later, the information of the CPU core activation key is deleted not only from the XSCF unit but also from the backup information in the XSCF. On the other hand, even if you execute the restoredefaults -c factory command, the information of the CPU core activation key is not deleted.
  To initialize all settings to factory defaults including the information of the CPU core activation key, use the -c factory -r activation option.

  For the information of changes the restoredefaults(8) commands, see *Contents of Revision of SPARC M10 Systems XSCF Reference Manual*.

- XSCF setting information saved by the dumpconfig(8) command contains CPU core activation information and CPU core activation keys.
  You can use the restoreconfig(8) command to restore CPU core activation information and CPU core activation keys saved by the dumpconfig(8) command.

  Therefore, if you configure CPU core activation or install a CPU core activation key when configuring some settings for the XSCF, such as configuring an XSCF

network or physical partition (PPAR), it is recommended to save the CPU core activation information and CPU core activation key by using the dumpconfig(8) command. To save and restore only CPU core activation keys, execute the dumpcodactivation(8) and restorecodactivation(8) commands, respectively. Note that, however, these commands cannot save and restore CPU core activation information. Use the showcod(8) and setcod(8) commands to reconfigure CPU core activation.

Notes and restrictions on XSCF Web

Notes

(1) **Common to browsers**

- When you import XCP or update firmware by using XSCF Web, "Session is invalid" may appear on the web browser.
- If the timeout of the XSCF shell is short when you import XCP by using XSCF Web, XCP importing fails. Set the timeout of the XSCF shell to 30 minutes or longer.
  Select the [menu] tab and select [XSCF] - [Settings] - [Autologout] menu. Then, enter a value of 30 minutes or greater in [Time-out value].

(2) **Internet Explorer**
   There are no notes known at present.

(3) **Firefox**

- If you use XSCF Web in a Firefox environment, the browser may prompt you to save the login ID and password when you log in to the XSCF. In this case, do not save the login ID and password. If you save the login ID and password, the saved data may be displayed on LDAP, SMTP, and REMCS web pages.

Note - Remote Customer Support System (REMCS) is supported only for SPARC M10 systems sold within Japan by Fujitsu.

Configure either of the following settings to disable the login ID/password save function of the browser:

- Disable the login ID/password save function across the entire browserSelect [Tools] - [Options] - [Security] tab, and uncheck [Remember passwords for sites] in [Passwords].
- Specify an exception for ID and password savingSelect [Tools] - [Options] - [Security] tab, and check [Remember passwords for sites] in [Passwords]. Then, click the [Never Remember Password for This Site] button in the dialog box for ID and password saving that appears when you log in to the XSCF. This registers the address of the XSCF in the [Exceptions] list for ID and password saving, and the dialog box for ID and password saving does not appear at subsequent logins to the XSCF.

Restrictions

(1) **Common to browsers**
There are no restrictions known at present.

(2) **Internet Explorer**
If you use Internet Explorer 8 in a Windows 7 environment, built-in Administrator accounts cannot be used.

(3) **Firefox**
There are no restrictions known at present.

Notes on firmware update

- [SPARC M10-4S]
  If you update the firmware by executing the flashupdate(8) command or using XSCF Web, the time for the processing depends on the number of SPARC M10-4S cabinets or crossbar boxes that configure the system.

- The relationship of the master XSCF and the standby XSCF after the update of the XSCF firmware depends on the version of the updated XCP.
  The following table shows the relationship between the master XSCF and the standby XSCF as well as the operation examples of firmware update, for each XCP version.

Table 2-1   Difference between firmware update in XCP 2050 or later and in XCP 2044 or earlier

XCP version	Relationship between master XSCF and standby XSCF	Operation examples during firmware update
XCP 2050 or later	The master XSCF and the standby XSCF that have been switched over during update will return to the status before the switchover.	**1. Execute the flashupdate(8) command from the master XSCF of BB#00.** - The status of XSCF on BB#00, on which the flashupdate(8) command was executed immediately after an XSCF reset, becomes standby. - XSCF automatic switchover is performed after the update is completed. - After completing XSCF automatic switch processing, the XSCF status of BB#00, on which the flashupdate(8) command was executed, is restored to master. **2. Completion of update can be confirmed on the master XSCF of BB#00 with log messages.**

XCP version	Relationship between master XSCF and standby XSCF	Operation examples during firmware update
XCP 2044 or earlier	The master XSCF and the standby XSCF that have been switched over during update will stay switched over.	**1. Execute the flashupdate(8) command from the master XSCF of BB#00.** - The status of XSCF on BB#00, on which the flashupdate(8) command was executed immediately after an XSCF reset, becomes standby. - Automatic switch processing of XSCFs is not executed even after completing the update. So the XSCF status of BB#00, on which the flashupdate(8) command, remains stand-by. **2. Completion of update can be confirmed on the master XSCF of BB#01 with log messages.** **3. In the case of restoring states of master and standby XSCFs to the statuses before the updates, execute the switchscf(8) command on the master XSCF of BB#01 to restore the XSCF of BB#00 to master.**

- [SPARC M10-1]

  In a configuration where PCI Expansion unit exists, when XCP firmware is updated from version 2043 or older to 2044 or newer, the logical domain configuration of the physical partition (PPAR) reverts back to the "factory-default" state at the next boot. Moreover, the environment variables of the OpenBoot PROM are also initialized.

  Before starting to update the firmware, save the logical domain configuration in XML file, on Oracle Solaris. To save in XML, use the "ldm list-constraints -x" command, to restore from XML, use the "ldm init-system -i" command. Moreover, note down the environment variables of the OpenBoot PROM of the control domain beforehand. The environment variables can be obtained by executing the "printenv" command at the "ok" prompt. For details on this procedure, see "The method of saving and restoring the logical domain configuration information and OpenBoot PROM environment variables".

  Saving and restoring of necessary information relating to PCI Expansion unit at the time of XCP firmware update are as follows:

Table 2-2   List of tasks needed to update XCP firmware from version 2043 or older to 2044 or newer.

PCI Expansion unit is mounted	Domain configuration	Rebuilding of Oracle VM Server for SPARC config	Resetting of OpenBoot PROM environment variables
no	factory-default	unnecessary	unnecessary

Table 2-2   List of tasks needed to update XCP firmware from version 2043 or older to 2044
or newer. *(continued)*

PCI Expansion unit is mounted	Domain configuration	Rebuilding of Oracle VM Server for SPARC config	Resetting of OpenBoot PROM environment variables
no	guest domain exists	unnecessary	unnecessary
yes	factory-default	unnecessary	necessary
yes	guest domain exists	necessary (XML)	necessary

- [SPARC M10-4/M10-4S]
  If the enabling/disabling the direct I/O function for the PCI Expansion unit is changed by using the setpciboxdio(8) command on XCP firmware version 2050 or newer, the logical domain configuration of the physical partition (PPAR) reverts back to the "factory-default" state at the next boot. Moreover, the environment variables of the OpenBoot PROM are also initialized.

  Before starting to update the firmware, save the logical domain configuration in XML file, on Oracle Solaris. To save in XML, use the "ldm list-constraints -x" command, to restore from XML, use the "ldm init-system -i" command. Moreover, note down the environment variables of the OpenBoot PROM of the control domain beforehand for using at a later time. The environment variables can be obtained by executing the "printenv" command at the "ok" prompt. For details on this procedure, see "The method of saving and restoring the logical domain configuration information and OpenBoot PROM environment variables".

  Saving and restoring of necessary information relating to the change of enabling/disabling the direct I/O function for the PCI Expansion unit by using the setpciboxdio(8) command is as follows:

Table 2-3   List of tasks needed to enable/disable the setpciboxdio(8) command

Domain configuration	Rebuilding of Oracle VM Server for SPARC config	Resetting of OpenBoot PROM environment variables
factory-default	unnecessary	necessary
guest domain exists	necessary(XML)	necessary

Note on dual power feed setting

The SPARC M10 Systems have redundant Power Supply Units. Even when the dual power feed setting is enabled/disabled by setdualpowerfeed(8) command, it won't make any changes on the system behavior including redundancy management of power.
Though system behavior is not changed, setting of this command can be checked by showhardconf command as follows:

- When enabled: "Power_Supply_System: Dual ;"

- When disabled: "Power_Supply_System: Single ;"

This function can be used as "memo" for administrator to distinguish whether a customer's facility is configured as dual power feed or not.

Other notes and restrictions

Notes

- [SPARC M10-1/M10-4/M10-4S]
  The maximum number of users who can concurrently connect to the XSCF via Telnet and SSH is as follows:
  - M10-1: 20 users
  - M10-4: 40 users
  - M10-4S (without crossbar box): 40 users
  - M10-4S (with crossbar box): 70 users

  If the maximum allowable number of users is exceeded, access is denied.

- If the following error log is registered with the XSCF, do not power on the physical partition (PPAR) but replace the PSU backplane:
  FRU : /PSUBP

  `Msg: SCF Diagnosis error on System backup memory`

- XSCF-LAN is compliant with auto-negotiation. If you connect XSCF-LAN to a network device that is fixed to full-duplex mode, the XSCF-LAN communicates in half-duplex mode according to the IEEE 802.3 protocol. This may slow down the speed of network communication or cause communication error. Be sure to set auto-negotiation for network devices to which you connect XSCF-LAN.

- Settings made by the setdualpowerfeed(8) command are immediately applied. Therefore, the XSCF does not need to be reset.

- The ioxadm poweroff(8) command can be specified with the -f option only for a power supply unit.

- Configuring a memory mirror setting by using the setupfru(8) command should be done when the physical partition (PPAR) to which the target system board (PSB) belongs is powered off.

- To display a man page, set TERM=vt100 for the terminal software.

- When configuring a physical partition (PPAR), do not set a BB-ID that does not exist in the system as the PPAR-ID.
  For example, if BB-IDs 00 and 01 exist in the system, you can set 00 or 01 as the PPAR-ID. If you set 02 as the PPAR-ID, the PPAR with PPAR-ID 02 becomes unable to start.

- Among the information displayed by executing the showhardconf(8) command, the PCI Express (PCIe) card information of the guest domain will be reflected after Oracle Solaris of the corresponding guest domain has started.

- As of XCP 2032, the default value for the power save operation set by the setpparmode(8) command is changed from "enabled" to "disabled."

- When you execute the testsb(8) or diagxbu(8) command, a PPAR-ID of "PPAR#30" that does not exist may appear in an error log suspected area. This indicates that an error was detected on the system board (PSB) while diagnosing. The output PPAR-ID does not have any meaning.

- We recommend to connect the control domain console via the XSCF-LAN port. When a large amount of data is output by connecting to the control domain console via a serial port, the data may not be displayed properly.

- [SPARC M10-4S]
  The time taken for processing a command that displays the system configuration or status (such as showhardconf(8) command, showboards(8) command, and showpparstatus(8) command) depends on the number of SPARC M10-4S cabinets or crossbar boxes that configure the system.

- [SPARC M10-4S] For a system configured with multiple cabinets, cabinet BB#01 or XBBOX#81 may become the master XSCF first.

- [SPARC M10-4S] Depending on the system configuration, it may take time to reboot.

- If you add a SPARC M10-4S to the SPARC M10-4S on which XCP 2032 is installed, update to the latest firmware in advance.

- When you execute the setsnmpvacm(8) command specifying createview as the operand, you cannot set an access restriction using the OID mask of MIB. When you execute the setsnmpvacm(8) command specifying createview as the operand, do not use the OID mask of MIB.

- Do not register the same node with multiple power supply interlocking groups. If power supply interlocking is performed by registering a single node with multiple power supply interlocking groups, the operation may not be as intended.
  With the setremotepwrmgmt(8) command, you cannot confirm whether a single node is registered with multiple power supply interlocking groups. When creating or modifying a power supply interlocking group management information file, take care not to cause overlaps.

- Do not register an I/O node with multiple power control groups. If the same I/O node is set with multiple power supply interlocking groups, and both of the conditions below are met, the I/O node is turned on and off alternately.
  - setremotepwrmgmt -c enable is executed, and the power supply interlocking function is enabled.
  - A power control group where one or more host nodes are on exist, so does a power control group where all host nodes are off.

  If you accidentally register an I/O node with multiple power control groups, use setremotepwrmgmt -c disable to disable power supply interlocking first and then use clearremotepwrmgmt to delete the power control group setting. After deletion, create a power supply interlocking group management information file so that the I/O node is not registered with multiple groups, and then use setremotepwrmgmt -c config to register it again.

- When takeover IP address is set, the source IP address of the UDP packets of the SMTP Trap of SNMPv1, differs from the Agent Address. The source IP address of UDP packets contains the IP address(physical address) that are allotted to each XSCF-LAN. The Agent Address contains the takeover IP address(virtual IP address).

- With a logical domain running Oracle Solaris 11, updating to XCP 2050 or later allows you to have an increased maximum number of PCIe cards on one root complex (RC).
  To install a PCIe card after updating to XCP 2050 or later, perform the steps below in the control domain.

This example assumes that two sets of configuration information currently in use, ldm-set1 and factory-default, are stored.

1. **Check the configuration information of the logical domain stored in XSCF.**

```
primary# ldm list-spconfig
ldm-set1  [current]
factory-default
```

2. **Execute the following commands on all logical domains including the control domain.**
   Specify the name of the logical domain for Idom.

```
primary# ldm set-variable fix_atu=true <ldom>
primary# ldm remove-variable fix_atu <ldom>
```

3. **Store the updated configuration information of the logical domain again.**
   Delete the stored ldm-set1 and then store the information again.

```
primary# ldm rm-spconfig ldm-set1
primary# ldm add-spconfig ldm-set1
```

4. **Restart all logical domains.**

Restrictions

- At this point, the deletefru(8) command is not supported.
- At this point, no-mem and no-io, to be set with the -s option of the setpcl(8) command, are not supported.
- Alive monitoring between the XSCF and a Hypervisor is not supported. Alive monitoring between the XSCF and a Hypervisor cannot be enabled/disabled even by using the setpparmode(8) command.
- [SPARC M10-4S]
  Suppose that the XSCF was switched while connecting to the control domain console in the SPARC M10-4S that is composed of more than two cabinets. In that case, connection to the control domain console may not be established until all the SPARC M10-4S cabinets have been restarted if an attempt has been made to reconnect the control domain console to the switched master XSCF.

  If all XSCFs have not been restarted due to an error in the XSCF, establish a connection to the control domain console again. Replace a failed XSCF or CPU memory unit (lower) if a connection cannot be established to the control domain

console.

- [SPARC M10-4S]
  The poweroff(8) and reset(8) commands may not be executed normally if all XSCF have not been restarted due to an error in a XSCF in the SPARC M10-4S that is composed of more than two cabinets.

  To disconnect the power of a physical partition (PPAR), login to the control domain of the PPAR and execute the shutdown(1M) command on Oracle Solaris. Then, disconnect the power of the PPAR using the poweroff -f command on the XSCF firmware. The reset(8) command cannot be used in this state.

- The -c wait option, which is used to set the air-conditioning wait time for the setpowerupdelay(8) command, is not supported at present.

- Ask your sales representatives regarding the support information of the dynamic reconfiguration (DR) of the system board (PSB).
  The command options related to the dynamic reconfiguration are as follows.

  - -c configure of the addboard(8) command
  - -c disconnect of the deleteboard(8) command (when the PPAR is powered on)
  - -c unassign of the deleteboard(8) command (when the PPAR is powered on)

- The -p option of the diagxbu(8) command is not supported at present.

- Replacement of a crossbar box using the replacefru(8) command is not supported at present. For how to replace a crossbar box, see "Restrictions on replacing crossbar box" in "Chapter 6 Information on SPARC M10-4S Hardware."

- Addition of a crossbar box using the addfru(8) command is not supported at present. For how to add a crossbar box, see "Restrictions on adding expansion rack 2" in "Chapter 6 Information on SPARC M10-4S Hardware."

- [SPARC M10-4S]
  If you power on all physical partitions (PPAR) in a system that has more than one PPARs with the poweron(8) command, the startup time taken when specifying power-on of PPAR is longer than the time taken for batch power-on by specifying -a.

- [SPARC M10-4/M10-4S]
  As for the ioreconfigure that can be specified by -m function of the setpparmode (8) command, leave it as the default, false, and disable the I/O bus reconfiguration function. If you enable the I/O bus reconfiguration function by specifying true to the ioreconfigure, it may be necessary to reinstall Oracle Solaris.

- [SPARC M10-4S]
  If showhardconf -M is executed, it may not be possible to display one screen at a time if both of the conditions below are met. Do not execute showhardconf -M.

  - System configured with 2BB or greater
  - One or more SPARC M10-4Ss are subject to an XSCF reset with the rebootxscf (8) command, so they cannot communicate.

- At this point, the Auto Service Request (ASR) function is not supported.

XCP 2051 Problems and Workarounds

See "Problems that might occur with XCP 2051 and workarounds" for information on problems that can occur with XCP 2051. See "Problems resolved in XCP 2051" for information on problems resolved in XCP 2051.

Chapter 3

Information on Software

This chapter describes special instructions and problems concerning the SPARC M10 Systems software.

- Notes and Restrictions
- Problems with XCP and Workarounds
- Problems with Oracle Solaris and Workarounds

Notes and Restrictions

Notes on Oracle VM Server for SPARC

- If you operate a guest domain with the reset(8) command of the XSCF firmware after reconfiguring a logical domain with Oracle VM Server for SPARC and before executing the ldm add-spconfig command, another guest domain may be reset. Or the specified guest domain will not be reset. Save a configuration of the logical domain with the ldm add-spconfig command. If you reset the guest domain before saving it, execute the ldm stop command from the control domain, not from XSCF.

- If you specify a logical domain configuration for next time you start, use the ldm set-config command in place of ldm add-spconfig -r.
  If you use the ldm add-spconfig -r command to specify a logical domain configuration for next time you start, and operate a guest domain with the reset(8) command of the XSCF firmware, another guest domain may be reset.

- If you execute the ldm migrate-domain command with Oracle VM Server for SPARC, the following problems will occur in XSCF:
  - If you execute the showdomainstatus(8) command, the status of the migrated guest domain shows "Unknown".
  - When the physical partition (PPAR) is powered off with the poweroff(8) command, all the guest domains may not be properly shut down.

- When resetting a guest domain by using the reset(8) command, another guest domain may be reset. If you reset the guest domain, execute from the guest domain, and not from XSCF.
- If SNMP is set, the name of the guest domain sent in the trap notification may be incorrect.

- The migration with the ldm migrate-domain command is not supported if the logical domain at the migration source is in the OpenBoot PROM state. Perform migration with the ldm migrate-domain command after changing the logical domain at the migration source to either of the following states: (CR 15858731)
  - Stopped state (bound state)
  - A state where Oracle Solaris is running

- Be sure to start the ldmd service (svc:/ldoms/ldmd:default) of the control domain.

Notes on a case where openssl is used

Oracle Solaris provides accelerated cryptographic libraries for SPARC64 M10 systems. These libraries can be used by using the PKCS11 engine of OpenSSL. See man pages openssl(5), engine(3openssl), and evp(3openssl), or the following OpenSSL documents:

http://www.openssl.org/docs/crypto/engine.html
http://www.openssl.org/docs/crypto/evp.html

Please note:
- The PKCS11 engine is the only way in OpenSSL to obtain the acceleration of cryptographic functions from the encryption arithmetic unit of the SPARC64 X processor.
- The implementation of PKCS11 engine for OpenSSL in Oracle Solaris requires the enabling of EVP model for digest and encryption methods supported by engine.
  - The following is the list of digest methods are optimized on SPARC64-X: SHA1, SHA224, SHA256, SHA384, SHA512
  - The following is the list of encryption methods are optimized on SPARC64 X: DES-CBC, DES-EDE3-CBC, DES-ECB, DES-EDE3
    AES-128-CBC, AES-192-CBC, AES-256-CBC
    AES-128-ECB, AES-192-ECB, AES-256-ECB
    AES-128-CTR, AES-192-CTR, AES-256-CTR

Here is an example on calling the accelerated version of AES method on SPARC64-X:

```
# openssl speed -engine pkcs11 -evp AES-256-CBC
```

- To use the optimized digest method or encryption method in the PKCS11 engine with an application using the OpenSSL library (libssl, libcrypto), enable the EVP

interface explained in evp(3openssl).

Notes on remote maintenance service

Note - Enhanced Support Facility (ESF) and Remote Customer Support System (REMCS) are supported only for SPARC M10 systems sold within Japan by Fujitsu.

This section describes notes when using the remote maintenance service. See *Enhanced Support Facility User's Guide for REMCS* for how to set and use REMCS.

Before setting the remote maintenance service

To use the remote maintenance service with SPARC M10 Systems, you must perform settings for the REMCS agent function by using XSCF Web. In addition, the REMCS agent uses timezone information of XSCF. Perform the following settings in advance with the XSCF shell:

- Setting necessary for using the XSCF Web, such as enabling the HTTPS setting
- Setting the timezone for XSCF

After completing the above settings, perform settings for the REMCS agent function by using the XSCF Web.
See *SPARC M10 Systems System Operation and Administration Guide* for details of the XSCF Web settings and timezone settings.

Timezone for the REMCS agent function

The REMCS agent uses the timezone currently set for the system.   For this reason, when you change the system timezone with XSCF, set the periodical connection schedule again to update the information of REMCS center.

Problems with XCP and Workarounds

This section describes problems with XCP and workarounds for each version.

Problems that might occur with XCP 2051 and workarounds

The following table shows problems that might occur with XCP 2051 and workarounds for them.

Table 3-1   Problems that might occur with XCP 2051 and workarounds

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121219-008		x	x	The device path of the I/O device that has been used changes if a CPU memory unit (CMU) is added to add two CPUs when the I/O bus reconfiguration is enabled in SPARC M10-4 or SPARC M10-4S with two CPUs installed.	There is no effective workaround.
RTIF2-121219-011			x	The power of a physical partition (PPAR) may not be disconnected if deleteboard -c unassign is executed to the system board that belongs to the PPAR while the power of the PPAR is being disconnected using the poweroff(8) command.	After executing the poweroff(8) command, confirm that the status field of the relevant PPAR shows Powered Off by using the showpcl(8) command. Then, execute the deleteboard (8) command.
RTIF2-130109-003	x	x	x	If you use the setpcl(8) command to change the LSB number of a SPARC M10 system cabinet to which a PCI expansion unit is connected and start Oracle Solaris in the logical domain configuration, you cannot display the configuration information of the PCI expansion unit by executing the showhardconf(8) command.	Use the setdomainconfig(8) command to set the logical domain configuration to the factory-default, and power on the physical partition (PPAR). Then, configure the logical domain again.
RTIF2-130219-003			x	The following error log is registered if you remove a XSCF BB control cable when removing a SPARC M10-4S with the initbb(8) command or replace a SPARC M10-4S or an XSCF unit with the replacefru (8) command. Msg: Board control error (MBC link error) Msg: BB control cable detected unexpected Msg: XSCF hang-up is detected	There is no effective workaround. Ignore the error log.
RTIF2-130219-004			x	When an error occurred with a crossbar unit mounted on a crossbar box, many copies of "failed to read/write interrupt mask register" may be registered in the error log.	There is no effective workaround. Power off the physical partition (PPAR) and replace the crossbar unit in the crossbar box.

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130219-006	x	x	x	If you restart an XSCF by using the flashupdate(8) or rebootxscf(8) command while a physical partition (PPAR) is being powered on, the POST may stop in a state where the diagnosis is completed (Initialization Complete).	Execute the reset por command, or power off the PPAR by using the poweroff -f command and then power it on again.
RTIF2-130219-007			x	When you turn on the input power supply to a crossbar box or SPARC M10-4S after disconnecting it in a system with building block configuration, "Board control error (MBC link error)" may be registered in the error log. In addition, an non-existing crossbar box or SPARC M10-4S may be displayed as a faulty unit.	This error log is registered when you disconnect the input power supply. Ignore this error log.
RTIF2-130228-001	x	x	x	If a physical partition (PPAR) is powered on again after the PPAR is forcefully powered off with the poweroff -f command while starting up Oracle Solaris, "Unable to connect to Domain Service providers" is output to the OS console and Oracle Solaris may not be started.	Power on the PPAR again with the poweron(8) command after disconnecting the power of the PPAR with the poweroff(8) command. If Oracle Solaris does not start up even after that, reset the XSCF after disconnecting the power of the PPAR and then power on the PPAR again.
RTIF2-130305-001	x	x	x	"The limit of power has been exceeded" is registered on the event log if you execute the following. Execute the setpowercapping(8) command to set the power consumption limit function to "Enable", the power consumption upper limit value to "Specify to 100 percent (default)", and an extension of time when exceeding the upper limit of power consumption to "none." And then turn on the input power supply or turn off the power of a physical partition.	There is no effective workaround. Ignore this event log.

Table 3-1 Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130305-002	x	x	x	If an error in the CPU or memory is detected and if the XSCF is switched while the XSCF is notifying the error information to the control domain, the error information may not be notified again to the control domain. Because of this, the error information displayed with the showlogs error command is not displayed in the Fault Report output by the fmdump command.	There is no effective workaround. Maintain according to the FRU displayed by the showlogs error command.
RTIF2-130305-003	x	x	x	If the input power supply cable is attached soon after detaching it, the following error log, which shows an error in the configuration of the input power supply, may be registered. In case of XCP2041 or newer∶ "Wrong PSU is installed" In case of XCP2032 or older∶ "PSUs detect 100V and 200V at AC inputs"	There is no effective workaround. Ignore this error log.

RTIF2-130305-004			x	When an XSCF unit of SPARC M10-4S or crossbar box is replaced using the replacefru(8) command, the replacement may fail with the following message displayed.
				`[Warning:010]`
				`An internal error has`
				`occurred.`
					Replace the unit again after the replacefru(8) command is completed. If replacement still fails, stop the system and then replace the unit.

RTIF2-130305-007	x	x	x	FRU registered in the error log is displayed as "PPAR#30" if the configuration error of the system board (PSB) is detected when executing the testsb(8) command or diagxbu(8) command.	There is no effective workaround. Maintain the applicable PSB of SPARC M10 system cabinet.
RTIF2-130305-009	x	x	x	Only up to 128 entries are displayed if the showsnmp(8) command is executed after 129 entries or more of trap host IP addresses are registered using the setsnmp addtraphost command or the setsnmp addv3traphost command.	There is no effective workaround. If abnormal termination does not occur when 129 entries or more of trap host IP addresses are registered using the setsnmp(8) command, the IP addresses are registered successfully.

Table 3-1 Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130305-018			x	An internal error may occur when performing "Diagnostic tests" at the time of selecting "BB" by the replacefru(8) command or executing the testsb(8) command. If you check the error log at this time, you can see that `"no PSB available in PPAR"` is registered in "PPAR#30" at the time when the internal error occurred.	An error occurred in the applicable SPARC M10-4S and the system board (PSB) is in an unavailable state. Check the error log and replace the SPARC M10-4S.
RTIF2-130305-019	x	x	x	Diagnosis continues even when an error occurred on the testsb(8) command and timeout occurs after a two-hour wait.	Execute the showboards(8) command in another session while executing the testsb(8) command to check the status of PSB to be diagnosed. An operation does not work properly if "Test" is set to other than "Testing" and "Pwr" is set to "n." In this case, cancel the testsb(8) command by pressing [Ctrl] + [C].
RTIF2-130305-020			x	If XSCF panic or hang-up occurs, an error log showing that `XSCF hang-up is detected` may be notified many times.	There is no effective workaround. Ignore the logs with the same contents that were notified at the same period of time considering that they are caused by the same reason.
RTIF2-130305-022			x	The poweron(8) command may fail with the following message if an error log showing that XSCF hang-up is detected was detected and an "unknown" system board (PSB) was found by the showboards(8) command. The same can be said for the instruction of power-on using the XSCF Web, APCS, or the power supply interlocking. `Not powering on : An internal error has occurred. Please contact your system administrator.`	There is no effective workaround. Use the showboards(8) command to replace the XSCF of the PSB, which is shown as "unknown".

Table 3-1 Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130305-023			x	If an error occurred in the DC-DC converter of a crossbar unit, `XB-XB interface link-up error` is registered mistakenly instead of the correct error log of `LSI detected errors with power subsystem failure.`	There is no effective workaround. Check a power error if the error log of "XB-XB interface link-up error" was registered. Ignore the error log of "XB-XB interface link-up error" if a power error has occurred.
RTIF2-130305-025			x	If the poweroff(8) command is executed in the system that has more than one physical partition (PPAR), it takes time for the processing because the power of the PPARs is disconnected one by one. Depending on the system configuration, it may take about one hour.	There is no effective workaround.
RTIF2-130307-001			x	If any of the SPARC M10-4Ss specified with the diagxbu(8) command is unimplemented, the message "PSB#xx-0 is not installed." showing the PSB No. that represents the unimplemented SPARC M10-4S should appear. However, the PSB No. of the SPARC M10-4S which has been implemented may be erroneously output.	There is no effective workaround. Execute the showhardconf(8) command to check the status of the SPARC M10-4S to which the corresponding PSB No. is assigned. The SPARC M10-4S which has not been implemented is not displayed with the showhardconf(8) command. When the corresponding SPARC M10-4S is displayed, read the PSB No. in the message "PSB#xx-0 is not installed." as that of the unimplemented SPARC M10-4S specified when executing the command.
RTIF2-130329-005	x			When you turn on the input power supply in SPARC M10-1, READY LED of XSCF remains blinking and the system may not start.	There is no effective workaround. Power off the input power supply and then power it on again.

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130410-001			x	The diagnosis of the system board may fail during the power-off of the system board (PSB) by executing the diagxbu(8) or testsb(8) command, displaying the following message. [Warning:010] An internal error has occurred.	There is no effective workaround. Execute the showhardconf(8) command to check that the Pwr field of the relevant PSB is set to "n". If the field is set to "y", execute the showhardconf(8) command every few minutes and check that the field is changed to "n".
RTIF2-130410-002			x	The switching of an XSCF may fail if the XSCF is switched by executing the switchscf(8) command while a physical partition (PPAR) is being powered on.	Do not switch an XSCF by using the switchscf(8) command while a PPAR is being powered on.
RTIF2-130410-003			x	If a physical partition (PPAR) is powered on in the system that satisfies all the following conditions, other PPAR may also be powered on. ■ The power supply interlocking is enabled with the setremotepwrmgmt(8) command. ■ A node is created whose SubNodeID is not set in a power supply interlocking management item. ■ Multiple PPARs are configured.	■ When the power supply interlocking is unnecessary Disable the power supply interlocking with the setremotepwrmgmt -c disable and then delete the power supply interlocking setting with the clearremotepwrmgmt(8) command. ■ When the power supply interlocking is necessary If the system has multiple PPARs, create a management file of a power supply interlocking by specifying a PPAR-ID as a SubNodeID, and then register the power supply interlocking setting with the setremotepwrmgmt -c config.
RTIF2-130516-001	x	x	x	In a system configuration for which power supply interlocking with ETERNUS is set, ETERNUS is not powered on even if the power is turned on from the power switch located on the operation panel of the SRARC M10 system.	Turn on the power in one of the following ways: ■ XSCF command, poweron(8) command ■ Menu on the XSCF Webpage ■ Automatic power turning on with schedule settings

Table 3-1 Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130516-002			x	If XSCF switching or an XSCF reset occurs while the physical partition (PPAR) is being powered off, it may be impossible to turn off the power.	There is no effective workaround. While powering off PPAR, do not use the switchscf(8) command to perform XSCF switching or the rebootxscf(8) command to perform an XSCF reset.
RTIF2-130516-006			x	If XSCF switching occurs while multiple physical partitions (PPARs) are being powered on at the same time, it may take more than than usual to power them on.	There is no effective workaround. Do not switch an XSCF by using the switchscf(8) command while PPARs are being powered on.
RTIF2-130516-004			x	If a hardware failure occurs in a 4BB or greater configuration, automatic cluster switching may fail. If 16 or more guest nodes are incorporated into a single cluster, the following warning message may be output to the console of the control domain. SA SA_xscf????.so to test host ??? failed	If automatic cluster switching fails, follow the procedure in the manual of the cluster software to perform switching manually.
RTIF2-130516-005				If the showcodactivation(8) command is executed while data is being restored with the restoreconfig(8) or restorecodactivation(8) command, it may be impossible to display the execution results. If this happens, the showcodactivation(8) command ends with the "codd internal error".	The execution results can be displayed if the showcodactivation(8) command is executed after the execution of the restoreconfig(8) or restorecodactivation(8) command is completed.

Table 3-1 Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130702-001		x	x	The "I/O devices error detected" message is output when either the PPAR is powered on, or the control domain is rebooted on a SPARC M10-4/M10-4S system which was previously being operated only with a CPU memory unit (lower) (CMUL), but later a CPU memory unit (upper) (CMUU) was added and the IOreconfigure attribute of the PPAR is set to "false".	There is no workaround for the error that is displayed when the system is powered on after the add-in. The following setup ensures that no error message is output when either the PPAR is powered on, or the control domain is rebooted: 1. After Oracle Solaris is booted up, use the "ldm rm-io" command to delete the PCIe root complex of the added CMUU from the configuration of the control domain. 2. Use the "ldm add-spconfig" command to save the created configuration of the logical domain, to XSCF.

Table 3-1 Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130709-001			x	If master XSCF switchover occurs when the physical partition (PPAR) is powered on, the standby XSCF may require some time to switchover to the master XSCF, which causes "Master switch synchronization timeout".	There is no effective workaround. [How to restore] ■ In case of the error by flashupdate(8) command when PPAR is powered on. Execute flashupdate(8) command after powering off the domain. ■ In case of the error either by switchscf(8) command or due to failure of XSCF (process down, etc.) when domain is powered on. The "XSCF hang-up is detected" error log will be registered in the target chassis. Restore the system with any of the following methods. ■ Replace the CPU memory unit lower (CMUL) or XSCF unit(XSCFU), which bears the "XSCF hang-up is detected" message, with replacefru(8) command. ■ Execute input power off/on on the CMUL or XSCFU which bears the "XSCF hang up is detected" message.
RTIF2-130710-001			x	Occasionally, standby XSCF may not start up when XSCF switchover is executed by switchscf(8) command.	There is no effective workaround. [How to restore] Either execute input power off/on (AC OFF/ON) on all the SPARC M10-4Ss or use the replacefru(8) command to undergo a quasi-replacement (undergo the operation of replacement of parts without actually replacing them) of the SPARC M10-4S that failed to start.

Table 3-1   Problems that might occur with XCP 2051 and workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130716-001	x	x	x	When PCI Expansion unit firmware is updated using the ioxadm(8) command, the "#INKCARD 12C error" may occur.	There is no effective workaround, but in the following case, it can be concluded that PCI Expansion unit firmware has been properly updated. In such a case, ignore the "LINKCARD I2C error" message and let the system continue operating. ■ The firmware had been properly updated using the ioxadm(8) command. ■ The ioxadm -v list command shows the PCI Expansion unit firmware version, which was specified at the time of updating the firmware.

Problems resolved in XCP 2051

The following table lists the problems resolved in XCP 2051.

Table 3-2   Problems resolved in XCP 2051

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130717-001	x	x	x	If some trouble occurs in the USB-SSD on the PSU backplane(XBBPU) or on the XSCF interface unit (XSCFIFU) in the crossbar box, an error message which says "System backup memory access error", is logged and problems like the inability to execute the poweron(8) command or to collect data using the snapshot(8) command may occur.	There is no effective workaround. If this problem occurs, execute an input power off/on (AC OFF/ON).

Problems resolved in XCP 2050

The following table lists the problems resolved in XCP 2050.

Table 3-3   Problems resolved in XCP 2050

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130219-002			x	When maintaining SPARC M10-4S with a slave XSCF, if you incorrectly connect the standby XSCF and the slave XSCF with an XSCF connection cable, the maintenance is considered to have finished normally without detecting the error.	After switching between the master XSCF and the standby XSCF by using the switchscf(8) command, execute the testsb(8) command to the target slave XSCF. The incorrect connection with the XSCF connection cable is detected and an error log is issued.
RTIF2-130305-016			x	Timeout may occur if the XCP firmware version of a SPARC M10-4S or crossbar box is updated using the flashupdate -c sync command.	Execute the flashupdate(8) command by specifying the -f option to reupdate the XCP firmware for all SPARC M10-4S or crossbar boxes.

Table 3-3   Problems resolved in XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130319-002	x	x	x	Before power-off of the physical partition (PPAR) completes in SPARC M10-4S, if you power off and then power on the input power supply of a SPARC M10-4S or a crossbar box again and power on the PPAR again, the PPAR in operation may be powered off if the master XSCF is switched with the switchscf (8) command, firmware update, or failure.	If you power off the PPAR before powering off the input power supply of SPARC M10-4S or crossbar box, check that power-off the target PPAR and SPARC M10-4S is complete, by using the showboards(8) and showlogs power commands. Then, power off the input power supply of SPARC M10-4S or crossbar box.
RTIF2-130319-003	x	x	x	If you have the shutdown -i5 command and power-off command compete for power-off of the PPAR by executing the former in the control domain or the latter upon the ok prompt while power-off of the physical partition (PPAR) is performed with the poweroff(8) command, "SCF:PPAR issued power-off request (PPARID X)" may be registered many times.	Ignore the registered event log, because the PPAR has been normally powered off.
RTIF2-130329-004			x	In a system with building block configuration, if the following operations are performed during power-on of the physical partition (PPAR), connection to the control domain console may not be possible. 1. XSCF of any of SPARC M10-4Ss comprising PPAR is reset. 2. Switching of the master XSCF and standby XSCF occurs. 3. XSCF of SPARC M10-4S that was reset in 1. is reset again.	There is no effective workaround. Reset the master XSCF using the switchscf(8) command.

Table 3-3 Problems resolved in XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130329-006			x	If XSCF of SPARC M10-4S belonging to the physical partition (PPAR) in operation is reset due to a panic or watchdog timeout while the master XSCF and the standby XSCF are restarting simultaneously, connection to the control domain console may not be possible.	There is no effective workaround. Power off the PPAR by using the poweroff -f command, and then power it on again.
RTIF2-130516-003	x	x	x	If the XSCF load is high, the following warning message may be output, indicating the power supply unit (PSU) as a suspected location. `"Insufficient FAN rotation speed"` `"PSU voltage out of range error"` `"PSU output current too high"` `"PSU over temperature warning"`	There is no workaround. This is a warning message, so you can operate it as it is. Ignore the message.
RTIF2-130528-001	x	x	x	You cannot use the PCI hot plug (PHP) function to add a Quad Gigabit Ethernet card (SE1X7GQ2F) to a PCI Express slot of a PCI expansion unit.	This has been modified with XCP 2050 and SRU11.1.6.4.0. If XCP and SRU are not applied, you must stop the logical domain to which you want to add the PCI card before adding it. [Precautions] To resolve this problem when you have saved the configuration information of the logical domain and are operating the system with a configuration other than factory-default, you must reconstruct the logical domain configuration after update of the XCP firmware. For details, see "Reconstructing the logical domain (RTIF2-130528-001)."

Table 3-3　Problems resolved in XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130711-001			x	When maintenance is done on SPARC M10-4S, using the replacefru(8) or addfru(8) command, "FMEM serious error" is logged and the replacefru(8) or addfru(8) command may fail. Moreover, if the physical partition (PPAR) is powered on when the flashupdate(8) command is running, "FMEM serious error" is logged similarly and the flashupdate(8) command may fail.	For detail, see "Workaround for "FMEM serious error" of SPARC M10-4S (RTIF2-130711-001)."

Reconstructing the logical domain (RTIF2-130528-001)

To resolve this problem when you have saved the configuration information of the logical domain and are operating the system with a configuration other than factory-default, you must reconstruct the logical domain configuration after update of the XCP firmware through the following procedure:

1. **Check the current configuration information of the logical domain stored in XSCF.**
   This example assumes that the name of the saved logical domain configuration information is config1.

```
XSCF> showdomainconfig -p 0
20xx-yy-zz hh:mm:ss
PPAR-ID     :0
Booting config
(Current)   :config1
(Next)      :config1
--------------------------------------------------------------
Index       :1
config_name :factory-default
domains     :1
date_created:-
--------------------------------------------------------------
Index       :2
config_name :config1
domains     :2
date_created:'20xx-yy-zz hh:mm:ss'
```

2. **Set a dummy variable and then clear it for all logical domains.**
   Execute the following commands for all logical domains.

```
primary# ldm set-variable fix-php=true ldom
primary# ldm remove-variable fix-php ldom
```

3. **Save the changed configuration in XSCF to replace the current configuration information.**
   In this example, the name of the current configuration information, "config1", is replaced.

```
primary# ldm remove-spconfig config1
primary# ldm add-spconfig config1
```

4. **Restart all logical domains.**

Workaround for "FMEM serious error" of SPARC M10-4S (RTIF2-130711-001)

- In case of replacing SPARC M10-4S:
  In case of replacing SPARC M10-4S using the replacefru(8) command and the following maintenance menu, power on the target SPARC M10-4S (BB#x) as in step 3) and wait for 50 minutes before inputting "f", as in step 4) to finish the maintenance task.

```
Please execute the following steps:
1) Remove (Delete) the BB#x from a system.
2) Turn off the breaker of the BB#x.
3) After the exchanged device is connected with the system, turn on
   the breaker of the BB#x.
4) Please select[f:finish] :
```

- In case of adding SPARC M10-4S:
  In case of adding SPARC M10-4S using the addfru(8) command and the following maintenance menu, power on the target SPARC M10-4S (BB#x) as in step 1) and wait for 50 minutes before inputting "f", as in step 2) to finish the maintenance task.

```
Please execute the following steps:
1) After the added device is connected with the system, please turn on
   the breaker of the BB#x.
2) Please select[f:finish] :
```

- In case of executing the flashupdate(8) command:
  Do not power on the PPAR when the flashupdate(8) command is running. If the PPAR had been mistakenly powered on when the flashupdate(8) command was running, power on the PPAR again after the flashupdate(8) command had finished execution. To check whether the flashupdate(8) command had finished execution, look for the following message in the output of the showlogs event

command.

```
XCP update has been completed (XCP version=xxxx:last version=yyyy)
```

Problems resolved in versions prior to XCP 2050

The following table lists the problems resolved in versions prior to XCP 2050.

Table 3-4   Problems resolved in versions prior to XCP 2050

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121113-001	x	x	x	After setting an invalid value for the user name with the setsmtp(8) command, you execute the setemailreport(8) command to send a test mail. Then the reply address shows that the mail has been successfully sent.	There is no effective workaround. Even if it is displayed that the test mail has been successfully sent, it is not sent.
RTIF2-121113-002	x	x	x	If you execute the setaudit delete command and use the viewaudit(8) to display the audit log, some audit logs may not be deleted.	There is no effective workaround.
RTIF2-121113-006	x	x	x	If you display the XSCF Web screen in another window or in another tab without using the XSCF Web menu, contents may not be normally displayed.	For operation to display the XSCF Web screen, use the menu tree.
RTIF2-121113-007	x	x	x	While XSCF is starting, process down, panic or watchdog timeout occurs, which may cause XSCF to be reset.	Confirm that XSCF is successfully started. If it is not started, turn off the power of the physical partition (PPAR), and then disconnect the input power supply to the system and back on again (AC OFF/ON). When recycling the power supply to the system, wait for 30 minutes or more to turn on the input power supply after disconnecting. In case XSCF is not started even if recycling the input power supply to the system, replace the CPU memory unit (CMU).

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121113-009	x	x	x	While XSCF is running, process down, panic or watchdog timeout occurs, which may cause XSCF not to be restarted after XSCF reset.	Confirm that XSCF is successfully started. If it is not started, turn off the power of the physical partition (PPAR), and then disconnect the input power supply to the system and back on again (AC OFF/ON). When recycling the power supply to the system, wait for 30 minutes or more to turn on the input power supply after disconnecting. In case XSCF is not started even if recycling the input power supply to the system, replace the CPU memory unit (CMU).
RTIF2-121113-011	x	x	x	If you execute the showsnmp(8) command, the following message may appear, which means that the snmp daemon has been terminated. `Agent Status: Disabled`	Execute the showsnmp(8) command again to confirm that the snmp daemon is restarted. If `"Agent Status: Disabled"` is still displayed, execute the setsnmp enable command to restart the snmp daemon.
RTIF2-121113-014	x	x	x	The error message "/etc/redhat-release not found" appears while XSCF is starting.	Ignore this message.
RTIF2-121113-018	x	x	x	When you replace a FRU with the replacefru(8) command, the message "configuration changed (...)" showing a configuration change may be registered more than once in the event log.	Ignore the message that appears second time and later.
RTIF2-121113-019	x	x	x	When the power supply of the physical partition (PPAR) is disconnected according to the power supply schedule, "-" may be displayed as a cause (Cause) in the power log.	There is no effective workaround.

Table 3-4 Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121113-021	x	x	x	If time cannot be read accurately due to a failed clock in the XSCF board, an error showing a clock failure may not be recorded in the error log.	There is no effective workaround. If the following message appears when you execute the poweron(8) command, the clock in the XSCF board has failed. Replace the XSCF board. `Poweron canceled due to invalid system date and time.`
RTIF2-121113-022	x	x	x	If the operation panel has failed or is not connected, XSCF cannot be started.	Connect the operation panel. If the operation panel has failed, replace it.
RTIF2-121113-023 RTIF2-121113-028	x	x	x	If a CPU failure occurs while Hypervisor is running, the physical partition (PPAR) is reset more than once, and restarting of the PPAR may take time.	There is no effective workaround.
RTIF2-121113-025	x	x	x	When a CPU failure occurs, an error message showing degradation or offline on Oracle Solaris may not be output to Syslog.	Use the showlogs(8) command to check a failure state on XSCF.
RTIF2-121113-027	x	x	x	If you update the firmware and then upload XCP with XSCF Web without restarting XSCF, uploading of XCP will fail and the XSCF Web session will time out.	If you update the firmware and then continue to upload XCP with XSCF Web, restart XSCF.
RTIF2-121113-029	x	x	x	When the following error is registered in the error log, the mark (*) showing a failure state does not appear when you execute the showhardconf(8) command or the showstatus(8) command. `System backup memory access error`	There is no effective workaround.

Table 3-4 Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121113-031	x	x	x	After creating an I/O domain to which the PCI card is assigned with Oracle VM Server for SPARC, turn on the power of the I/O domain. If you then stop it in ok prompt, the configuration information of the PCI card may not be displayed with the showhardconf(8) command of XSCF.	Start Oracle Solaris of the logical domain to which the PCI card is assigned with Oracle VM Server for SPARC.
RTIF2-121129-001	x	x	x	By restarting XSCF, an error log "System backup memory access error" may be recorded and a (*) mark indicating a failure state may be put to PSUBP. Once this error occurs, you cannot start the physical partition (PPAR) or collect log information.	XSCF is restored by restarting XSCF, although the (*) mark to PSUBP indicating the failure state remains. The remaining (*) mark does not cause any inconvenience. To remove the (*) mark, power off the server and then power it on again.
RTIF2-121129-002	x	x	x	When you replace the CPU memory unit (CMU) or motherboard unit (MBU), the XSCF user account information may be deleted. To recover the XSCF user account information, you need to use the restoreconfig(8) command to restore the information saved by the dumpconfig(8) command.	After you have conducted the replacement, use the restoreconfig(8) command to restore the information saved by the dumpconfig(8) command, or set the XSCF user account information again.
RTIF2-121129-004	x	x	x	The restoredefaults(8) cannot initialize the following information. The setting information remains as it is. ■ Timezone for XSCF ■ Server certificate for HTTPS	There is no effective workaround. Reset by the settimezone(8), sethttps(8), and setssh(8) commands.
RTIF2-121130-001	x	x	x	When you enable and disable the power supply interlocking of RCIL, and then enable it again, the power supply interlocking of ETERNUS DX80/DX90/DX410/DX440/ DX8100/DX8700 S2 may not work.	When you enable and disable the power supply interlocking of RCIL, restart XSCF.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121204-001	x	x	x	The dynamic resource management software (ServerView Resource Orchestrator) sometimes fails to register a server to be monitored.	There is no effective workaround. Register the server to be monitored again by the dynamic resource management software.
RTIF2-121204-002	x	x	x	If a node of PRIMECLUSTER stops, node switching does not occur automatically.	There is no effective workaround. Switch nodes manually in PRIMECLUSTER.
RTIF2-121204-003	x	x	x	When you set or change environment variables of OpenBoot PROM by setenv or nvramrc of OpenBoot PROM, or by the eeprom(1M) or ldm set-var commands of Oracle Solaris, the setting or changes may not be retained after recycling the power supply to the system.	After you update an environment variable of OpenBoot PROM, execute the ldm add-config command to save the domain configuration information to XSCF.

RTIF2-121204-004	x	x	x	When you enable the auto boot function of the guest domain by the setpparmode(8) command of XSCF and then start the control domain and the guest domain simultaneously, you may encounter the situation where the following error message is recorded and Oracle Solaris cannot be started in the guest domain.
				`Code: 20000000-`
				`00ffff0000ff0000ff-`
				`030000020000000000000000`
				`Status: Notice`
				`Occurred: Nov 16 16:`
				`55:25.518 JST 2012`
				`FRU: /UNSPECIFIED`
				`Msg: Boot process`
				`failed`
					Use the XSCF setpparmode(8) to disable the auto boot function of the guest domain, and then start Oracle Solaris of the control domain. Then use the ldm start command of Oracle VM Server for SPARC to start the guest domain.
					
					[How to restore]
					Use the ldm stop command of Oracle VM Server for SPARC to stop the guest domain, and then use the ldm start command to start the guest domain.

RTIF2-121206-001	x	x	x	When starting the domain, the following error message may appear.
				`Msg: PCI Express link`
				`not active`
					Ignore this message if the showhardconf(8) command recognizes the PCI Express (PCIe) card.

RTIF2-121219-002			x	Some cabinets may not be recognized if all power cables are not connected within four minutes when connecting the power cables of the system that	Make sure not to exceed four minutes to finish connecting all the power cables when the system is composed of multiple SPARC M10-4S cabinets.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
				is composed of multiple SPARC M10-4S cabinets.	Remove and connect the power cables of all the cabinets again when there is a SPARC M10-4S cabinet that is not recognized.
RTIF2-121219-004	x	x	x	While powering on/off the power supply interlocking group, the showremotepwrmgmt(8) command may be abnormally terminated with the following message. `Controller response timeout.`	Execute the showremotepwrmgmt(8) command again.
RTIF2-121219-005	x	x	x	When a component with high temperature or low temperature at an air inlet is registered, the information on the second faulty component (the second suspect component) displayed in the FRU may not be correct.	Ignore the information on the displayed second faulty component (the second suspect component).
RTIF2-121219-006	x	x	x	Replacement of the power supply unit (PSU) using the replacefru(8) command may fail with Warning:005.	Execute the replacefru(8) command again and replace the PSU.
RTIF2-121219-009	x	x	x	If an error log indicating a fan failure, "Power-on failure" or "Power-off failure", is registered, an incorrect component may be displayed as the faulty FRU.	If the failure is "Power-on failure" or "Power-off failure", and the faulty component is a fan, replace the following component. ■ For SPARC M10-1 Motherboard unit (MBU) ■ For SPARC M10-4/M10-4S PSU backplane
RTIF2-121219-010			x	The error log "XSCF hang-up is detected" may be registered when the switchscf(8) command is executed.	Ignore this error log.
RTIF2-121219-012			x	When a SPARC M10-4S cabinet is replaced using the replacefru(8) command, replacement of the SPARC M10-4S cabinet may fail with "internal error" displayed.	Use the following procedure to replace a SPARC M10-4S cabinet by using the replacefru(8) command. 1. Enter "r" to replace the cabinet in response to the message "Do you want to continue?[r:replace|c:cancel]", which is displayed after the replacefru(8) command is executed.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
					2. Replace the SPARC M10-4S cabinet and wait for about 15 minutes after the input power of the cabinet is turned on.
					3. Execute the showlogs event command to display an event log.
					4. Continue the replacement using either of the following methods.
					■ When "XSCF update is started" is displayed in the event log: Wait until a log "XSCF update has been completed" is registered. When "XCP update has been completed" is displayed, enter "f" in response to "Please select[f:finish]" and then continue the replacement according to the instructions on the screen.
					■ When "XSCF update is started" is not displayed in the event log: Enter "f" in response to "Please select[f:finish]" and continue the replacement according to the instructions on the screen.
RTIF2-121219-013			x	When a SPARC M10-4S cabinet finds an error indicating that the XSCF cannot be started, not only an error log for the SPARC M10-4S cabinet where the error occurred but also an error log regarding a cable connection error in a cabinet that does not exist may be registered.	Ignore the error log regarding a cable connection error registered for a SPARC M10-4S cabinet that does not exist.
RTIF2-121219-014			x	When the cold replacement is performed (a replacement performed in the state of input power off) due to an error in BB#00, the setting information of the XSCF is deleted.	To replace a SPARC M10-4S cabinet due to an error in BB#00, use the replacefru(8) command.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121219-015			x	When a SPARC M10-4S cabinet is removed with the initbb(8) command, the information on the removed cabinet remains without being completely deleted.	To remove a SPARC M10-4S cabinet, perform the cold removal (the cabinet is removed by turning off the input power).
RTIF2-121219-016	x	x	x	An internal error may occur if the prtfru(8) command is executed while powering on/off or resetting the physical partition (PPAR).	Wait for the power on/off or reset of the PPAR to complete and then execute the prtfru(8) command again.
RTIF2-121219-017			x	If a SPARC M10-4S cabinet is powered off after an error log is registered because a memory error occurred in BB#00 or BB#01, the same error log may be registered again.	There is no effective workaround.
RTIF2-121219-018			x	In a system in which two or more SPARC M10-4S cabinets comprise multiple physical partitions (PPARs), if you power on the PPAR after switching of the master XSCF due to any of the following events, error logs of "STICK does not start (CPU)", "STICK does not start (MBC)", or "STICK count up error" may be registered, causing degradation of a CPU memory unit (CMUU/CMUL). ■ Performing firmware update ■ Detecting an XSCF failure ■ Executing the switchscf(8) command	There is no effective workaround. After switching of the master XSCF is performed, power off the input power supply of all SPARC M10-4Ss and power them on again, without powering on the PPAR. When any of error logs "STICK does not start (CPU)", "STICK does not start(MBC)", or "STICK count up error" is registered and a failure mark (*) appears on a part when you power on the PPAR after switching of the master XSCF, contact field engineers.
RTIF2-121219-019	x	x	x	When a PCI card is inserted to or removed from a PCI expansion unit, a number that is different from the relevant PCI card number (PCI#) is displayed in the log. In addition, when an error log "PCICARD failed" is registered due to an error in the PCIe slot on the PCI expansion unit or the PCI card, a number that is different from the relevant PCI card number (PCI#) is displayed in the error log.	Read it as the number obtained by subtracting one from the PCI number (PCI#) displayed in the log.

Table 3-4 Problems resolved in versions prior to XCP 2050 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130109-002			x	If "Console path is switched" is registered in the event log in a system where a physical partition (PPAR) consists of multiple system boards (PSBs), the PPAR-ID may show an invalid value.	There is no effective workaround.
RTIF2-130109-005	x	x	x	If you use the replacefru(8) command to replace a power supply unit (PSU), "Indispensable parts are not installed (PSU)" may be registered in the event log.	This is an error log that is registered because a PSU is removed. Ignore it.
RTIF2-130109-006			x	If you change the setting information of the power supply interlocking function while the standby XSCF is in failure or starting, the changed setting information may not be reflected in the standby XSCF even after the start of the standby XSCF is completed. If XSCF switching occurs in this state, the master XSCF after the switching may not be able to achieve power supply interlocking based on the changed setting information.	Disable the power supply interlocking function, and then configure it again using the following procedure: 1. Execute the setremotepwrmgmt -c disable command to disable the power supply interlocking function. 2. Save the management file, and then use the clearremotepwrmgmt(8) command to initialize the setting information. ■ If the standby XSCF is starting, execute the clearremotepwrmgmt(8) command after the start is completed. ■ If the standby XSCF is in failure, use the replacefru(8) command to replace the target FRU, and then execute the clearremotepwrmgmt(8) command. 3. After the start of the standby XSCF is completed, execute the setremotepwrmgmt -c config command to restore the setting information based on the saved management file. 4. Execute the setremotepwrmgmt -c enable command to enable the power supply interlocking function.

Table 3-4　Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130109-007	x	x	x	If all physical partitions (PPARs) are stopped and you try to power on a PPAR, the PPAR may not be powered on with no error log registered.	There is no effective workaround. Tun off the input power supply and turn it back on to all SPARC M10 system cabinets and then try to power on the PPAR again.
RTIF2-130130-001		x	x	If you turn on the AC in a system configuration with no CMUU mounted, an error log of Hardware access error is generated for CMUU. The same phenomenon occurs when you add or replace SPARC M10-4S.	The error log is registered because no CMUU is mounted. So, ignore it.
RTIF2-130212-001			x	If the power save operation, which is set by the setpparmode (8) command, is "enabled," the following problems may occur. ■ A hang-up (heartbeat function) in a logical domain may be unable to be detected. ■ If the CoD resources of a CPU core are reduced during system startup (while a physical partition (PPAR) is operating), the PPAR may be powered off.	Set the power save operation to "disabled" by using the setpparmode(8) command.
RTIF2-130212-002	x	x	x	When you check the domain status by using the showdomainstatus(8) command from the XSCF after executing the ldm add-spconfig command from Oracle Solaris, "Host stopped" is displayed for all domains, including the control domain.	When you check the domain status by using the showdomainstatus(8) command from the XSCF after executing the ldm add-spconfig command from Oracle Solaris, "Host stopped" is displayed for all domains, including the control domain.
RTIF2-130212-003	x	x	x	If you execute the testsb(8) command to a system board (PSB) that is being diagnosed by the testsb(8) or diagxbu(8) command in a different session, the PSB that is being diagnosed may enter an abnormal state and become unavailable.	Confirm that the PWR of the PSB to be diagnosed is "n" and that Test is not Testing by using the showboards(8) command before executing the testsb(8) command. If a PSB becomes unavailable, power off the entire system and then power it on again.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130215-001			x	After the hardware initial diagnosis detects a system board (PSB) error as described in the following error log, the PSB may not be degraded but the physical partition (PPAR) may be reset repeatedly. Code: 40002000-003cff0000ff0000ff-02000e000000000000000000 FRU: /BB#x Msg: SB deconfigured (SB-SB access error) Code: 40002000-003cff0000ff0000ff-02000e010000000000000000 FRU: /BB#x Msg: SB deconfigured (not running)	Disconnect the PSB where an error is detected from the PPAR configuration by using the deleteboard(8) command.
RTIF2-130215-002	x	x	x	Even when policy is set to psb by the setpcl(8) command, a unit of resource to be degraded when an error occurs may not be a system board but Field Replaceable Unit (FRU).	Disconnect the PSB where an error is detected from the PPAR configuration by using the deleteboard(8) command.
RTIF2-130219-001			x	The takeover IP address of an XSCF cannot be specified as a value for "IPAddress" or "SlaveAddress," which can be set in the management file for a power supply interlocking group.	Specify the IP addresses of XSCF-LAN#0 and XSCF-LAN#1 of the master XSCF and the standby XSCF for "IPAddress" and "SlaveAddress," respectively.
RTIF2-130219-005		x	x	If a failure occurs in a component in a physical partition (PPAR), the status of the PPAR in the SNMP MIB is not updated.	There is no effective workaround.
RTIF2-130219-008			x	If you turn on the input power supply to a SPARC M10-4S cabinet while a physical partition (PPAR) is being powered on in a system that has multiple PPARs, the SPARC M10-4S cabinet for which the input power supply is turned on may not be recognized by the master XSCF.	Power on the input power supply to all the crossbar boxes and SPARC M10-4S cabinets that compose the system before powering on a PPAR.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130227-001			x	If you collect a snapshot by specifying -a option, XSCF Kernel Panic may occur due to increased load of the master XSCF.	If you collect a snapshot of the entire system, collect snapshots one by one by specifying a BB-ID of SPARC M10-4S using -b option and not -a option. Perform this operation on all SPARC M10-4S.
RTIF2-130305-005			x	If XSCF panic occurs in a SPARC M10-4S while processing the diagnose by the POST after a physical partition (PPAR) is powered on in the system that has more than one SPARC M10-4S cabinet, then the power may be disconnected without continuing the process of powering on the PPAR.	There is no effective workaround. Make sure that the XSCF of each SPARC M10-4S is restarted. Power on the PPAR again if they are restarted.
RTIF2-130305-008			x	If each physical partition (PPAR) is configured with one system board (PSB) in the system that has more than one SPARC M10-4S cabinet and crossbar box, the power of the crossbar unit of a crossbar box is not stopped and the crossbar box is also powered on.	There is no effective workaround.
RTIF2-130305-010			x	Hypervisor Abort or OS PANIC may occur if all PPARs are powered on using the poweron -a command in the system that has four SPARC M10-4S cabinets or more with multiple physical partitions (PPARs).	Do not power on all the PPARs at the same time using the poweron -a command. Power on each PPAR using the -p option.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130305-013	x	x	x	While XSCF is starting, process down, panic or watchdog timeout occurs, which may cause XSCF to be reset.	Confirm that XSCF is successfully started. If it is not started, turn off the power of the physical partition (PPAR), and then disconnect the input power supply to the system and back on again (AC OFF/ON). When recycling the power supply to the system, wait for 30 minutes or more to turn on the input power supply after disconnecting. In case XSCF is not started even if recycling the input power supply to the system, replace the CPU memory unit (CMU).
RTIF2-130305-021			x	Immediately after starting up the XSCF, the system board (PSB) may be recognized as "Unmount" and the addboard (8) command or the poweron(8) command may fail.	Wait for about 30 seconds after starting up the XSCF and check that the target PSB is mounted using the showboards(8) command. Then execute the addboard(8) or poweron(8) command.
RTIF2-130305-024			x	If the input power supply of a crossbar box is disconnected and then powered on again in the state where a physical partition (PPAR) is powered on in the system that has the crossbar boxes, the following message may be output in the control domain console and the power-on process of the PPAR may not be completed. `WARNING: Unable to connect to Domain Service providers`	There is no effective workaround. [How to restore] If the power-on process of the PPAR is canceled, disconnect the power of the PPAR forcefully using the poweroff -f command. After that, reset all the XSCFs using the rebootxscf -a command or disconnect the input power supply of all the SPARC M10-4S cabinets and then power on again.
RTIF2-130319-001		x	x	Immediately after the input power supply of SPARC M10-4/M10-4S is powered on, "DMA timeout error Hard detected" may be detected occasionally. The CPU memory unit (lower side) (CMUL) is degraded if you start the logical domain with "DMA timeout error Hard detected" detected.	There is no effective workaround. Before starting the logical domain, disconnect the input power supply and then power it on again. If the degradation state of CMUL is not cleared after you start the logical domain, contact field engineers.

Table 3-4 Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130329-001			x	During firmware updating in SPARC M10-4S, ALARM LED of the master cabinet suddenly turns on and remains stopped, and the firmware updating may not complete.	There is no effective workaround.
RTIF2-130329-002			x	If the configuration has two or more crossbar boxes and the physical partition (PPAR) is configured not to use any crossbar box, you cannot disconnect the power supply from the operating panel.	Disconnect the power by using the poweroff(8) command.
RTIF2-130329-003	x	x	x	If you power off the input power supply with status of the physical partition (PPAR) being PowerOn (from the startup of Oracle Solaris OS to the completion of PowerOff), an SRAM serious error occurs in any of the SPARC M10-4Ss in the PPAR when you power on the input power supply next time, preventing you from powering on the input power supply.	When you power off the input power supply, do so after disconnecting the PPAR power supply in advance and making sure that disconnection is complete. If any problem occurs, restore the configuration with the following procedure: 1. Save settings with the dumpconfig(8) command. 2. Initialize the system to the factory default with the restoredefaults -c factory command. 3. Restore the configuration with the restoreconfig(8) command.
RTIF2-130410-004	x	x	x	The power may not be turned on/off from the operation panel.	If you power on from the XSCF shell, execute the poweron(8) command. If you power off from the XSCF shell, execute the poweroff(8) command. [How to restore] If this event occurs, power off the physical partition (PPAR) by using the poweroff -f command.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130410-005			x	Executing the poweron -a command leads to the failure of power-on if more than one PPAR is powered on or more than one PPAR has failed in the system that has multiple physical partitions (PPARs).	Specify the -p option to execute the poweron(8) command and turn on the power of each PPAR. [How to restore] If this event occurs, execute the poweroff -f command to forcefully power off the PPAR whose power has stopped being supplied during the middle of the power supply process. Then execute the poweron -p command to power on the PPAR.
RTIF2-130410-006			x	If a crossbar box has failed in the system that satisfies all the following conditions, a crossbar box may be degraded and the operation may not be continued. ■ Two or more crossbar boxes are configured. ■ Multiple PPARs are configured. ■ Each physical partition (PPAR) is configured with multiple CPU memory units (CMUU/CMUL).	There is no effective workaround. [How to restore] Execute the poweron -p command to power on the PPAR again whose power has been turned off due to an error in the crossbar box.
RTIF2-130410-007			x	If you forcefully turn off the power of the physical partition using the poweroff -f command immediately after you powered on the physical partition, you may not be able to power on/off the physical partition after that.	After powering on a PPAR, do not execute the poweroff -f command until the ok prompt is displayed. [How to restore] If you fail to forcefully turn off the power of a PPAR, power off the input power supply and then turn on the power again (AC OFF/ON).

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130415-001		x	x	In SPARC M10-4/M10-4S, if the firmware version is XCP 2031 or XCP 2032, the initial value of the following OpenBoot PROM environment variable differs from the default. Even if the setting is changed by using the setpparparam(8) command of the XSCF shell or the setenv command from the OpenBoot PROM prompt, it will return to the original value. auto-boot? false diag-switch? true fcode-debug? true local-mac-address? false	There is no effective workaround. Make a firmware update to XCP 2041 or a later version, and then set the value of the OpenBoot PROM environment variable again.
RTIF2-130416-001	x	x	x	If the PCI device in the I/O domain is deleted (ldm rm-io) or a PCI device is added (ldm add-io), hypervisor abort may occur when the I/O domain starts.	To delete the PCI device in the I/O domain, delete all devices under the same route complex as that of the PCI device to be deleted (which have the same xxxx of /pci@xxxx) and then add the necessary devices again. Alternatively, do not assign multiple devices under the same route complex to a single I/O domain.
RTIF2-130417-001			x	If the XSCF mounted in the crossbar box panics, it may be impossible to perform communication between the master XSCF and non-master XSCF.	There is no effective workaround. [How to restore] If the event occurs, wait for 15 minutes or longer, and then use rebootxscf -s to reset the master XSCF.
RTIF2-130507-001	x	x	x	There is a case where a RAID volume cannot be recognized after a power failure occurred while using the hardware RAID function.	Please run the activate-volume command at ok prompt to activate a hardware RAID volume. For the detailed procedure, see "12.2.8 Re-enabling hardware RAID volume" in the *SPARC M10 Systems System Operation And Administration Guide*.

Table 3-4   Problems resolved in versions prior to XCP 2050 *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130515-001	x	x	x	While the system is operating, the following events may occur: 1. The prtpicl command no longer responds. 2. Display data (such as XCP version) of prtpicl -v and prtdiag -v is not output as expected. 3. For /var/adm/messages, the warning message, "PICL snmpplugin: cannot fetch object value", is output. 4. XSCF CMDD process shutdown occurs, an XSCF is reset repeatedly, and becomes unusable. At this time, system operation can be continued.	There is no effective workaround. [How to restore] If event 1. occurs, recover with the following procedure. 1. End the prtdiag(1M) command with [Ctrl-C]. 2. Wait for about 30 minutes, and let an SNMP timeout occur in the XSCF. 3. On the control domain, execute the svcadm(1M) command to restart the picl service. If event 2. occurs, execute the command again. If results are displayed, the system can be operated continuously. If the state where results are not displayed as expected continues, check whether the XSCF is operating. ■ If the XSCF is operating, use the rebootxscf(8) command to reset the XSCF. ■ If the XSCF is not operating, turn off the input power supply of the system, and then back on (AC OFF/ON) to recover. If event 3. occurs, the system can be operated continuously because this is a temporary warning message. If event 4. occurs, turn off the input power supply of the system, and then back on (AC OFF/ON) to recover.
RTIF2-130612-001			x	In case of the XCP firmware versions XCP 2041, XCP 2042 or XCP 2043, replacement of SPARC M10-4S cannot be done with the replacefru(8) command on a system that is composed of multiple SPARC M10-4Ss.	Either execute cold replacement (a replacement performed in the state of input power off) or first update to XCP firmware version XCP2044 or newer, and then execute the replacement.

Problems with Oracle Solaris and Workarounds

This section describes problems with Oracle Solaris and workarounds for each version.

Problems relating to all the versions of Oracle Solaris and their workarounds

The following table shows problems that might occur in any versions of Oracle Solaris being supported and workarounds for them.

Table 3-5   Problems that might occur in any versions of Oracle Solaris and their workarounds

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround

15812880			x	If you try to access, via telnet or ssh, a domain where 8000 GB (about 7.8 TB) or greater memory is mounted, the following message appears on the destination control domain console and the access fails.
				■ For ssh
				`error: /dev/ptmx: Not enough space`
				`error: session_pty_ req: session 0 alloc failed`
				■ For telnet
				`telnetd: open /dev/ ptmx: Not enough space`
					This has been modified with Oracle Solaris 11.1 SRU3.5.1, and the patch 148888-04 for Oracle Solaris 10.
					
					[Workaround]
					Execute the following command to change ptmx_ptymax:
					[Example]
					# echo "ptms_ptymax/Z 0x400000" | mdb -kw
					`ptms_ptymax: 0 = 0x400000`

15813959 15813960 (7196117)	x	x	x	When a PCI expansion unit is added by hotplug(1M) in a SPARC M10 system, devices on the PCI expansion unit are not recognized.	Before you add a PCI expansion unit by hotplug(1M), add the following line in the /etc/system file in advance and restart Oracle Solaris. `set pcicfg:pcicfg_ slot_busnums = 4`

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
15822113	x	x	x	If ldm add-vcpu and ldm remove-vcpu are repeatedly executed in a shell script, the process that is being run may cause a core dump and abnormally terminate.	This has been modified with SRU11.1.7.5.0. If this defect occurs because SRU is not applied, execute the command again. In addition, when executing ldm remove-vcpu, execute it in such a condition that the process load is low.
15825208	x	x	x	In SPARC M10 Systems, the scp(1), sftp(1), and ssh(1) commands of Oracle Solaris may generate an error or installation of Oracle RAC may fail.	This has been modified with Solaris 11.1 SRU1.4. [Workaround] For details, see "An error occurs in executing the scp(1), sftp(1), or ssh(1) command of Oracle Solaris or the installation of Oracle RAC fails (CR:15825208)."
15826052	x	x	x	You cannot use the PCI hot plug (PHP) function to add a Quad Gigabit Ethernet card (SE1X7GQ2F) to a PCI-Express slot of a PCI expansion unit.	This has been modified with XCP 2050 and SRU11.1.6.4.0. For XCP 2050, see the description of RTIF2-130528-001. If XCP and SRU are not applied, stop the logical domain to which you want add the PCI card before adding it.
15840018	x	x	x	When the firmware is updated to XCP2031 or later, the following message is displayed when starting Oracle Solaris. `NOTICE: skipping unsupported token: fjorclnum`	This has been modified with SRU11.1.6.4.0, and the patch 148888-03 for Oracle Solaris 10. Ignoring this message does not have an impact on the system.

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround

15851224	x	x	x	When starting the I/O domain, the following message may be output and the panic may persist.
				
				`recursive rw_enter,`
				`lp=XXXXXXXX`
				`wwwh=XXXXXXXX`
				`thread=XXXXXXXX`
					Add the following to /etc/system of the I/O domain and restart Oracle Solaris:
					`forceload:  drv/vpci`
					
					Note that if starting of the I/O domain is disabled, you must change to inactive state the guest domain to which the virtual disk (vdisk), which is a target of the virtual disk service (vds) of the I/O domain, is assigned, with the ldm stop-domain and ldm unbind-domain commands. This will enable starting of the I/O domain. After starting the I/O domain, set the above.

Table 3-5   Problems that might occur in any versions of Oracle Solaris and their workarounds *(continued)*

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
15851441	x	x	x	When the memory fails and is degraded, the following message may be output at startup of Oracle Solaris, and the panic may persist. `tilelet_assign_fini_ cb(): tile 0xX in memgrp X was unused` This may also occur when you set the mirror mode for the memory after saving the logical domain setting with ldm add-spconfig.	Replace the memory having an error. If you want to start Oracle Solaris while the memory having an error remains to be mounted, start it using the following procedure from XSCF. 1. Execute the poweroff(8) command to turn off the power of the physical partitions (PPARs). 2. Execute the setdomainconfig (8) command to restore PPARs to their factory-default state. `setdomainconfig -p` *ppar_id* `-c default` 3. Execute the poweron(8) command to start the PPARs. Oracle Solaris is started in the factory-default configuration which consists of only control domains. If you set the mirror mode for the memory, configure a logical domain after setting the mirror mode in the factory-default condition. Then, save the settings with ldm add-spconfig. In addition, you must not specify with ldm set-config or the setdomainconfig(8) command of XSCF the settings that were saved with no mirror mode set, to the environment where the mirror mode is used.

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
15858713	x	x	x	If a memory error occurs and all the memories assigned to the guest domain are degraded, ldmd(1M) causes a core dump to abnormally terminate and the ldm(1M) command ends with an error.	This has been modified with Oracle Solaris 11 SRU3.5.1, and the patch 150011-02 for Oracle Solaris 10. Replace the memory having an error. If you want to start Oracle Solaris while the memory having an error remains to be mounted, start it using the following procedure from XSCF. 1. Execute the poweroff(8) command to turn off the power of the physical partitions (PPARs). 2. Execute the setdomainconfig (8) command to restore PPARs to their factory-default state. `setdomainconfig -p` `ppar_id -c default` 3. Execute the poweron(8) command to start the PPARs. Oracle Solaris is started in the factory-default configuration which consists of only control domains.
15887244	x	x	x	When you start the SunVTS 7.0 ps14 and ps15 tests in a SPARC M10 system, they may terminate with an error.	This has been modified with Oracle Solaris 11.1 SRU4.6, and the patch 149395-02 for Oracle Solaris 10. There is no workaround other than applying the modification.

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround

15823255			x	An Oracle Solaris panic may occur if the CPU allocation is changed using the psradm(1M) or psrset(1M) command or the configuration of a virtual CPU is dynamically changed using the ldm(1M) command under the environment that meets the following two conditions.
				■ The environment where the physical partition (PPAR) is composed of two or more SPARC M10-4S cabinets.
				■ The environment where the following lgroup exists when the lgrpinfo command is executed on the control domain or logical domain.
				Among the lgroups that are displayed as "lgroup XX (intermediate):", only one number is displayed before "(CPU)" of the "Lgroup resources:" field and the number is not displayed before (memory)
				
				[Example]
				`# /usr/bin/lgrpinfo`
				`...`
				`lgroup 12`
				`(intermediate):`
				`        Children: 10,`
				`Parent: 0`
				`        CPUs: 0 1`
				`        Memory:`
				`installed 520M,`
				`allocated 494M, free`
				`26M`
				`        Lgroup`
				`resources: 1 (CPU); 10`
				` 11 (memory)`
				`        Latency: 21`
				`...`
					This has been modified with Solaris 11.1 SRU5.5.
					
					[Workaround]
					Add the following line to /etc/system and restart Oracle Solaris:
					`set mpo_disabled=1`

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
16292272			x	If you configure many guest domains in a system where 16 BBs compose one physical partition (PPAR), it takes time to perform binding for the guest domains. It approximately takes (the number of guest domains for which binding has already been performed + 1) x 6 + 10 seconds to perform binding. Therefore, if there are no domains for which binding has been performed, and binding is performed for the guest domains one by one through the ldm bind-domain command, the required time is obtained by summing the times taken to perform binding for all of them.	This has been improved with SRU11.1.6.4.0, and the patch 150011-03 for Oracle Solaris 10. We recommend that you do not configure the system with a single PPAR but divide it into multiple PPARs and then configure guest domains in each PPAR. Having a configuration above not only mitigates the described phenomenon but also helps improve fault tolerance. If a virtual network switch (vsw) is configured, you can reduce the time for binding by half by setting inter-vnet-link to off. For notes when inter-vnet-link is set to off, see *Oracle VM Server for SPARC Administration Guide* or *Oracle VM Server for SPARC Release Notes*.

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround

—	x	x	x	If an access error is detected when accessing an internal SAS disk drive, further access to the disk may become impossible.	Perform settings for multipathing (MPxIO) on the internal HDD. If the Enhanced Support Facility 5.0 or later is applied, you do not have to perform the following operations:
					
					Note - Enhanced Support Facility (ESF) is supported only for SPARC M10 systems sold within Japan by Fujitsu.
					
					[Setting example]
					1. Use the format(1M) command to check the product and model of the HDD which is mounted.
					# **format**
					
					2. Add the internal HDD information to the /kernel/drv/scsi_vhci.conf file.
					
					[Setting example of scsi_vhci.conf file]
					■ For Oracle Solaris 11
					`scsi-vhci-failover-override =`
					`"TOSHIBA MBF2600RC",`
					` "f_sym";`
					
					■ For Oracle Solaris 10
					`device-type-scsi-options-list =`
					`"TOSHIBA MBF2600RC",`
					` "sym-opt";`
					`sym-opt = 0x1000000;`
					
					3. Use the stmsboot(1M) command to enable MPxIO.
					# **stmsboot -e**

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
—	x	x	x	When a logical domain mounted with a 10 Gigabit Ethernet card (SP1X7HF1F) has the value of OpenBoot PROM environment variable diag-switch? being set to true, the console shows the following warning message and the error log records "Msg: Device error (FCode informed error)". `WARNING: /pci@X, XXXXXX: FCODE mapin doesn't match decoded register type;` Also, executing the showstatus (8) command may show "Degraded" for the FRU that mounts the relevant PCI card.	Ignore all these outputs. To prevent these outputs, execute the following command on the ok prompt to change the value of OpenBoot PROM environment variable diag-switch? to false. `setenv diag-switch? false`

An error occurs in executing the scp(1), sftp(1), or ssh(1) command of Oracle Solaris or the installation of Oracle RAC fails (CR:15825208)

[Workaround]
Using the following procedure, change the setting so that the AES_CTR, AES_CBC_MAC, and AES_CFB128 algorithms are not used with the assist function of the encryption unit.

- If you use it with the client function (scp(1), sftp(1), ssh(1), etc.):
    1. **Add the content of the setting in one line to a target file. A space is necessary only between "Cipher" and "aes128-cbc."**
        - Target file
        The setting of the entire system: /etc/ssh/ssh_config
        The setting per user: $HOME/.ssh/ssh_config

        - The content of the setting

```
Ciphers aes128-cbc,aes192-cbc,aes256-cbc,3des-bc,arcfour128,
arcfour256,arcfour,blowfish-cbc
```

- If you use it with the server function (sshd(1M) etc.):
    1. **Add the content of the setting in one line to a target file.**
        - Target file
        /etc/ssh/ssh_config

- The content of setting (recommended)

```
Ciphers 3des-cbc,arcfour128,arcfour256,arcfour,blowfish-cbc
```

2. Restart the service with the following command:

```
# svcadm restart svc:/network/ssh:default
```

- If the problem cannot be resolved with any of the client function and server function:
  1. Add the following, in place of the above content of the setting:

```
UseOpenSSLEngine no
```

Problems with Oracle Solaris 10 and Workarounds

The following table shows problems that might occur with Oracle Solaris 10 being supported and workarounds for them.

Table 3-6   Problems that might occur with Oracle Solaris 10 and workarounds

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
15738030	x	x	x	If both of the following conditions are met, the control domain panic may occur with `"BAD TRAP: type=31"`. - The operating system of the control domain is Solaris 10. - As a result of executing ldm list-domain -o memory primary, the RA (real address) is greater than 0x200000000000 (32 TB).	This has been modified with the patch 148888-03 for Solaris 10. [Workaround] Perform the following procedure: 1. Execute ldm list-domain -o memory primary to display the value of SIZE. 2. Execute ldm start-reconf primary to enter the latency reconfiguration mode. 3. Execute ldm remove-memory 256M primary to reduce the assigned memory. 4. Execute ldm set-memory <value of SIZE in Step 1> primary to return the assigned memory back to the original size. 5. Restart the Oracle Solaris of the control domain. 6. Execute ldm list-domains -o memory primary to confirm that the RA is smaller than 0x200000000000. 7. Execute ldm add-spconfig <configuration information name> to save the configuration information to the XSCF.

Chapter 4

Information on SPARC M10-1 Hardware

This chapter describes special instructions and problems concerning the SPARC M10-1 hardware.

- Notes and Restrictions
- Device Paths of SPARC M10-1
- Problems with Hardware and Workarounds

Notes and Restrictions

Notes on using external DVD drive

USB bus power drive is not supported for external DVD drives connected via USB.

Notes on using USB memory

Prepare a USB memory as a medium in advance if you execute the command specifying the USB memory as a destination of saving data, among XSCF commands. The saved data contains information on the system . If you use the USB memory, consideration should be made for the management of the USB memory in which the data is saved, for security reasons.
Not all the commercially available USB memories of any manufacturer are guaranteed for their connectivity and operability with XSCF. Abnormalities may occur such as an XSCF firmware error or reset depending on your USB memories. In such a case, immediately stop using the USB memory.
When connecting a USB memory to the USB port for XSCF, directly connect it to the USB port. If you connect the USB memory via the USB hub or USB extension cable, it may cause an error.

Restrictions regarding mounting memories

Be sure to mount memories with the same capacity and rank in a cabinet of the SPARC M10 system.

Device Paths of SPARC M10-1

The following shows the device paths identified in SPARC M10-1.

Table 4-1   I/O device paths in a SPARC M10-1 cabinet and at the PCI expansion unit side

Device	Device path
Internal SAS	/pci@8000/pci@4/pci@0/pci@0/scsi@0
Internal HDD#0	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p0
Internal HDD#1	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p1
Internal HDD#2	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p2
Internal HDD#3	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p3
Internal HDD#4	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p4
Internal HDD#5	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p5
Internal HDD#6	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p6
Internal HDD#7	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p7
Internal LAN#0	/pci@8000/pci@4/pci@0/pci@1/network@0
Internal LAN#1	/pci@8000/pci@4/pci@0/pci@1/network@0,1
Internal LAN#2	/pci@8100/pci@4/pci@0/pci@0/network@0
Internal LAN#3	/pci@8100/pci@4/pci@0/pci@0/network@0,1
Internal USB port	
rear: USB1.1	/pci@8000/pci@4/pci@0/pci@2/pci@0/usb@4/****@1
front: USB1.1	/pci@8000/pci@4/pci@0/pci@2/pci@0/usb@4/****@2
rear: USB2.0	/pci@8000/pci@4/pci@0/pci@2/pci@0/usb@4,1/****@1
front USB2.0	/pci@8000/pci@4/pci@0/pci@2/pci@0/usb@4,1/****@2
PCI#0	/pci@8000/pci@4/pci@0/pci@8/****@0
PCI#1	/pci@8100/pci@4/pci@0/pci@1/****@0
PCI#2	/pci@8100/pci@4/pci@0/pci@9/****@0
PCI expansion unit under PCI#0	
PCI#1	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0

Device	Device path
PCI#3	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0
PCI expansion unit under PCI#1	
PCI#1	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0
PCI#3	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@8100/pci@4/pci@0/pci@1/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0
PCI expansion unit under PCI#2	
PCI#1	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0
PCI#3	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@8100/pci@4/pci@0/pci@9/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0

Problems with Hardware and Workarounds

There is no problem that has been confirmed as of this moment.

Chapter 5

Information on SPARC M10-4 Hardware

This chapter describes special instructions and problems concerning the SPARC M10-4 hardware.

- Notes and Restrictions
- Device Paths of SPARC M10-4
- Problems with Hardware and Workarounds

Notes and Restrictions

Notes on using external DVD drive

USB bus power drive is not supported for external DVD drives connected via USB.

Notes on using USB memory

Prepare a USB memory as a medium in advance if you execute the command specifying the USB memory as a destination of saving data, among XSCF commands. The saved data contains information on the system . If you use the USB memory, consideration should be made for the management of the USB memory in which the data is saved, for security reasons.
Not all the commercially available USB memories of any manufacturer are guaranteed for their connectivity and operability with XSCF. Abnormalities may occur such as an XSCF firmware error or reset depending on your USB memories. In such a case, immediately stop using the USB memory.
When connecting a USB memory to the USB port for XSCF, directly connect it to the USB port. If you connect the USB memory via the USB hub or USB extension cable, it may cause an error.

Restrictions regarding mounting memories

Be sure to mount memories with the same capacity and rank in a cabinet of the SPARC M10 system.

Device Paths of SPARC M10-4

The following shows the device paths identified in SPARC M10-4.

When the CPU configuration at the initial implementation is a two-CPU

The following shows the device paths when the CPU configuration at the initial implementation is a two-CPU.

Note - The following device paths are applied when the configuration is changed from a two-CPU to a four-CPU.

I/O device paths in SPARC M10-4 cabinet

Table 5-1   I/O device paths in SPARC M10-4 cabinet (at initial implementation: a two-CPU)

Device		Device path
LSB#0	Internal SAS	/pci@8000/pci@4/pci@0/pci@0/scsi@0
	Internal HDD#0	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p0
	Internal HDD#1	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p1
	Internal HDD#2	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p2
	Internal HDD#3	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p3
	Internal HDD#4	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p4
	Internal HDD#5	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p5
	Internal HDD#6	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p6
	Internal HDD#7	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p7
	Internal LAN#0	/pci@8000/pci@4/pci@0/pci@9/network@0
	Internal LAN#1	/pci@8000/pci@4/pci@0/pci@9/network@0,1
	Internal LAN#2	/pci@8000/pci@4/pci@0/pci@a/network@0
	Internal LAN#3	/pci@8000/pci@4/pci@0/pci@a/network@0,1

Table 5-1　　I/O device paths in SPARC M10-4 cabinet (at initial implementation: a two-CPU) *(continued)*

Device	Device path
Internal USB port (rear: USB1.1)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4/****@1
Internal USB port (rear: USB2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/****@1
Internal USB port (front: USB1.1/2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/hub@2/****@1
PCI#0	/pci@8100/pci@4/pci@0/pci@0/****@0
PCI#1	/pci@8100/pci@4/pci@0/pci@8/****@0
PCI#2	/pci@8100/pci@4/pci@0/pci@9/****@0
PCI#3	/pci@8200/pci@4/pci@0/pci@0/****@0
PCI#4	/pci@8200/pci@4/pci@0/pci@8/****@0
PCI#5	/pci@8200/pci@4/pci@0/pci@9/****@0
PCI#6	/pci@8200/pci@4/pci@0/pci@11/****@0
PCI#7	/pci@8300/pci@4/pci@0/pci@0/****@0
PCI#8	/pci@8300/pci@4/pci@0/pci@8/****@0
PCI#9	/pci@8300/pci@4/pci@0/pci@9/****@0
PCI#10	/pci@8300/pci@4/pci@0/pci@11/****@0

I/O device paths at PCI expansion unit side

If the PCI slot on the server to which a link card is connected is PCI#X, the following device path is created to vvvv and u that are indicated in /pci@vvvv/pci@4/pci@0/ pci@u/****@0 that is the device path of PCI#X shown in .

Table 5-2　　I/O device paths at PCI expansion unit side (at initial implementation: a two-CPU)

Device	Device path
PCI expansion unit under PCI#X	
PCI#1	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0
PCI#3	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0

When the CPU configuration at the initial implementation is a four-CPU

The following shows the device paths when the CPU configuration at the initial implementation is a four-CPU

Note - The following device paths are applied when the configuration is reduced from a four-CPU to a two-CPU.

I/O devices in SPARC M10-4 cabinet

Table 5-3   I/O devices in SPARC M10-4 cabinet (at initial implementation: a four-CPU)

Device		Device path
LSB#0	Internal SAS	/pci@8000/pci@4/pci@0/pci@0/scsi@0
	Internal HDD#0	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p0
	Internal HDD#1	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p1
	Internal HDD#2	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p2
	Internal HDD#3	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p3
	Internal HDD#4	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p4
	Internal HDD#5	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p5
	Internal HDD#6	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p6
	Internal HDD#7	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p7
	Internal LAN#0	/pci@8000/pci@4/pci@0/pci@9/network@0
	Internal LAN#1	/pci@8000/pci@4/pci@0/pci@9/network@0,1
	Internal LAN#2	/pci@8400/pci@4/pci@0/pci@a/network@0
	Internal LAN#3	/pci@8400/pci@4/pci@0/pci@a/network@0,1
	Internal USB port (rear: USB1.1)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4/****@1
	Internal USB port (rear: USB2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/****@1
	Internal USB port (front: USB1.1/2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/hub@2/****@1
	PCI#0	/pci@8100/pci@4/pci@0/pci@0/****@0
	PCI#1	/pci@8500/pci@4/pci@0/pci@8/****@0
	PCI#2	/pci@8500/pci@4/pci@0/pci@9/****@0
	PCI#3	/pci@8200/pci@4/pci@0/pci@0/****@0
	PCI#4	/pci@8200/pci@4/pci@0/pci@8/****@0
	PCI#5	/pci@8600/pci@4/pci@0/pci@9/****@0
	PCI#6	/pci@8600/pci@4/pci@0/pci@11/****@0

Table 5-3 I/O devices in SPARC M10-4 cabinet (at initial implementation: a four-CPU) *(continued)*

Device	Device path
PCI#7	/pci@8300/pci@4/pci@0/pci@0/****@0
PCI#8	/pci@8300/pci@4/pci@0/pci@8/****@0
PCI#9	/pci@8700/pci@4/pci@0/pci@9/****@0
PCI#10	/pci@8700/pci@4/pci@0/pci@11/****@0

I/O devices at PCI expansion unit side

If the PCI slot on the server to which a link card is connected is PCI#X, the following device path is created to vvvv and u that are indicated in /pci@vvvv/pci@4/pci@0/pci@u/****@0 that is the device path of PCI#X shown in Table 5-3.

Table 5-4 I/O device paths at PCI expansion unit side (at initial implementation: a four-CPU)

Device	Device path
PCI expansion unit under PCI#X	
PCI#1	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0
PCI#3	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0

Problems with Hardware and Workarounds

There is no problem that has been confirmed as of this moment.

Chapter 6

Information on SPARC M10-4S Hardware

This chapter describes special instructions and problems concerning the SPARC M10-4S hardware.

- Notes and Restrictions
- Device Paths of SPARC M10-4S
- Problems with Hardware and Workarounds

Notes and Restrictions

Notes on using external DVD drive

USB bus power drive is not supported for external DVD drives connected via USB.

Notes on using USB memory

Prepare a USB memory as a medium in advance if you execute the command specifying the USB memory as a destination of saving data, among XSCF commands. The saved data contains information on the system . If you use the USB memory, consideration should be made for the management of the USB memory in which the data is saved, for security reasons.
Not all the commercially available USB memories of any manufacturer are guaranteed for their connectivity and operability with XSCF. Abnormalities may occur such as an XSCF firmware error or reset depending on your USB memories. In such a case, immediately stop using the USB memory.
When connecting a USB memory to the USB port for XSCF, directly connect it to the USB port. If you connect the USB memory via the USB hub or USB extension cable, it may cause an error.

Restrictions on replacing crossbar box

Replacement of a crossbar box using the replacefru(8) command is not supported at present. To replace a crossbar box, perform the following procedure:

1. **Execute the showhardconf command to confirm that the crossbar box to be replaced is not the master cabinet.**
   The crossbar box indicated as "Role:Master" is the master cabinet.

```
XSCF> showhardconf
          :
   XBBOX#80 Status:Normal; Role:Master; Ver:2038h; Serial:2111206001;
          :
```

2. **If the crossbar box to be replaced is the master cabinet, execute the switchscf command to switch it to standby.**

   ```
   XSCF> switchscf -y -t Standby
   ```

3. **The master XSCF is switched. Log in to the XSCF again.**

4. **Power off the physical partition (PPAR) that uses the crossbar box, and then power off the crossbar box to be replaced.**
   Confirm that the Power-LED on the operation panel of the crossbar box is turned off.

5. **Disconnect the input power supply to the crossbar box to be replaced, and replace it.**

Note - Although error logs for the crossbar box to be replaced are registered when the input power supply is disconnected, ignore all of them.

---

6. **Connect the power cord of the crossbar box to the input power supply.**
   For details, see "5.4 Connecting Cable to Crossbar Box" in the *SPARC M10 Systems Installation Guide*.

   Wait until STANDBY-LED on the operation panel of the crossbar box turns on.

7. **Execute the diagxbu command to perform diagnosis of the newly installed crossbar box.**

   ```
   XSCF> diagxbu -y -b XX -t YY -t ZZ
   ```

   Specify the BB_IDs (00 to 15) of SPARC M10-4S that is powered off in XX, YY, and ZZ.

8. **Execute the showlogs command to confirm that no error occurred during the diagnosis.**

```
XSCF> showlogs error
```

9. **Confirm that there are no faulty components.**

```
XSCF> showstatus
```

Restrictions on adding expansion rack 2

Addition of a crossbar box using the addfru(8) command is not supported at present.
To add a crossbar box, see the "8.4 Adding the Expansion Rack 2" in the *SPARC M10
Systems Installation Guide* and read Steps 17 and 18 as follows:

17. **Connect all power cords of the crossbar box and SPARC M10-4S to the input power supply.**
    For details, see "5.2 Connecting Cable to SPARC M10-4/SPARC M10-4S" and "5.4 Connecting Cable to Crossbar Box."

18. **Update the firmware to the same version as the master XSCF.**

    ■ XCP 2040 or earlier

```
XSCF> getflashimage file:///media/usb_msd/images/XCPxxxx.tar.gz
XSCF> flashupdate -c update -m xcp -s version
```

    ■ XCP 2041 or later

```
XSCF> flashupdate -c sync
```

Restrictions regarding mounting memories

Be sure to mount memories with the same capacity and rank in a cabinet of the
SPARC M10 system.

Device Paths of SPARC M10-4S

The following shows the device paths identified in SPARC M10-4S.

When the CPU configuration at the initial implementation is a two-CPU

The following shows the device paths when the CPU configuration at the initial implementation is a two-CPU.

Note - The following device paths are applied when the configuration is changed from a two-CPU to a four-CPU.

I/O device paths in SPARC M10-4S cabinet

Table 6-1   I/O device paths in SPARC M10-4S cabinet (at initial implementation: a two-CPU)

Device		Device path
LSB#0	Internal SAS	/pci@8000/pci@4/pci@0/pci@0/scsi@0
	Internal HDD#0	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p0
	Internal HDD#1	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p1
	Internal HDD#2	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p2
	Internal HDD#3	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p3
	Internal HDD#4	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p4
	Internal HDD#5	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p5
	Internal HDD#6	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p6
	Internal HDD#7	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p7
	Internal LAN#0	/pci@8000/pci@4/pci@0/pci@9/network@0
	Internal LAN#1	/pci@8000/pci@4/pci@0/pci@9/network@0,1
	Internal LAN#2	/pci@8000/pci@4/pci@0/pci@a/network@0
	Internal LAN#3	/pci@8000/pci@4/pci@0/pci@a/network@0,1
	Internal USB port (rear: USB1.1)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4/****@1
	Internal USB port (rear: USB2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/****@1
	Internal USB port (front: USB1.1/2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/hub@2/****@1
	PCI#0	/pci@8100/pci@4/pci@0/pci@0/****@0
	PCI#1	/pci@8100/pci@4/pci@0/pci@8/****@0
	PCI#2	/pci@8100/pci@4/pci@0/pci@9/****@0
	PCI#3	/pci@8200/pci@4/pci@0/pci@0/****@0
	PCI#4	/pci@8200/pci@4/pci@0/pci@8/****@0
	PCI#5	/pci@8200/pci@4/pci@0/pci@9/****@0
	PCI#6	/pci@8200/pci@4/pci@0/pci@11/****@0

Device	Device path
PCI#7	/pci@8300/pci@4/pci@0/pci@0/****@0
PCI#8	/pci@8300/pci@4/pci@0/pci@8/****@0
PCI#9	/pci@8300/pci@4/pci@0/pci@9/****@0
PCI#10	/pci@8300/pci@4/pci@0/pci@11/****@0

I/O device paths at PCI expansion unit side

If the PCI slot on the server to which a link card is connected is PCI#X, the following device path is created to vvvv and u that are indicated in /pci@vvvv/pci@4/pci@0/pci@u/****@0 that is the device path of PCI#X shown in Table 6-1.

Table 6-2   I/O device paths at PCI expansion unit side (at initial implementation: a two-CPU)

Device	Device path
PCI expansion unit under PCI#X	
PCI#1	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0
PCI#3	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0

I/O device paths of logical system board

As for the I/O device paths of LSB#1 to LSB#15, the top device nodes (/pci@vvvv) shown in Table 6-1 will be the device nodes shown in Table 6-3. Other nodes are the same as Table 6-1.
For example, in case of LSB#1, replace the device nodes shown in Table 6-1 as the following order. Replace the device nodes of LSB#2 to LSB#15 as the same way.
/pci@8000 to /pci@8800, /pci@8100 to /pci@8900, /pci@8200 to /pci@8a00, and /pci@8300 to /pci@8b00

Table 6-3   I/O device paths of LSB#1 to LSB#15 (at initial implementation: a two-CPU)

LSB number	Device path
LSB#1	/pci@8800/…
	/pci@8900/…
	/pci@8a00/…
	/pci@8b00/…
LSB#2	/pci@9000/…
	/pci@9100/…
	/pci@9200/…
	/pci@9300/…
LSB#3	/pci@9800/…
	/pci@9900/…
	/pci@9a00/…
	/pci@9b00/…
LSB#4	/pci@a000/…
	/pci@a100/…
	/pci@a200/…
	/pci@a300/…
LSB#5	/pci@a800/…
	/pci@a900/…
	/pci@aa00/…
	/pci@ab00/…
LSB#6	/pci@b000/…
	/pci@b100/…
	/pci@b200/…
	/pci@b300/…
LSB#7	/pci@b800/…
	/pci@b900/…
	/pci@ba00/…
	/pci@bb00/…
LSB#8	/pci@c000/…
	/pci@c100/…
	/pci@c200/…
	/pci@c300/…
LSB#9	/pci@c800/…
	/pci@c900/…

Table 6-3   I/O device paths of LSB#1 to LSB#15 (at initial implementation: a two-CPU)
(continued)

LSB number	Device path
	/pci@ca00/…
	/pci@cb00/…
LSB#10	/pci@d000/…
	/pci@d100/…
	/pci@d200/…
	/pci@d300/…
LSB#11	/pci@d800/…
	/pci@d900/…
	/pci@da00/…
	/pci@db00/…
LSB#12	/pci@e000/…
	/pci@e100/…
	/pci@e200/…
	/pci@e300/…
LSB#13	/pci@e800/…
	/pci@e900/…
	/pci@ea00/…
	/pci@eb00/…
LSB#14	/pci@f000/…
	/pci@f100/…
	/pci@f200/…
	/pci@f300/…
LSB#15	/pci@f800/…
	/pci@f900/…
	/pci@fa00/…
	/pci@fb00/…

When the CPU configuration at the initial implementation is a four-CPU

The following shows the device paths when the CPU configuration at the initial implementation is a four-CPU

> **Note -** The following device paths are applied when the configuration is reduced from a four-CPU to a two-CPU.

I/O devices in SPARC M10-4S cabinet

Table 6-4   I/O devices in SPARC M10-4S cabinet (at initial implementation: a four-CPU)

Device		Device path
LSB#0	Internal SAS	/pci@8000/pci@4/pci@0/pci@0/scsi@0
	Internal HDD#0	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p0
	Internal HDD#1	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p1
	Internal HDD#2	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p2
	Internal HDD#3	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p3
	Internal HDD#4	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p4
	Internal HDD#5	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p5
	Internal HDD#6	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p6
	Internal HDD#7	/pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p7
	Internal LAN#0	/pci@8000/pci@4/pci@0/pci@9/network@0
	Internal LAN#1	/pci@8000/pci@4/pci@0/pci@9/network@0,1
	Internal LAN#2	/pci@8400/pci@4/pci@0/pci@a/network@0
	Internal LAN#3	/pci@8400/pci@4/pci@0/pci@a/network@0,1
	Internal USB port (rear: USB1.1)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4/****@1
	Internal USB port (rear: USB2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/****@1
	Internal USB port (front: USB1.1/2.0)	/pci@8000/pci@4/pci@0/pci@1/pci@0/usb@4,1/hub@2/****@1
	PCI#0	/pci@8100/pci@4/pci@0/pci@0/****@0
	PCI#1	/pci@8500/pci@4/pci@0/pci@8/****@0
	PCI#2	/pci@8500/pci@4/pci@0/pci@9/****@0
	PCI#3	/pci@8200/pci@4/pci@0/pci@0/****@0
	PCI#4	/pci@8200/pci@4/pci@0/pci@8/****@0
	PCI#5	/pci@8600/pci@4/pci@0/pci@9/****@0
	PCI#6	/pci@8600/pci@4/pci@0/pci@11/****@0
	PCI#7	/pci@8300/pci@4/pci@0/pci@0/****@0
	PCI#8	/pci@8300/pci@4/pci@0/pci@8/****@0
	PCI#9	/pci@8700/pci@4/pci@0/pci@9/****@0
	PCI#10	/pci@8700/pci@4/pci@0/pci@11/****@0

I/O devices at PCI expansion unit side

If the PCI slot on the server to which a link card is connected is PCI#X, the following device path is created to vvvv and u that are indicated in /pci@vvvv/pci@4/pci@0/pci@u/****@0 that is the device path of PCI#X shown in Table 6-4.

Table 6-5   I/O device paths at PCI expansion unit side (at initial implementation: a four-CPU)

Device	Device path
PCI expansion unit under PCI#X	
PCI#1	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@0/****@0
PCI#2	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@1/****@0
PCI#3	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/****@0
PCI#4	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@0/****@0
PCI#5	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@1/****@0
PCI#6	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@10/****@0
PCI#7	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@10/pci@0/pci@11/****@0
PCI#8	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@0/****@0
PCI#9	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@1/****@0
PCI#10	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@10/****@0
PCI#11	/pci@vvvv/pci@4/pci@0/pci@u/pci@0/pci@0/pci@0/pci@1/pci@0/pci@11/pci@0/pci@11/****@0

I/O devices of logical system board

As for the I/O device paths of LSB#1 to LSB#15, the top device nodes (/pci@vvvv) shown in Table 6-4 will be the device nodes shown in Table 6-6. Other nodes are the same as Table 6-4.
For example, in case of LSB#1, replace the device nodes shown in Table 6-4 as the following order. Replace the device nodes of LSB#2 to LSB#15 as the same way.
/pci@8000 to /pci@8800, /pci@8100 to /pci@8900, /pci@8200 to /pci@8a00, and /pci@8300 to /pci@8b00
/pci@8400 to /pci@8c00, /pci@8500 to /pci@8d00, /pci@8600 to /pci@8e00, and /pci@8700 to /pci@8f00

Table 6-6   I/O devices of LSB#1 to LSB#15 (at initial implementation: a four-CPU)

LSB number	Device path
LSB#1	/pci@8800/…
	/pci@8900/…
	/pci@8a00/…
	/pci@8b00/…
	/pci@8c00/…
	/pci@8d00/…

Table 6-6   I/O devices of LSB#1 to LSB#15 (at initial implementation: a four-CPU) *(continued)*

LSB number	Device path
	/pci@8e00/…
	/pci@8f00/…
LSB#2	/pci@9000/…
	/pci@9100/…
	/pci@9200/…
	/pci@9300/…
	/pci@9400/…
	/pci@9500/…
	/pci@9600/…
	/pci@9700/…
LSB#3	/pci@9800/…
	/pci@9900/…
	/pci@9a00/…
	/pci@9b00/…
	/pci@9c00/…
	/pci@9d00/…
	/pci@9e00/…
	/pci@9f00/…
LSB#4	/pci@a000/…
	/pci@a100/…
	/pci@a200/…
	/pci@a300/…
	/pci@a400/…
	/pci@a500/…
	/pci@a600/…
	/pci@a700/…
LSB#5	/pci@a800/…
	/pci@a900/…
	/pci@aa00/…
	/pci@ab00/…
	/pci@ac00/…
	/pci@ad00/…
	/pci@ae00/…
	/pci@af00/…

Table 6-6　　I/O devices of LSB#1 to LSB#15 (at initial implementation: a four-CPU) *(continued)*

LSB number	Device path
LSB#6	/pci@b000/…
	/pci@b100/…
	/pci@b200/…
	/pci@b300/…
	/pci@b400/…
	/pci@b500/…
	/pci@b600/…
	/pci@b700/…
LSB#7	/pci@b800/…
	/pci@b900/…
	/pci@ba00/…
	/pci@bb00/…
	/pci@bc00/…
	/pci@bd00/…
	/pci@be00/…
	/pci@bf00/…
LSB#8	/pci@c000/…
	/pci@c100/…
	/pci@c200/…
	/pci@c300/…
	/pci@c400/…
	/pci@c500/…
	/pci@c600/…
	/pci@c700/…
LSB#9	/pci@c800/…
	/pci@c900/…
	/pci@ca00/…
	/pci@cb00/…
	/pci@cc00/…
	/pci@cd00/…
	/pci@ce00/…
	/pci@cf00/…
LSB#10	/pci@d000/…
	/pci@d100/…

LSB number	Device path
	/pci@d200/…
	/pci@d300/…
	/pci@d400/…
	/pci@d500/…
	/pci@d600/…
	/pci@d700/…
LSB#11	/pci@d800/…
	/pci@d900/…
	/pci@da00/…
	/pci@db00/…
	/pci@dc00/…
	/pci@dd00/…
	/pci@de00/…
	/pci@df00/…
LSB#12	/pci@e000/…
	/pci@e100/…
	/pci@e200/…
	/pci@e300/…
	/pci@e400/…
	/pci@e500/…
	/pci@e600/…
	/pci@e700/…
LSB#13	/pci@e800/…
	/pci@e900/…
	/pci@ea00/…

Problems with Hardware and Workarounds

There is no problem that has been confirmed as of this moment.

Chapter 7

Information on PCI Expansion Unit Hardware

This chapter describes special instructions and problems concerning the PCI expansion unit hardware.

- Direct I/O Function for the PCI Expansion Unit
- The method of saving and restoring the logical domain configuration information and OpenBoot PROM environment variables
- Problems with PCI Expansion Units and Workarounds

Direct I/O Function for the PCI Expansion Unit

For XCP 2044 or later of SPARC M10-1/M10-4 and for XCP 2050 or later of SPARC M10-4S, the direct I/O function of Oracle VM Server for SPARC is supported for the PCI expansion unit. This makes it possible to assign an I/O domain for each slot of the PCI expansion unit. For details on the direct I/O function of Oracle VM Server for SPARC, see *Oracle VM Server for SPARC Administration Guide* for the version used.
If the PCI expansion unit is connected to SPARC M10-4, make the setting below before using the direct I/O function. For SPARC M10-1, the setting below need not be made. The direct I/O function can be used simply by connecting the PCI expansion unit to SPARC M10-1.

Setting/displaying the direct I/O function

To set the direct I/O function for the PCI expansion unit, use the setpciboxdio(8) command of the XSCF firmware. To confirm the present settings, use the showpciboxdio(8) command.
For details on the setpciboxdio(8) and showpciboxdio(8) commands, see *SPARC M10 Systems XSCF Reference Manual* or the manual page for each command.

The method of saving and restoring the logical domain configuration information and OpenBoot PROM environment variables

1. **Execute the "ldm ls-spconfig" command on the control domain and check the configuration information to be saved, from the output.**
   The following example shows that "test3" is the present configuration.

```
# ldm ls-spconfig
factory-default
test1
test2
test3 [current]
```

   If the state of the present configuration is shown as "next poweron", there is a difference in the configuration information saved in XSCF and control domain. Use the "ldm add-spconfig" command to save the present configuration information.

   In the following example, present configuration information is saved in "test4", as "test3" is in the state of "next poweron".

```
# ldm ls-spconfig
factory-default
test1
test2
test3 [next poweron]
# ldm add-spconfig test4
# ldm ls-spconfig
factory-default
test1
test2
test3
test4 [current]
```

2. **Use the "ldm set-spconfig" command to setup the configuration information that is to be saved.**
   The following is an example of saving "test1".

```
# ldm set-spconfig test1
# ldm ls-spconfig
factory-default
test1 [next poweron]
test2
```

```
                              test3
```

3. **Power off/on the physical partition (PPAR) by executing the poweroff(8) and poweron(8) command respectively on the XSCF.**

   Before powering off the system, stop logical domains with appropriate procedure and execute the "ldm unbind" command to shift them to the "inactive" state.

   The following is an example of powering off/on PPAR 0.

```
XSCF> poweroff -p 0
XSCF> poweron -p 0
```

4. **Check that the specified value is setup, using the "ldm ls-spconfig" command.**

   The following example shows that "test1" is setup as the present configuration information..

```
# ldm ls-spconfig
  factory-default
  test1 [current]
  test2
  test3
```

5. **Execute the "ldm ls-constraints −x" command to save the present configuration information.**

   If necessary, backup the XML files.

   The following is an example of saving the present configuration information in "test1.xml".

```
# ldm ls-constraints -x > /var/tmp/test1.xml
```

6. **Check whether the configuration information is correct, using the "more" command.**

```
# more /var/tmp/test1.xml
<?xml version="1.0"?>
<LDM_interface version="1.3" xmlns:xsi=http://www.w3.org/2001/
XMLSchema-instancce
```

7. **Execute from step 2 to step 6 for as many times as is necessary to save the necessary configuration information.**

8. **Setup the system to "factory-default", using the "ldm set-spconfig factory-default" command.**

```
# ldm set-spconfig factory-default
# ldm ls-spconfig
  factory-default [next poweron]
```

```
   test1 [current]
   test2
   test3
```

9. **Remove all configuration information executing the "ldm rm-spconfig" command.**

```
# ldm rm-spconfig test1
# ldm rm-spconfig test2
# ldm rm-spconfig test3
# ldm ls-config
  factory-default [next poweron]
```

10. **Shutdown the logical domain to bring it to OpenBoot PROM.**
    Before powering off the system, stop logical domains with appropriate procedure and execute the "ldm unbind" command to shift them to the "inactive" state.

```
# shutdown -i0 -g0 -y
```

11. **Check the environment variables of the OpenBoot PROM using the "printenv" command.**

```
{0} ok printenv
Variable Name           Value                          Default Value
ttya-rts-dtr-off        false                          false
ttya-ignore-cd          true                           true
keyboard-layout
reboot-command
security-mode           none                           No default
security-password                                      No default
security-#badlogins     0                              No default
diag-switch?            false                          false
local-mac-address?      true                           true
fcode-debug?            false                          false
scsi-initiator-id       7                              7
oem-logo                                               No default
oem-logo?               false                          false
oem-banner                                             No default
oem-banner?             false                          false
ansi-terminal?          true                           true
screen-#columns         80                             80
screen-#rows            34                             34
ttya-mode               9600,8,n,1,-                   9600,8,n,1,-
output-device           virtual-console                virtual-console
input-device            virtual-console                virtual-console
auto-boot-on-error?     false                          false
load-base               16384                          16384
auto-boot?              false                          true
network-boot-arguments
boot-command            boot                           boot
```

```
boot-file
boot-device              /pci@8000/pci@4/pci@0/pc ...    disk net
multipath-boot?          false                           false
boot-device-index        0                               0
use-nvramrc?             false                           false
nvramrc
error-reset-recovery     boot                            boot
```

If there are some places which are abbreviated using "…", recheck those places.

```
{0} ok printenv boot-device
boot-device =            /pci@8000/pci@4/pci@0/pci@0/scsi@0/disk@p0,0
```

12. **Execute the poweroff(8) command on XSCF to power off the PPAR.**

```
XSCF>  poweroff -p 0
```

13. **Depending on the model which is using, restore the logical domain configuration information from XML files using step 14 and subsequent steps.**
   - **In case of SPARC M10-1, to update XCP firmware version from 2043 or older to 2044 or newer, on a system which contains a PCI Expansion unit, restore the logical domain configuration information from XML file using step 14 and subsequent steps.**

     For details on firmware update, see *SPARC M10 Systems System Operation and Administration Guide*.
   - **In case of SPARC M10-4/M10-4S, when executing the setpciboxdio(8) command to change the enabling/disabling the direct I/O function for the PCI Expansion unit, restore the logical domain configuration information from XML files using step 14 and subsequent steps.**

     For details on the setpciboxdio(8) command, refer to *SPARC M10 Systems XSCF Reference Manual*.

14. **Execute the showdomainconfig(8) command on XSCF to check that the configuration is "factory-default" at the next boot of the PPAR.**
    The following is an example which shows that configuration is "factory-default" at the next boot.

```
XSCF> showdomainconfig -p 0
PPAR-ID     :0
Booting config
(Current)  :factory-default
(Next)     :factory-default
--------------------------------------------------------------
-------------
Index      :1
config_name :factory-default
domains     :1
date_created:-
```

In the following example, the configuration is not "factory-default" at the next boot. In this case, execute the setdomainconfig(8) command to change the configuration to "factory-default" at the next boot of the PPAR.

```
XSCF> showdomainconfig -p 0
PPAR-ID      :0
Booting config
(Current)   :test1
(Next)      :test2
:
XSCF> setdomainconfig -p 0 -i 1
XSCF> showdomainconfig -p 0
PPAR-ID      :0
Booting config
(Current)   :test1
(Next)      : factory-default
--------------------------------------------------------------------------------
Index        :1
config_name :factory-default
domains      :1
date_created:-
```

15. **To stop at the OpenBoot PROM, check the "auto-boot?" environment variable. If the value is set to "true", change it to "false".**

```
XSCF> setpparparam -p 0 -s bootscript "setenv auto-boot? false"
 PPAR-ID of PPARs that will be affected:0
 OpenBoot PROM variable bootscript will be changed.
 Continue? [y|n] :y
```

If changed, check the OpenBoot PROM environment variable.

```
XSCF> showpparparam -p 0
use-nvramrc          :-
security-mode        :-
bootscript           :
setenv auto-boot? false
```

16. **Execute the poweron(8) command to reboot the PPAR.**

```
XSCF> poweron -p 0
```

17. **Execute the showdomainstatus(8) command to check that the primary domain state is "OpenBoot Running".**

```
XSCF> showdomainstatus -p 0
Logical Domain Name    Status
primary                OpenBoot Running
```

18. **Execute the console(8) command to change the control domain console.**

```
XSCF> console -p 0 -y
Console contents may be logged.
Connect to PPAR-ID 0?[y|n] :y
```

19. **Restore the OpenBoot PROM environment variables based on the result of step 11.**
    The following is an example of restoring the value of the "auto-boot?" environment variable to "true".

```
{0} ok setenv auto-boot? true
auto-boot? =           true
{0} ok printenv auto-boot?
auto-boot? =           true
```

20. **Boot Oracle Solaris.**

```
{0} ok boot
```

21. **On the control domain, check that the system has been booted in "factory-default".**

```
# ldm ls-spconfig
factory-default [current]
```

22. **Execute the "ldm init-system" and the "shutdown" commands to reboot the control domain.**

```
# ldm init-system -i /var/tmp/test1.xml
Initiating a delayed reconfiguration operation on the primary domain.
All configuration changes for other domains are disabled until the primary
domain reboots, at which time the new configuration for the primary domain
will also take effect.
# shutdown -y -g0 -i6
```

23. **After the control domain has rebooted, execute "bind" and "start" on the logical domains.**
    If there are logical domains which are dependent on other logical domains, they must be booted in the proper order.

    The following is an example of executing "bind" and "start" on the root-domain and a guest-domain.

```
# ldm bind root-domain
# ldm start root-domain
# ldm bind guest-domain
# ldm start guest-domain
```

Due to the existence of duplicate resources, in case of a "bind" failure, remove the target resource from the logical domain.

The following is an example of removing a duplicate resource.

```
# ldm bind root-domain
No free matching I/O device for LDom root-domain, name PCIE1
# ldm start-reconf primary
# ldm rm-io PCIE1 primary
-----------------------------------------------------------------
--------------
Notice: The primary domain is in the process of a delayed
reconfiguration.
Any changes made to the primary domain will only take effect
after it reboots.
-----------------------------------------------------------------
--------------
```

If a resource is removed, reboot the control domain.

```
# shutdown -i6 -g0 -y
```

If a resource is removed, execute "bind" and "start" on logical domains after the control domain is rebooted.
If there are logical domains which are dependent on other logical domains, they should be booted in the proper order.
The following is an example of executing bind/start on a root-domain and a guest-domain.

```
# ldm bind root-domain
# ldm start root-domain
# ldm bind guest-domain
# ldm start guest-domain
```

24. **Execute the "ldm ls" command to check whether the logical domain is running properly.**

```
# ldm ls
NAME              STATE      FLAGS    CONS    VCPU  MEMORY   UTIL  UPTIME
primary           active     -n-cv-   UART    8     8G       66%   4m
root-domain       active     -t----   5000    8     4G       19%   29s
:
:
```

25. **After restoring the configuration, execute the "ldm add-spconfig" command**

to save the configuration information in XSCF.
In the following example, the configuration information of "test1" is saved in XSCF.

```
# ldm add-spconfig test1
# ldm ls-spconfig
factory-default
test1 [current]
```

26. **If there are several configuration information to be restored, execute the poweroff(8) command to power off the PPAR.**
If there are logical domains which are dependent on other logical domains, they should be booted in the proper order.

```
XSCF> poweroff -p 0
```

27. **If there are several configuration information to be restored, re-execute from step 14 to step 26.**

Problems with PCI Expansion Units and Workarounds

This section describes problems with PCI Expansion unit and workarounds for each version.

Problems relating to all the versions of PCI Expansion unit formware and their workarounds

The following table shows problems that might occur in any versions of PCI Expansion unit firmware being supported and workarounds for them.

Table 7-1   Problems that might occur in any versions of PCI Expansion unit firmware and their workarounds

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130703-001		x	x	When installing a PCI Expansion unit by PCI hot plug (PHP), among PCI expansion unit slots 6, 7, 10 and 11, those without HBA will have command execution result "disconnected" instead of "empty" for the Oracle Solaris cfgadm(1M) command. Although the display is not appropriate, the slots work normally if you mount HBA. This phenomenon does not occur if you restart the logical domain after connecting the PCI Expansion unit.	This is just a display problem and does not affect operation.
RTIF2-130703-002		x	x	When you install a PCI Expansion unit with PCI hot plug (PHP), there may be lane degrade.	When using PHP, execute cfgadm -c configure instead of cfgadm -c connect.
RTIF2-130703-003		x	x	When you install a PCI Expansion unit by PCI hot plug (PHP), a PCI-Express correctable error may occur and cause degradation of the PCI Expansion unit at the time of the next Oracle Solaris booting.	If there a fault error message is output after installing a PCI expansion unit with PHP, reinstalled the PCI Expansion unit.
RTIF2-130703-004		x	x	When you install a PCI Expansion unit with PCI hot plug (PHP), the PCI Expansion unit may not be recognized.	If the PCI Expansion unit is not recognized after installing it with PHP, reinstall the PCI Expansion unit.
RTIF2-130724-002	x	x	x	When you install Sun Storage 6 Gb SAS PCIe HBA with PCI hot plug (PHP), HBA do not link up on PCI Express 8lane. [Example of prtdiag output] /SYS/PCI0 PCIE LSI,sas-pciex1000,72 LSI,2008 5.0GTx2 /pci@8000/pci@4/pci@0/pci@8/pci@0/pci@0/pci@0/pci@1/pci@0/pci@8/LSI,sas@0	Either start the physical partition (PPAR) or the I/O domain, or remount the PCIe card using the PCI hot plug (PHP) feature.

Table 7-1 Problems that might occur in any versions of PCI Expansion unit firmware and their workarounds *(continued)*

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130724-003	x	x	x	False detection of failure of PCIe card on PCI expansion unit slots 6, 7, 10 and 11 may occur when physical partition (PPAR) is started. [Example of error message] FRU: /MBU/PCI#0/ PCIBOX#0000/PCI#7 Msg: PCICARD failed	If the PCIe card is recognized, this is just a display problem and does not affect operation.

Problems resolved in PCI Expansion unit firmware version 1120

The following table shows problems that resolved in PCI Expansion unit firmware version 1120.

Table 7-2 Problems that resolved in PCI Expansion unit firmware version 1120

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130703-009	x	x	x	Sun Storage 6 Gb SAS PCIe HBA, External cards, that are mounted on PCI Expansion unit may not link up on PCI Express 8lane when a physical partition (PPAR) or an I/O domain is started.	If Sun Storage 6 Gb SAS PCIe HBA, External cards do not link up on PCI Express 8lane, either restart the physical partition (PPAR) or the I/O domain, or remount the Sun Storage 6 Gb SAS PCIe HBA, External card using the PCI hot plug (PHP) feature.

Problems resolved in PCI Expansion unit firmware version 1110

The following table shows problems that resolved in PCI Expansion unit firmware version 1110.

Table 7-3   Problems that resolved in PCI Expansion unit firmware version 1110

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130703-007	x	x	x	False detection of failure of link card may occur when physical partition (PPAR) or I/O domain is started. [Example of error message] FRU: /BB#0/PCI#1/LINK Msg: TWI access error	There is no influence on system performance, even if this message is displayed.
RTIF2-130703-008	x	x	x	PCI-Express correctable errors are produced when starting a physical partition (PPAR) or an I/O domain, and PCI Expansion units may degrade at the time of the next Oracle Solaris booting.	If fault error messages are output, either restart the physical partition (PPAR) or the I/O domain, or remount the PCI Expansion unit using the PCI hot plug (PHP) feature.

Problems resolved in PCI Expansion unit firmware version 1100

The following table shows problems that resolved in PCI Expansion unit firmware version 1100.

Table 7-4   Problems that resolved in PCI Expansion unit firmware version 1100

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130703-005	x	x	x	False detection of failures of PCIe cards or link boards, which are mounted on PCI Expansion units, may occur when starting up a physical partition (PPAR) or an I/O domain. [Example of messages about PCIe cards] FRU: /BB#0/PCI#3/PCIBOX#1234/PCI#3 Msg: PCICARD failed [Example of messages about link board] FRU: /BB#0/PCI#0/PCIBOX#1234/LINKBD Msg: TWI access error	This error message does not have any influence on the performance of the system. In case of the link board, this error message will make the PCI Expansion unit CHECK LED blink, but if this problem does not occur when the PPAR is started the next time, this CHECK LED will turn off.

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130703-006	x	x	x	In case, the serial number, as output by the 'ioxadm -v list' command, of a PCI Expansion unit is all zero('0000000000'), hardware failures are not recorded as error between the timing of powering on the PCI Expansion unit and the timing when the physical partition (PPAR) is powered on.	Do not replace the I/O board and the fan backplane at the same time or mount an I/O board or a fan backplane that was previously used elsewhere on a PCI Expansion unit. If the serial number of PCI Expansion unit becomes all zero('0000000000'), as output by the 'ioxadm -v list' command, revert back to the former serial number using the ioxadm(8) command of XSCF firmware. In this case, the fieldeng privilege is necessary. For detail, see "Revert back to the former serial number of PCI Expansion unit (RTIF2-130703-006)".

Revert back to the former serial number of PCI Expansion unit (RTIF2-130703-006)

If the serial number of PCI Expansion unit becomes all zero('0000000000'), as output by the 'ioxadm -v list' command, revert back to the former serial number using the ioxadm(8) command.
In this case, the fieldeng privilege is necessary.

```
XSCF> ioxadm [-fvAM] serial target serial_num
```

Specifies the PCI Expansion unit identifier as the 'target' device. In this case, it is PCIBOX#0000.
'serial_num' is the serial number of the previous PCI Expansion unit in the 'nnnnnnnnnn' format. The 'serial_num' can be found on a label on PCI Expansion unit chassis.

The serial number and identifier are reverted back to the previous ones by the above command. You can see the reverted serial number and identifier by the 'ioxadm -v list' command.

The following is an example when the serial number of PCI Expansion unit is 2121212006:

```
XSCF> ioxadm serial PCIBOX#0000 2121212006
XSCF> ioxadm -v list
Location          Type    FW Ve   Serial Num      Part Num               State
```

```
PCIBOX#2006          PCIBOX    -      2121212006                              On
PCIBOX#2006/PSU#0   PSU       -      FEJD1201000170 CA01022-0750-D/           On
PCIBOX#2006/PSU#1   PSU       -      FEJD1245001342 CA01022-0750-D/7060988    On
PCIBOX#2006/IOB     IOBOARD   1110   PP121001JM     CA20365-B66X 007AF        On
PCIBOX#2006/LINKBD  BOARD     -      PP123300TR     CA20365-B60X 001AA        On
PCIBOX#2006/FANBP   FANBP     -      PP120904SY     CA20365-B68X 004AC        On
BB#00-PCI#00        CARD      1110                                           On
XSCF>
```

Chapter 8

Contents of Revision of Documentation

This chapter describes the latest information which has been confirmed after documentations related to SPARC M10 Systems are released and contents of revision of documentations.

- Contents of revision of PCI Expansion Unit for SPARC M10 Systems Service Manual
- Contents of Revision of SPARC M10 Systems System Operation and Administration Guide
- Contents of Revision of SPARC M10 Systems Domain Configuration Guide
- Contents of Revision of SPARC M10 Systems XSCF Reference Manual
- Contents of Revision of SPARC M10 Systems Getting Started Guide

Contents of revision of *PCI Expansion Unit for SPARC M10 Systems Service Manual*

This section describes the currently confirmed contents of revision of the *PCI Expansion Unit for SPARC M10 Systems Service Manual*.

Table 8-1 Contents of revision of *PCI Expansion Unit for SPARC M10 Systems Service Manual*

Section number or name	Contents of revision
15.1	The following note will be added in "15.1 Configuration of I/O Board." **Note -** Do not replace the I/O board and the fan backplane at the same time. If I/O board and the fan backplane are replaced at the same time, the serial number of the PCI Expansion unit, as output by the 'ioxadm -v list' command, is changed to all zero('0000000000'). If the serial number of the PCI Expansion unit has been changed to all zero('0000000000'), it is necessary to use the ioxadm(8) command of the XSCF firmware to revert back to the former serial number. When replacing the I/O board and the fan backplane at the same time, first replace one of the two, start the physical partition (PPAR) that is connected to the PCI Expansion unit and check for any error log regarding the PCI Expansion unit. If there is no such error log, replace the remaining Field Replaceable Unit (FRU).
16.1	The following note will be added in "16.1 Location of Fan Backplane." **Note -** Do not replace the I/O board and the fan backplane at the same time. If I/O board and the fan backplane are replaced at the same time, the serial number of the PCI Expansion unit, as output by the 'ioxadm -v list' command, is changed to all zero('0000000000'). If the serial number of the PCI Expansion unit has been changed to all zero('0000000000'), it is necessary to use the ioxadm(8) command of the XSCF firmware to revert back to the former serial number. When replacing the I/O board and the fan backplane at the same time, first replace one of the two, start the physical partition (PPAR) that is connected to the PCI Expansion unit and check for any error log regarding the PCI Expansion unit. If there is no such error log, replace the remaining Field Replaceable Unit (FRU).
C.1.1	The following point will be deleted from "C.1.1 Precautions to observe when updating." ■ Update the firmware when a logical domain connected to the PCI expansion unit is showing the ok prompt. The following point will be added to "C.1.1 Precautions to observe when updating." ■ Be sure to check the firmware version before replacing a link card or I/O board. The link card and I/O board contain the PCI expansion unit firmware. Replacing the link card or I/O board disables automatic matching with the pre-replacement version of the firmware. As a result, you will need to match the firmware to the pre-replacement firmware version. After the replacement, if the PCI expansion unit cannot be recognized from the XSCF, check the firmware version of the components that were not replaced. Then, match the firmware to the pre-replacement firmware version. ■ Do not replace a link card together with an I/O board. Since the firmware would be updated at the same time by the link card and I/O board, matching the firmware to the pre-replacement firmware version would not be possible. ■ Do not to operate the system power supply during firmware update. Also, to reflect the applied firmware, you need to restart the physical partition or I/O domain. Ask the system administrator to do this.

C.1.2	Step 2 will be added to "C.1.2 How to check the firmware version." The subsequent step will be moved down.
	2. **If the system has been stopped, restart it.**
	  In the following example, ppar_id "0" is specified.
	  XSCF> poweron -p 0

Section number or name	Contents of revision

C.1.3	"Table C-1 Time required for updating" will be changed. The details are as follows.
	■ System status
	    The system is operating with a PCI expansion unit recognized from the XSCF
	■ Updating time
	    About 30 minutes

C.2.2	Step 2 in "C.2.2 Importing the firmware into the system" will be changed.
	2. **Execute the getflashimage command to import the downloaded firmware into the system.**
	Note - To use USB, connect a device to the USB port indicated as MAINTENANCE ONLY.
	    Specify the downloaded firmware file (tar.gz).
	    In the following example, the "PCIBOX1101.tar.gz" file placed in the ///media/usb_msd/images folder is specified.
	    `XSCF> getflashimage file:///media/usb_msd/images/` `PCIBOX1100.tar.gz`
	    When the import completes successfully, "Download successful: ..." or "MD5: ..." is displayed.

C.2.3	The following description will be added to Step 2 in "C.2.3 Updating the firmware." After "Firmware update is started." is displayed, nothing is displayed for about 30 minutes before "Firmware update has been completed." is displayed. The following Step 4 will be added to "C.2.3 Updating the firmware." 4. **Reflect the firmware.** If the PCIe slot of the PCI expansion unit is being used with the direct I/O function, restart the physical partition. If the link card slot is being used with the direct I/O function, restart the I/O domain.

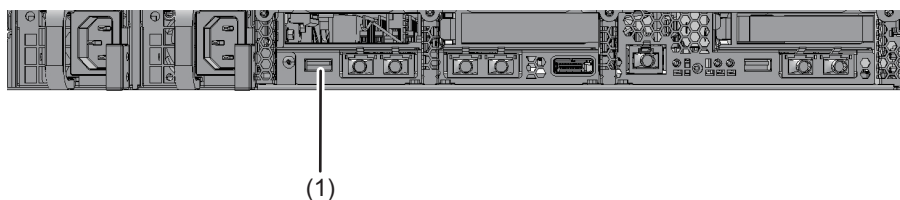# Contents of Revision of *SPARC M10 Systems System Operation and Administration Guide*

This section describes the contents of revision of the *SPARC M10 Systems System Operation and Administration Guide*.
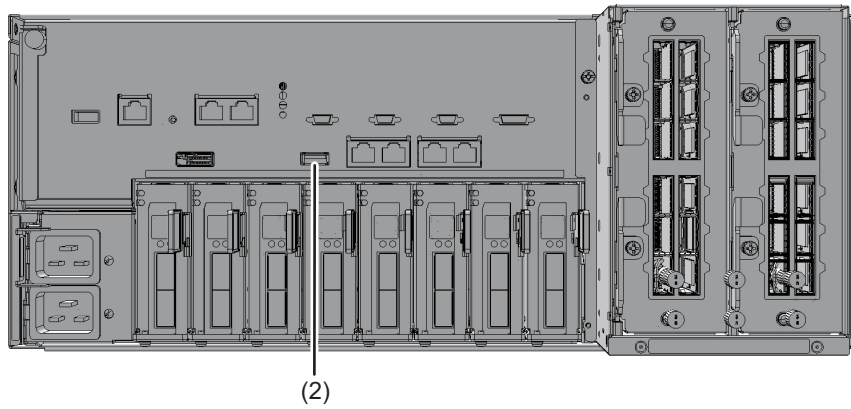
Table 8-2   Contents of revision of *SPARC M10 Systems System Operation and Administration Guide*

Section number	Contents of revision
9.5.1	A DVD drive can be connected to the USB port also which is at the rear side of a SPARC M10 system cabinet. The figures to indicate the position of the USB port used for connecting a DVD drive will be added in "9.5.1 Using an external DVD drive connected via USB". For detail, see "DVD-connectable USB port (rear)".
11.2.2	The method for specifying a command described in Step 2 in "11.2.2 Setting OpenBoot PROM environment variable in control domain" will be changed as follows: XSCF> setpparparam -p 0 -s boot-script "setenv auto-boot? true"
18.1.3	A part of Step 3 in "18.1.3 Updating firmware" will be changed as follows: 3. Execute the flashupdate command to confirm whether the firmware can be updated to the new version. XSCF> flashupdate -c check -m xcp -s 2020 XCP update is started. [3600sec] 0XSCF> When an end value of the showresult(8) command is 0, the firmware can be updated.
Appendix A	The list of device paths for SPARC M10 systems is added to Appendix A. For details, see "Device Paths of SPARC M10-1" for SPARC M10-1, see "Device Paths of SPARC M10-4" for SPARC M10-4, and see "Device Paths of SPARC M10-4S" for SPARC M10-4S.

DVD-connectable USB port (rear)

Figure 8-1   USB ports for DVD drive connection on SPARC M10 Systems (rear)

(1)

(2)

No.	Component
1	USB port for connecting a DVD drive (SPARC M10-1)
2	USB port for connecting a DVD drive (SPARC M10-4/M10-4S)

Contents of Revision of *SPARC M10 Systems Domain Configuration Guide*

This section describes the contents of revision of the *SPARC M10 Systems Domain Configuration Guide*.

Table 8-3   Contents of Revision of *SPARC M10 Systems Domain Configuration Guide*

Section number	Contents of revision
Preface	The URL of Fujitsu documents provided in "Related Documentation" will be changed as follows: ■ Fujitsu documents http://jp.fujitsu.com/platform/server/sparc/manual The URL of the Japanese web site provided in "Documentation Feedback" will be changed as follows: ■ Japanese site http://jp.fujitsu.com/platform/server/sparc/manual
3.6	"Settable mode" in "Power save function" in "Table 3-5 Settable mode for PPAR" will be changed to the following: Enable/Disable (default value)

4.3.2	The description of "ldom" in "ldm add-vds command" in "4.3.2 Setting the default service" will be changed to the following:
	■ ldom
	  Specifies the name of the logical domain. The name of the control domain is "primary". If a logical domain other than the control domain is specified, that logical domain will be the output destination for the console.
	  Execute the ldm add-vcc command, and then use the svcadm enable command for the logical domain specified by the ldm add-vcc command to enable the virtual network terminal server daemon (vntsd).
	`# svcadm enable svc:/ldoms/vntsd`

Contents of Revision of *SPARC M10 Systems XSCF Reference Manual*

This section describes the contents of revision of the *SPARC M10 Systems XSCF Reference Manual*.
Note that the contents of revision of the *SPARC M10 Systems XSCF Reference Manual* are also applied to documentation pages, if not otherwise specified. Furthermore, the descriptions here have priority over information described in documentation pages.

Table 8-4   Contents of revision of *SPARC M10 Systems XSCF Reference Manual*

Section number or command	Contents of revision
diagxbu(8)	The following description in EXTENDED DESCRIPTION will be deleted: ■ If it is executed specifying the -p or -s option, the power can be shut down forcibly when [Ctrl]+[C] key is pressed while probe-scsi-all or show-devs is in execution.

Contents of Revision of *SPARC M10 Systems Getting Started Guide*

Table 8-5   Contents of revision of *SPARC M10 Systems Getting Started Guide*

Section number or name	Contents of revision
Accessing the SPARC M10 Systems Documentation Files	The URL of the Japanese web site of SPARC M10 Systems documents will be changed to the following: http://jp.fujitsu.com/platform/server/sparc/manual/
Documentation Feedback	The URL of the Japanese web site will be changed to the following: http://jp.fujitsu.com/platform/server/sparc/manual/