

Fujitsu M10/SPARC M10 Systems

Product Notes for XCP Version 2043



Manual Code: C120-E701-02EN
October 2013

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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 2042-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)

*SPARC M10 Systems Getting Started Guide (*2)*

SPARC M10 Systems Quick Guide

*SPARC M10 Systems Important Legal and Safety Information (*2)*

Software License Conditions for SPARC M10 Systems

SPARC M10 Systems Safety and Compliance Guide

SPARC M10 Systems Security Guide

SPARC M10 Systems/SPARC Enterprise/PRIMEQUEST Common Installation Planning Manual

SPARC M10 Systems Installation Guide

SPARC M10-1 Service Manual

SPARC M10-4/M10-4S Service Manual

PCI Expansion Unit for SPARC M10 Systems Service Manual

SPARC M10 Systems System Operation and Administration Guide

SPARC M10 Systems Domain Configuration Guide

SPARC M10 Systems XSCF Reference Manual

SPARC M10 Systems Product Notes

SPARC M10 Systems Glossary

*1: The listed manuals are subject to change without notice.

*2: The printed manual comes with the product.

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

Note - Enhanced Support Facility (ESF) and Remote Customer Support System (REMCS) are not supported on SPARC M10 systems sold outside of Japan.

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 not applied to SPARC M10 systems sold outside of Japan.

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

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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
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	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.

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 2043-Related Information

This chapter provides XCP 2043-related information.

- [Latest Information on XCP 2043](#)
- [SPARC M10 System Lineup](#)
- [Notes and Restrictions](#)
- [XCP 2043 Problems and Workarounds](#)

Latest Information on XCP 2043

This section describes newly added functions for XCP 2043.

- It became possible to connect multiple SPARC M10-4Ss through crossbar boxes. For details, see "[SPARC M10 System Lineup](#)."

SPARC M10 System Lineup

There are the following SPARC M10 system models:

- SPARC M10-1
This is a compact model that has one CPU and provides both small footprint and high performance.
- SPARC M10-4
This is a model that uses a single cabinet that has four or two CPUs.
- SPARC M10-4S
This is a model that allows multiple cabinets that have four or two CPUs to be connected by a system called building block.
You can connect up to 16 cabinets through the crossbar box. If you want a four-cabinet configuration at a maximum, you can directly connect the cabinets to one another.

- PCI expansion unit
This is an optional cabinet for I/O slot expansion. It supports PCI Express (PCIe), and can be used in the above three models.

XCP 2043 is the first firmware package that supports SPARC M10-4S connection through the crossbar box.

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 `nvrnrc`, 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 `nvrnrc`, 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 of the `restoredefaults` command, 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 not supported on SPARC M10 systems sold outside of Japan.

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.

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 usersEven if the maximum number of users is exceeded, access is not rejected. Therefore, a process may be down or a hang-up may occur in the XSCF, which may reset the XSCF.
- 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]
If the system has multiple cabinets, BB#01 or XBBOX#81 cabinet may become the master XSCF at first.
- [SPARC M10-4S]
Depending on the system configuration, it may take time to reboot.
- [SPARC M10-4S]
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.

Restrictions

- Data input/output using SSH, HTTP, HTTPS, or FTP is not possible with the following commands:
`getflashimage(8)`, `dumpconfig(8)`, `restoreconfig(8)`, `setremotepwrmgmt(8)`, `getremotepwrmgmt(8)`, `dumpcodactivation(8)`, `restorecodactivation(8)`, and `snapshot(8)`.
Use a USB device for data input and output.
However, in the following cases, data can be uploaded and downloaded from the browser:
 - Importing XCP by selecting the [menu] tab in XSCF Web, and then selecting the [XSCF]-[Firmware Update] menu
 - Saving a log by selecting the [menu] tab in XSCF Web, and then selecting the [XSCF]-[snapshot] menu
- `no-mem` and `no-io`, which can be set by the `-s` option of the `setpcl(8)` command, are not supported at present.
- 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 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.
- The setpciboxdio(8) and showpciboxdio(8) commands are not supported at present.
- Active/hot addition of SPARC M10-4S is not supported at present. Perform inactive/hot addition. For details, see "[Restrictions on active/hot addition of SPARC M10-4S](#)" in "Chapter 6 Information on SPARC M10-4S Hardware."
- 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.

XCP 2043 Problems and Workarounds

See "[Problems that might occur with XCP 2043 and workarounds](#)" for information on problems that can occur with XCP 2043. See "[Problems resolved in XCP 2043](#)" for information on problems resolved in XCP 2043.

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 SPARC M10 systems. These libraries are accessible for OpenSSL users through PKCS11 engine. Please consult man pages openssl(5), engine(3openssl), and evp(3openssl), or 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
```

- Applications which are using OpenSSL libraries (libssl, libcrypto) for optimized digest or encryption methods in PKCS11 engine, must enable EVP interfaces

described in `evp(3openssl)`.

Notes on remote maintenance service

Note - Enhanced Support Facility (ESF) and Remote Customer Support System (REMCS) are not supported on SPARC M10 systems sold outside of Japan.

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 2043 and workarounds

The following table shows problems that might occur with XCP 2043 and workarounds for them.

Table 3-1 Problems that might occur with XCP 2043 and workarounds

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- 121113-025	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- 121129-003	x	x	x	When you execute the setsnmpvacm(8) command specifying createview as the operand, you cannot set an access restriction using the OID mask of MIB.	There is no effective workaround. When you execute the setsnmpvacm(8) command specifying createview as the operand, do not use the OID mask of MIB.
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 showppl(8) command. Then, execute the deleteboard (8) command.

Table 3-1 Problems that might occur with XCP 2043 and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
RTIF2-130219-002			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.
RTIF2-130219-003			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.
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.

Table 3-1 Problems that might occur with XCP 2043 and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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, a 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.
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.

Table 3-1 Problems that might occur with XCP 2043 and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130305-003	x	x	x	If you reconnect the input power cable soon after it is unplugged, the error log of "PSUs detect 100V and 200V at AC inputs" indicating that an error in the configuration of the input power supply may be registered.	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 <code>replacefru(8)</code> command, the replacement may fail with the following message displayed. [Warning:010] An internal error has occurred.	Replace the unit again after the <code>replacefru(8)</code> command is completed. If replacement still fails, stop the system and then replace the unit.
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.
RTIF2-130305-007	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 <code>testsb(8)</code> command or <code>diagxbu(8)</code> 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 <code>showsnmp(8)</code> command is executed after 129 entries or more of trap host IP addresses are registered using the <code>setsnmp addtraphost</code> command or the <code>setsnmp addv3traphost</code> 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 <code>setsnmp(8)</code> command, the IP addresses are registered successfully.
RTIF2-130305-016			x	Timeout may occur if the XCP firmware version of a SPARC M10-4S or crossbar box is updated using the <code>flashupdate -c sync</code> command.	Execute the <code>flashupdate(8)</code> command by specifying the <code>-f</code> option to reupdate the XCP firmware for all SPARC M10-4S or crossbar boxes.

Table 3-1 Problems that might occur with XCP 2043 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. Replace the XSCF of the PSB which is showed as "unknown" by the showboards(8) command.

Table 3-1 Problems that might occur with XCP 2043 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.
RTIF2-130305-024			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.
RTIF2-130305-025			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.

Table 3-1 Problems that might occur with XCP 2043 and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	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.
RTIF2-130319-002			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.

Table 3-1 Problems that might occur with XCP 2043 and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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.
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.
RTIF2-130410-001			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.

Table 3-1 Problems that might occur with XCP 2043 and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130410-003			x	<p>If a physical partition (PPAR) is powered on in the system that satisfies all the following conditions, other PPAR may also be powered on.</p> <ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ 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.

Problems resolved in XCP 2043

The following table lists the problems resolved in XCP 2043.

Table 3-2 Problems resolved in XCP 2043

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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. <ul style="list-style-type: none"> 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.

Table 3-2 Problems resolved in XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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).

Problems resolved in versions prior to XCP 2043

The following table lists the problems resolved in versions prior to XCP 2043.

Table 3-3 Problems resolved in versions prior to XCP 2043

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).
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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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.
RTIF2-121113-027	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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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. <ul style="list-style-type: none"> ■ Timezone for XSCF ■ Server certificate for HTTPS 	There is no effective workaround. Reset by the settimezone(8), sethttps(8), and setssh(8) commands.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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 is composed of multiple SPARC M10-4S cabinets.	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. 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	A fan may be displayed in the FRU as a faulty component when the error log "TWI access error" or "Power-off failure" is registered with SPARC M10-1.	Replace a PSU backplane when a fan is displayed as a faulty component for "TWI access error" or "Power-off failure".
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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.	<p>Use the following procedure to replace a SPARC M10-4S cabinet by using the replacefru (8) command.</p> <ol style="list-style-type: none"> 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. 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. <ul style="list-style-type: none"> ■ 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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-121219-018			x	<p>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).</p> <ul style="list-style-type: none"> ■ Performing firmware update ■ Detecting an XSCF failure ■ Executing the switchscf(8) command 	<p>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.</p>
RTIF2-121219-019	x	x	x	<p>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.</p>	<p>Read it as the number obtained by subtracting one from the PCI number (PCI#) displayed in the log.</p>
RTIF2-130109-002			x	<p>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.</p>	<p>There is no effective workaround.</p>
RTIF2-130109-005	x	x	x	<p>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.</p>	<p>This is an error log that is registered because a PSU is removed. Ignore it.</p>

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.	<p>Disable the power supply interlocking function, and then configure it again using the following procedure:</p> <ol style="list-style-type: none"> 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. <ul style="list-style-type: none"> ■ 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.
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. Turn 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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130212-001			x	<p>If the power save operation, which is set by the setpparmode(8) command, is "enabled," the following problems may occur.</p> <ul style="list-style-type: none"> ■ 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.	<p>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.</p> <p>If a PSB becomes unavailable, power off the entire system and then power it on again.</p>

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
RTIF2-130215-001			x	<p>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.</p> <p>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)</p>	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 3-3 Problems resolved in versions prior to XCP 2043 (*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.
RTIF2-130305-008			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.
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.

Table 3-3 Problems resolved in versions prior to XCP 2043 (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
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.
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.

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 3-4 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
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
15814853			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 Solaris 11.1 SRU3.5.1. [Workaround] Execute the following command to change ptmx_ptymax: [Example] # echo "ptms_ptymax/Z0x400000" mdb -kw ptms_ptymax: 0 = 0x400000
15822113 15956174	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.	In this case, execute the command again. In addition, when executing ldm remove-vcpu, execute it in such a condition that the process load is low.

Table 3-4 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
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.	There is no effective workaround. 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: fforclnum	There is no impact on the system. Ignore this message.
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 www=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 3-4 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	<p>When the memory fails and is degraded, the following message may be output at startup of Oracle Solaris, and the panic may persist.</p> <pre>tilelet_assign_fini_ cb(): tile 0xX in memgrp X was unused</pre> <p>This may also occur when you set the mirror mode for the memory after saving the logical domain setting with ldm add-spconfig.</p>	<p>Replace the memory having an error.</p> <p>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.</p> <ol style="list-style-type: none">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. <pre>setdomainconfig -p ppar_id -c default</pre>3. Execute the poweron(8) command to start the PPARs. <p>Oracle Solaris is started in the factory-default configuration which consists of only control domains.</p> <p>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.</p> <p>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.</p>

Table 3-4 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
15858713	x	x	x	If a memory error occurs and all the memories assigned to the guest domain are degraded, <code>ldmd(1M)</code> causes a core dump to abnormally terminate and the <code>ldm(1M)</code> command ends with an error.	<p>Replace the memory having an error.</p> <p>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.</p> <ol style="list-style-type: none"> 1. Execute the <code>poweroff(8)</code> command to turn off the power of the physical partitions (PPARs). 2. Execute the <code>setdomainconfig(8)</code> command to restore PPARs to their factory-default state. <code>setdomainconfig -p ppar_id -c default</code> 3. Execute the <code>poweron(8)</code> command to start the PPARs. <p>Oracle Solaris is started in the factory-default configuration which consists of only control domains.</p>
15887244	x	x	x	When you start the SunVTS 7.0 <code>ps14</code> and <code>ps15</code> tests in a SPARC M10 system, they may terminate with an error.	SunVTS is not supported for SPARC M10 systems.

Table 3-4 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
15823255			x	<p>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.</p> <ul style="list-style-type: none">■ 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. <p>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)"</p> <p>[Example]</p> <pre># /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 ...</pre>	<p>This has been modified with Solaris 11.1 SRU5.5.</p> <p>[Workaround]</p> <p>Add the following line to /etc/system and restart Oracle Solaris:</p> <pre>set mpo_disabled=1</pre>

Table 3-4 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
16292272			x	<p>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.</p> <p>It approximately takes (the number of guest domains for which binding has already been performed + 1) x 6 + 10 seconds to perform binding.</p> <p>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 <code>ldm bind-domain</code> command, the required time is obtained by summing the times taken to perform binding for all of them.</p>	<p>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.</p> <p>Having a configuration above not only mitigates the described phenomenon but also helps improve fault tolerance.</p> <p>If a virtual network switch (vsw) is configured, you can reduce the time for binding by half by setting <code>inter-vnet-link</code> to off. For notes when <code>inter-vnet-link</code> is set to off, see <i>Oracle VM Server for SPARC Administration Guide</i> or <i>Oracle VM Server for SPARC Release Notes</i>.</p>

Table 3-4 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
—	x	x	x	If an access error is detected when accessing an internal SAS disk drive, further access to the disk may become impossible.	<p>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:</p> <p>Note - Enhanced Support Facility (ESF) is not supported on SPARC M10 systems sold outside of Japan.</p> <p>[Setting example]</p> <p>1. Use the format(1M) command to check the product and model of the HDD which is mounted.</p> <pre># format</pre> <p>2. Add the internal HDD information to the /kernel/drv/scsi_vhci.conf file.</p> <p>[Setting example of scsi_vhci.conf file]</p> <ul style="list-style-type: none">■ For Oracle Solaris 11<pre>scsi-vhci-failover-override = "TOSHIBA MBF2600RC", "f_sym";</pre>■ For Oracle Solaris 10<pre>device-type-scsi- options-list = "TOSHIBA MBF2600RC", "sym-opt"; sym-opt = 0x1000000;</pre> <p>3. Use the stmsboot(1M) command to enable MPxIO.</p> <pre># stmsboot -e</pre>

Table 3-4 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
—	x	x	x	<p>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)".</p> <pre>WARNING: /pci@X, XXXXXX: FCODE mapin doesn't match decoded register type;</pre> <p>Also, executing the showstatus (8) command may show "Degraded" for the FRU that mounts the relevant PCI card.</p>	<p>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.</p> <pre>setenv diag-switch? false</pre>

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 3-5 Problems that might occur with Oracle Solaris 10 and workarounds

CR ID	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
16024646	x	x	x	<p>If both of the following conditions are met, the control domain panic may occur with "BAD TRAP: type=31".</p> <ul style="list-style-type: none"> ■ The operating system of the control domain is Solaris 10. ■ As a result of executing <code>ldm list-domain -o memory primary</code>, the RA (real address) is greater than 0x200000000000 (32 TB). 	<p>Perform the following procedure:</p> <ol style="list-style-type: none"> 1. Execute <code>ldm list-domain -o memory primary</code> to display the value of SIZE. 2. Execute <code>ldm start-reconf primary</code> to enter the latency reconfiguration mode. 3. Execute <code>ldm remove-memory 256M primary</code> to reduce the assigned memory. 4. Execute <code>ldm set-memory <value of SIZE in Step 1> primary</code> to return the assigned memory back to the original size. 5. Restart the Oracle Solaris of the control domain. 6. Execute <code>ldm list-domains -o memory primary</code> to confirm that the RA is smaller than 0x200000000000. 7. Execute <code>ldm add-spconfig <configuration information name></code> 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.

Notes on hardware RAID

There are the following precautions when you use hardware RAID.

About hardware RAID management utility

- When you use the hardware RAID function of a SPARC M10 system, we recommend using the RAID management utility (sas2ircu: SAS2 Integrated RAID Configuration Utility) provided by the LSI Corporation, in order to manage the hardware RAID environment. In the OpenBoot PROM environment, you can set the hardware RAID but cannot manage it.
- For details on how to obtain the RAID management utility, see the LSI Corporation website described in "12.2 Configuring Hardware RAID" in *SPARC M10 Systems System Operation and Administration Guide*. For details on how to use this, see *SAS2 Integrated RAID Solution User Guide* on the same website.
- If the RAID volume fails, you can specify the failed disk by using the RAID management utility.
- The RAID management utility is used in the Oracle Solaris OS environment logged in with an account with root privilege. Therefore, the RAID management utility should be operated by a system administrator.

Notes when using hardware RAID

- Perform backup of important data and programs on a regular basis. For some errors, you may need to restore data or programs from a backup media by reconstructing the hardware RAID.
- We recommend using an uninterruptible power supply (UPS) in order to secure the data in the system in case of power outage.
- If a high availability such as duplication of controller or data path is required for the hardware RAID function, install a dedicated RAID system.

Notes when configuring/removing hardware RAID

- When configuring/removing the hardware RAID, preserving data on a disk is not guaranteed. Be sure to perform backup of data when you initially configure the hardware RAID to the system that is in operation or remove an installed hardware RAID. After configuring the hardware RAID, you need to newly install data or restore data from a backup media.
- When you configure the hardware RAID, the RAID volume becomes smaller in size than the original disk.

Notes on operating hardware RAID

System may slow down because the hardware RAID controller cannot completely judge whether a disk has a failure. When you maintain it in this state, follow the procedures below. Be sure to take backup of data before performing the procedures because the hardware RAID will be removed.

1. Stop an application to use an internal disk.
2. Remove the hardware RAID.
3. Identify whether the problem is related to the disk.
4. If the problem is not solved, replace all disks used for the hardware RAID.
5. Reconfigure the hardware RAID.
6. Restore data from a backup media.

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	

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

Device	Device path
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
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

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

Device	Device path
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.

Notes on hardware RAID

There are the following precautions when you use hardware RAID.

About hardware RAID management utility

- When you use the hardware RAID function of a SPARC M10 system, we recommend using the RAID management utility (sas2ircu: SAS2 Integrated RAID Configuration Utility) provided by the LSI Corporation, in order to manage the hardware RAID environment. In the OpenBoot PROM environment, you can set the hardware RAID but cannot manage it.
- For details on how to obtain the RAID management utility, see the LSI Corporation website described in "12.2 Configuring Hardware RAID" in *SPARC M10 Systems System Operation and Administration Guide*. For details on how to use this, see *SAS2 Integrated RAID Solution User Guide* on the same website.
- If the RAID volume fails, you can specify the failed disk by using the RAID management utility.
- The RAID management utility is used in the Oracle Solaris OS environment logged in with an account with root privilege. Therefore, the RAID management utility should be operated by a system administrator.

Notes when using hardware RAID

- Perform backup of important data and programs on a regular basis. For some errors, you may need to restore data or programs from a backup media by reconstructing the hardware RAID.
- We recommend using an uninterruptible power supply (UPS) in order to secure the data in the system in case of power outage.
- If a high availability such as duplication of controller or data path is required for the hardware RAID function, install a dedicated RAID system.

Notes when configuring/removing hardware RAID

- When configuring/removing the hardware RAID, preserving data on a disk is not guaranteed. Be sure to perform backup of data when you initially configure the hardware RAID to the system that is in operation or remove an installed hardware RAID. After configuring the hardware RAID, you need to newly install data or restore data from a backup media.
- When you configure the hardware RAID, the RAID volume becomes smaller in size than the original disk.

Notes on operating hardware RAID

System may slow down because the hardware RAID controller cannot completely judge whether a disk has a failure. When you maintain it in this state, follow the procedures below. Be sure to take backup of data before performing the procedures because the hardware RAID will be removed.

1. Stop an application to use an internal disk.
2. Remove the hardware RAID.
3. Identify whether the problem is related to the disk.
4. If the problem is not solved, replace all disks used for the hardware RAID.
5. Reconfigure the hardware RAID.
6. Restore data from a backup media.

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

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

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
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 5-1.

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)

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.

Notes on hardware RAID

There are the following precautions when you use hardware RAID.

About hardware RAID management utility

- When you use the hardware RAID function of a SPARC M10 system, we recommend using the RAID management utility (sas2ircu: SAS2 Integrated RAID Configuration Utility) provided by the LSI Corporation, in order to manage the hardware RAID environment. In the OpenBoot PROM environment, you can set the hardware RAID but cannot manage it.
- For details on how to obtain the RAID management utility, see the LSI Corporation website described in "12.2 Configuring Hardware RAID" in *SPARC M10 Systems System Operation and Administration Guide*. For details on how to use this, see *SAS2 Integrated RAID Solution User Guide* on the same website.
- If the RAID volume fails, you can specify the failed disk by using the RAID management utility.
- The RAID management utility is used in the Oracle Solaris OS environment logged in with an account with root privilege. Therefore, the RAID management utility should be operated by a system administrator.

Notes when using hardware RAID

- Perform backup of important data and programs on a regular basis. For some errors, you may need to restore data or programs from a backup media by reconstructing the hardware RAID.
- We recommend using an uninterruptible power supply (UPS) in order to secure the data in the system in case of power outage.
- If a high availability such as duplication of controller or data path is required for the hardware RAID function, install a dedicated RAID system.

Notes when configuring/removing hardware RAID

- When configuring/removing the hardware RAID, preserving data on a disk is not guaranteed. Be sure to perform backup of data when you initially configure the hardware RAID to the system that is in operation or remove an installed hardware RAID. After configuring the hardware RAID, you need to newly install data or restore data from a backup media.
- When you configure the hardware RAID, the RAID volume becomes smaller in size than the original disk.

Notes on operating hardware RAID

System may slow down because the hardware RAID controller cannot completely judge whether a disk has a failure. When you maintain it in this state, follow the procedures below. Be sure to take backup of data before performing the procedures because the hardware RAID will be removed.

1. Stop an application to use an internal disk.
2. Remove the hardware RAID.
3. Identify whether the problem is related to the disk.
4. If the problem is not solved, replace all disks used for the hardware RAID.
5. Reconfigure the hardware RAID.
6. Restore data from a backup media.

Restrictions on active/hot addition of SPARC M10-4S

Active/hot addition of SPARC M10-4S is not supported at present. Perform inactive/hot addition.

For the procedure for inactive/hot addition, see "8.2.1 Active/hot addition" in the *SPARC M10 Systems Installation Guide* and read Step 10 as follows:

10. **Stop the relevant PPAR from the master XSCF and perform cable check.**
 - a. **Execute the poweroff command to stop the PPAR into which SPARC M10-4S to be added is incorporated.**

Specify the PPAR number of the destination PPAR in `ppar_id`.

```
XSCF> poweroff -y -p ppar_id
```

- b. **Execute the diagxbu command to perform cable check.**

XX specifies the added BB-ID. YY and ZZ specify BB-IDs that were incorporated into the PPAR you stopped in Step a.

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

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
```

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

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

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
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

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

PCI#7	/pci@vrvv/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@vrvv/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@vrvv/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@vrvv/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@vrvv/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@vrvv) shown in Table 6-1 will be the device nodes shown in Table 6-2. 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@a000/...
	/pci@a900/...
LSB#4	/pci@a000/...
	/pci@a100/...
	/pci@a200/...
	/pci@a300/...
LSB#5	/pci@a800/...
	/pci@a900/...
	/pci@aa00/...
	/pci@ab00/...

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

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/...
	/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/...

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

LSB#15	/pci@f200/...
	/pci@f300/...
	/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

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

Device	Device path
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 6-5. 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/...
	/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/...

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

LSB number	Device path
LSB#5	/pci@a100/...
	/pci@a200/...
	/pci@a300/...
	/pci@a400/...
	/pci@a500/...
	/pci@a600/...
	/pci@a700/...
	/pci@a800/...
	/pci@a900/...
	/pci@aa00/...
	/pci@ab00/...
	/pci@ac00/...
	/pci@ad00/...
	/pci@ae00/...
	/pci@af00/...
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/...

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

LSB number	Device path
LSB#9	/pci@c300/...
	/pci@c400/...
	/pci@c500/...
	/pci@c600/...
	/pci@c700/...
	/pci@c800/...
	/pci@c900/...
	/pci@ca00/...
	/pci@cb00/...
	/pci@cc00/...
LSB#10	/pci@cd00/...
	/pci@ce00/...
	/pci@cf00/...
	/pci@d000/...
	/pci@d100/...
	/pci@d200/...
	/pci@d300/...
	/pci@d400/...
	/pci@d500/...
	/pci@d600/...
LSB#11	/pci@d700/...
	/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/...

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

LSB number	Device path
LSB#13	/pci@e500/...
	/pci@e600/...
	/pci@e700/...
	/pci@e800/...
	/pci@e900/...
	/pci@ea00/...

Problems with Hardware and Workarounds

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

Information on PCI Expansion Unit Hardware

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

- [Problems with PCI Expansion Units and Workarounds](#)

Problems with PCI Expansion Units and Workarounds

The following table shows problems that might occur with PCI expansion units and workarounds for them.

Table 7-1 Problems with PCI expansion units and workarounds

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
—		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 cfadm(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.

Table 7-1 Problems with PCI expansion units and workarounds (*continued*)

RTI No.	SPARC M10-1	SPARC M10-4	SPARC M10-4S	Description	Workaround
—		x	x	When you install a PCI expansion unit with PCI hot plug (PHP), there may be lane degrade.	When using PHP, execute <code>cfgadm -c configure</code> instead of <code>cfgadm -c connect</code> .
—		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 next reboot.	If there a fault error message is output after installing a PCI expansion unit with PHP, reinstalled the PCI expansion unit.
—		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.

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 SPARC M10 Systems Installation Guide](#)
- [Contents of Revision of SPARC M10-1 Service Manual](#)
- [Contents of Revision of SPARC M10-4/M10-4S Service Manual](#)
- [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 *SPARC M10 Systems Installation Guide*

This section describes the currently confirmed contents of revision of the *SPARC M10 Systems Installation Guide*.

Table 8-1 Contents of revision of *SPARC M10 Systems Installation Guide*

Section number or name	Contents of revision
4.3.1	Steps 2 and 3 described in "4.3.1 Changing crossbar cable (case in which the expansion rack 2 is added later)" will be changed. For details, see " Changing crossbar cable (case in which the expansion rack 2 is added later) ."

Table 8-1 Contents of revision of *SPARC M10 Systems Installation Guide (continued)*

Section number or name	Contents of revision
4.3.2	<p>Step 2 described in "4.3.2 Connecting crossbar cable" will be changed as follows:</p> <p>2. Connect the crossbar cable to the crossbar box.</p> <p>Cross bar cables are laid out in a bundle for each cabinet. Connect cables without changing the way they are laid out.</p> <p>Connect the cables so that the port indicators on each cabinet match the labels on the cables. There are two ports with the same port number. Each port on the cabinet is color-coded. Connect a port to the corresponding port with the same color.</p> <p>Hold the connector part of the crossbar cable (optical) and insert it straight into the opening. Do not hold the cable part when inserting the cable.</p>
5.2	<p>The note in Step 1 in "5.2 Connecting Cable to SPARC M10-4/SPARC M10-4S" will be changed as follows.</p> <p>Note—Normally, BB#00 is the master XSCF and BB#01 is the standby XSCF. When the master is switched, BB#01 is the master XSCF and BB#00 is the standby XSCF.</p>
5.3	<p>Two notes in Step 2 in "5.3 Connecting Cable to PCI Expansion Unit" will be changed. For details, see "Connecting Cable to PCI Expansion Unit."</p>
5.4	<p>The note in Step 1 in "5.4 Connecting Cable to Crossbar Box" will be changed as follows.</p> <p>Note—Normally, XBBOX#80 is the master XSCF and XBBOX#81 is the standby XSCF. When the master is switched, XBBOX#81 is the master XSCF and XBBOX#80 is the standby XSCF.</p>
6.1	<p>The note in Step 2 in "6.1 Connecting System Management Terminal to the Cabinet" will be changed as follows.</p> <p>Note—When each cabinet is directly connected, normally BB#00 is the master XSCF and BB#01 is the standby XSCF. When connection is made through a crossbar box, normally XBBOX#80 is the master XSCF and XBBOX#81 is the standby XSCF. When the master is switched, BB#01 or XBBOX#81 is the master XSCF and BB#00 or XBBOX#80 is the standby XSCF.</p>

Changing crossbar cable (case in which the expansion rack 2 is added later)

2. **Move the crossbar cable (optical) for XBBOX#80/#81.**
 - a. **Remove the crossbar cables between L4 and L7 and between R4 and R7 of the crossbar unit #1.**

Hold the tab (A in Figure 8-1) of the crossbar cable (optical), and pull it straight in the arrow direction to remove it. At this time, do not pull out the crossbar cable by holding the cable part. If you pull the cable part, the connector is not unlocked completely, which may cause a damage.
 - b. **Reattach the labels of the removed cables.**

The labels for reattachment are included with the expansion rack 2.
 - c. **Connect the crossbar cables from L0 to L3 and from R0 to R3 of the**

crossbar unit #2. Implement the cables according to the labels.

Hold the connector part of the crossbar cable (optical) and insert it straight into the opening. Do not hold the cable part when inserting the cable.

Note – There are two types of crossbar cables (optical). Connect cables of the same type to the same port number. Cables can be distinguished by tab shape. For tab shape, see Figure 8-2.

Figure 8-1 Tabs and pull-out directions of crossbar cables

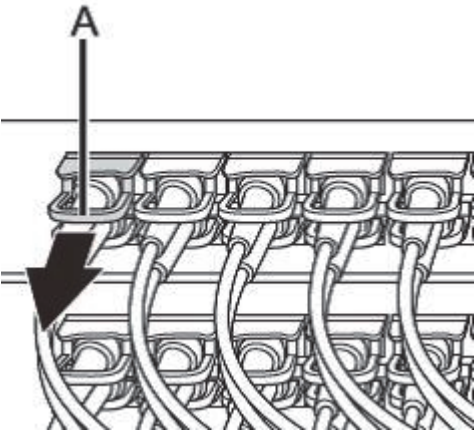
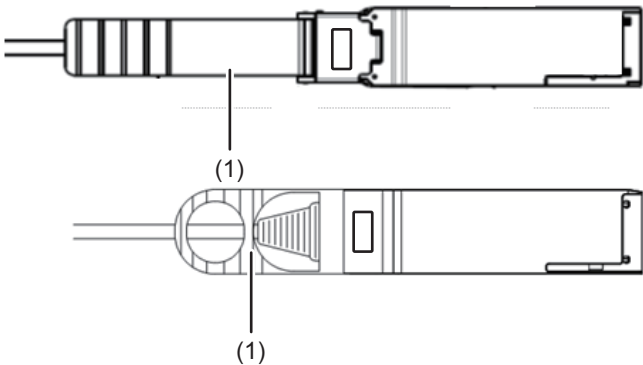


Figure 8-2 Shape and tab of crossbar cable (optical)



Number in figure	Description
1	Tab

Connecting Cable to PCI Expansion Unit

2. Connect the link cable.

Note - The two link cables are the same. Each cable has the same indication labels on the both ends. When connecting cables, ensure that cable ends having the same label are connected to the corresponding positions of the link card and link board.

Figure 8-3 Shape and tab of link cable (optical)



Number in figure	Description
1	Tab

Note - The two ports have the same shape and thus you may connect them incorrectly. Check the labels to confirm that each cable is connected to the correct port.
Hold the connector part of the link cable (electrical) or link cable (optical) and insert it straight into the opening. Do not hold the cable part when inserting the cable.

Contents of Revision of *SPARC M10-1 Service Manual*

This section describes the currently confirmed contents of revision of the *SPARC M10-1 Service Manual*.

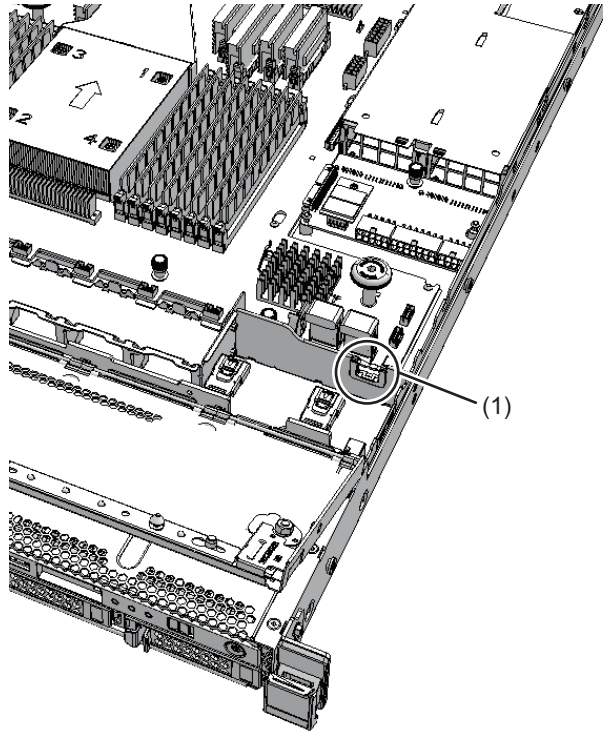
Table 8-2 Contents of revision of SPARC M10-1 Service Manual

Section number or name	Contents of revision
Preface	<p>The following description will be removed. It will be described under "Audience." It is intended for users with advanced knowledge of hardware troubleshooting and replacement.</p> <p>The following description will be added. The maintenance tasks are performed by the service and field engineers of Fujitsu.</p> <p>The description under "Audience" will be changed to the following: This document is designed for service engineers who are in charge of system maintenance, and field engineers.</p> <p>The URL of Fujitsu documents provided in "Related Documentation" will be changed as follows: <ul style="list-style-type: none"> ■ Fujitsu documents http://jp.fujitsu.com/platform/server/sparc/manual </p> <p>The URL of the Japanese web site provided in "Documentation Feedback" will be changed as follows: <ul style="list-style-type: none"> ■ Japanese site http://jp.fujitsu.com/platform/server/sparc/manual </p>
1.2	<p>The certification standards on the standard label described in "1.2 Labels/Tags" will be changed to the following: <ul style="list-style-type: none"> ■ Safety: NRTL/C ■ Radio wave: VCCI-A, FCC-A, DOC-A, KCC, and C-Tick ■ Safety and radio wave: CE, CCC, BSMI, and GOST-R </p>
7.1	<p>The following caution will be added to "7.1 Location of Motherboard Unit": Caution - Do not replace a motherboard unit together with a PSU backplane. If you replace a motherboard unit together with a PSU backplane, the system fails to operate normally. Replace a motherboard unit or PSU backplane, and confirm that the newly installed Field Replaceable Unit (FRU) is normal by using the showhardconf or showstatus command. Then, replace the other FRU. </p>
7.2.2	<p>The following caution will be moved to "7.1 Location of Motherboard Unit" and deleted from "7.2.2 Precautions for replacement": <ul style="list-style-type: none"> ■ Do not replace the motherboard unit and the PSU backplane at the same time. If you replace the motherboard unit together with the PSU backplane, the system fails to operate normally. Replace a motherboard unit or PSU backplane, and confirm that the newly installed Field Replaceable Unit (FRU) is normal by using the showhardconf or showstatus command. Then, replace the other FRU. </p>
7.5.1	<p>Procedure to store cables in the cable guide will be added to Step 6 in "7.5.1 Installing motherboard unit." For details, see "Storing Cables in Cable Guide."</p>
Chapter 16	<p>"Chapter 16 Maintaining Cable Kit" will be added. For details, see "Appendix A Maintaining SPARC M10-1 Cable Kit."</p>

Storing Cables in Cable Guide

6. **Store cables of the motherboard unit in the cable guide.**

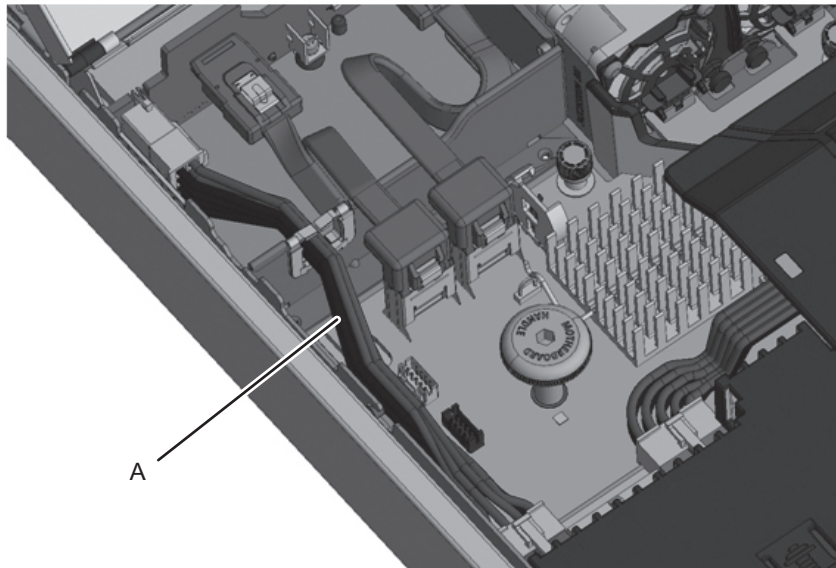
Figure 8-4 Location of cable guide



Location number	Component
1	Cable guide

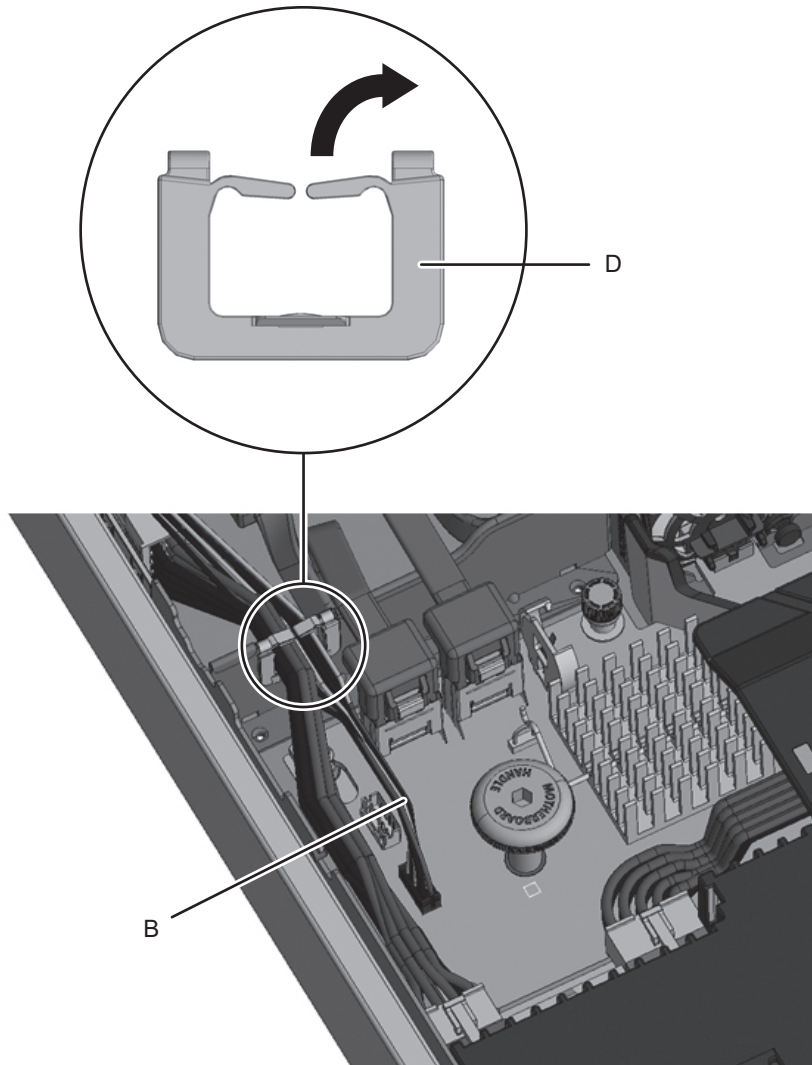
- a. **Store the cable (red/black) (A in the figure) connecting the HDD backplane to the PSU backplane in the cable guide from the middle of the clamp.**

Figure 8-5 Storing cable (red/black)



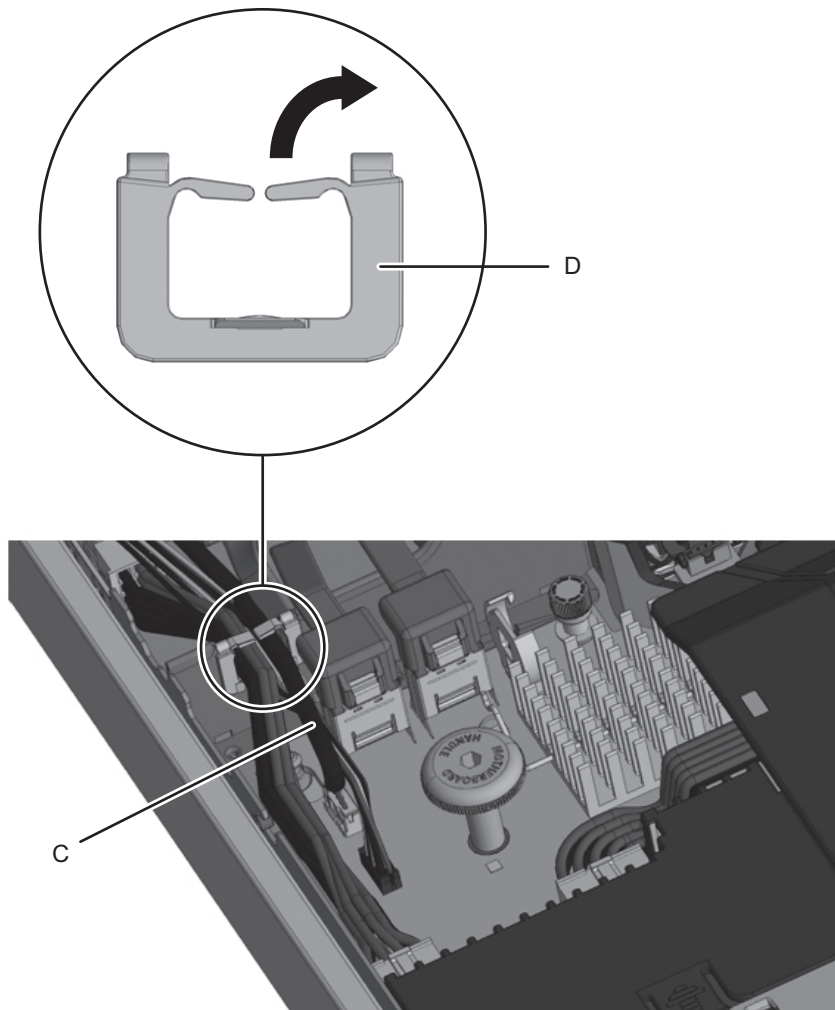
- b. Push up one side of the clamp at upper part of the cable guide from the middle to open it (D in the figure). Then, store the cables (black/yellow/white) (B in the figure) connecting the operation panel to the motherboard unit in the cable guide.

Figure 8-6 Storing cables (black/yellow/white)



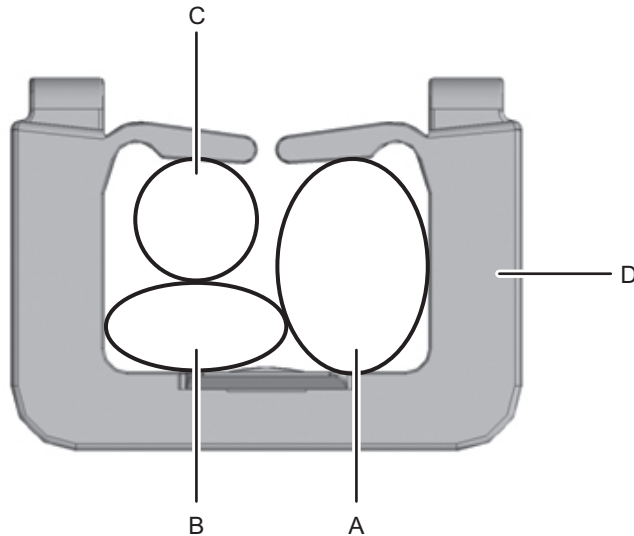
- c. Push up one side of the clamp at upper part of the cable guide from the middle to open it (D in the figure). Then, store the cable (black) (C in the figure) connecting the operation panel to the motherboard unit in the cable guide.

Figure 8-7 Storing cable (black)



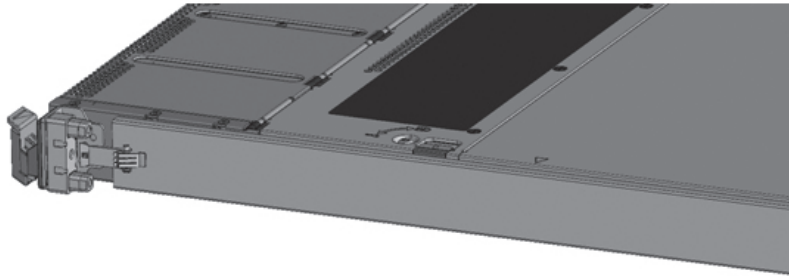
- d. Confirm that each cable is stored in the cable guide, as shown in Figure 8-8.

Figure 8-8 Cross section of the guide viewed from the front, after storage of the cables



- e. Confirm that each laid-out cable will not interfere with the fan unit cover, and attach the fan unit cover.

Figure 8-9 Attaching fan unit cover



Contents of Revision of *SPARC M10-4/M10-4S Service Manual*

This section describes the currently confirmed contents of revision of the *SPARC M10-4/M10-4S Service Manual*.

Table 8-3 Contents of revision of SPARC M10-4/M10-4S Service Manual

Section number or name	Contents of revision
1.3	<p>The certification standards on the standard label described in "1.3 Labels/Tags" will be changed to the following:</p> <p>SPARC M10-4/M10-4S</p> <ul style="list-style-type: none"> ■ Safety: NRTL/C ■ Radio wave: VCCI-A, FCC-A, DOC-A, KCC, and C-Tick ■ Safety and radio wave: CE, BSMI, and GOST-R <p>Crossbar box</p> <ul style="list-style-type: none"> ■ Safety: NRTL/C ■ Radio wave: VCCI-A, FCC-A, DOC-A, KCC, and C-Tick ■ Safety and radio wave: CE and CU
4.3	<p>"Inactive/hot" for "Crossbar cable (electrical)" and "Crossbar cable (optical)" described in "Table 4-8 Types of maintenance for cables" in "4.3 Understanding Types of Maintenance" is changed to "Unavailable."</p>
7.4.4	<p>Some procedures in "7.4.4 Removing PCI Express cable" will be described differently for each model. For details, see "Removing PCI Express cable."</p>
7.5.1	<p>Some procedures in "7.5.1 Attaching PCI Express cable" will be described differently for each model. For details, see "Installing PCI Express cable."</p>
7.5.2	<p>Step 4 in "7.5.2 Installing CPU memory unit upper" will be changed. For details, see "Installing CPU memory unit upper."</p>
24.2.1	<p>"Inactive/hot" described in "Table 24-1 Types of maintenance for crossbar cable (electrical)" in "24.2.1 Types of maintenance" is changed to "Unavailable."</p>
24.3.1	<p>"24.3.1 Inactive/hot maintenance" is deleted.</p>
24.4	<p>Steps 1 and 2 in "24.4 Removing crossbar cable (electrical)" will be changed. For details, see "Removing Crossbar Cable (Electrical)."</p>
24.5	<p>Steps 1 and 2 in "24.5 Attaching crossbar cable (electrical)" will be changed as follows.</p> <ol style="list-style-type: none"> 1. Write down corresponding connection destinations of connectors 1 and 2 respectively for new crossbar cables (electrical) to replace, on the connection destination indication labels attached to the building block expansion kit #1, and attach them to the crossbar cables (electrical). In addition, select corresponding labels from color indication labels similarly attached, and attach them next to the labels indicating the connection destinations. 2. Connect two crossbar cables (electrical) to each cabinet. Hold the connector part of the crossbar cable (electrical) and insert it straight into the opening. Do not hold the cable part when inserting the cable.
25.3.1	<p>Step 5 described in "25.3.1 Inactive/cold maintenance" and "25.3.2 System-stopped maintenance" is changed as follows.</p>
25.3.2	<p>5. Remove all power cords from the power supply unit of the maintenance-target SPARC M10-4S.</p>
25.4	<p>The following note is added in "25.4 Removing Crossbar Cable (Optical)."</p> <p>Note - There is no problem if you remove the crossbar cables at the crossbar box side when electricity is supplied.</p> <p>Steps 1 and 2 will be changed. For details, see "Removing Crossbar Cable (Optical)."</p>

Table 8-3 Contents of revision of *SPARC M10-4/M10-4S Service Manual (continued)*

Section number or name	Contents of revision
25.5	<p>The following note will be added in "25.5 Installing Crossbar Cable (Optical)."</p> <p>Note - There is no problem if you connect the crossbar cables at the crossbar box side when electricity is supplied.</p> <p>The following will be added as Step 1. The existing Step 1 will be changed to Step 2.</p> <ol style="list-style-type: none"> Write down corresponding connection destinations of connectors 1 and 2 respectively for new crossbar cables (optical) to replace, on the connection destination indication labels attached to the crossbar box of the building block expansion rack, and attach them to the crossbar cable (optical). In addition, select corresponding labels from color indication labels similarly attached, and attach them next to the labels indicating the connection destinations. <p>Step 1 will be changed. For details, see "Installing Crossbar Cable (Optical)."</p>
25.6.1	Step 1 described in "25.6.1 Inactive/cold maintenance" and "25.6.2 System-stopped maintenance" is changed as follows.
25.6.2	<ol style="list-style-type: none"> Connect all power cords to the power supply unit of the maintenance-target SPARC M10-4S.
26.5	<p>The following will be added as Step 1 in "26.5 Attaching XSCF BB control cable". The following procedures will be moved down:</p> <ol style="list-style-type: none"> Write down corresponding connection destinations of connectors 1 and 2 respectively for new XSCF BB control cables to replace, on the connection destination indication labels supplied with the building block expansion kit #1 or building block expansion rack, and attach them to the XSCF BB control cables.
27.5	<p>The following will be added as Step 1 in "26.5 XSCF DUAL Control Cable." The following procedures will be moved down:</p> <ol style="list-style-type: none"> Write down corresponding connection destinations of connectors 1 and 2 respectively for new XSCF DUAL control cables to replace, on the connection destination indication labels supplied with the building block expansion kit #1 or building block expansion rack, and attach them to the XSCF DUAL control cables.
Chapter 29	"Chapter 29 Maintaining Cable Kit of Crossbar Box" will be added. For details, see " Appendix B Maintaining Cable Kit of Crossbar Box ."

Removing PCI Express cable

When reducing the CPU memory unit upper or when replacing the PCIe cable, remove the PCIe cable. You can expand the CPU memory unit upper by performing the procedure up to Step 9.

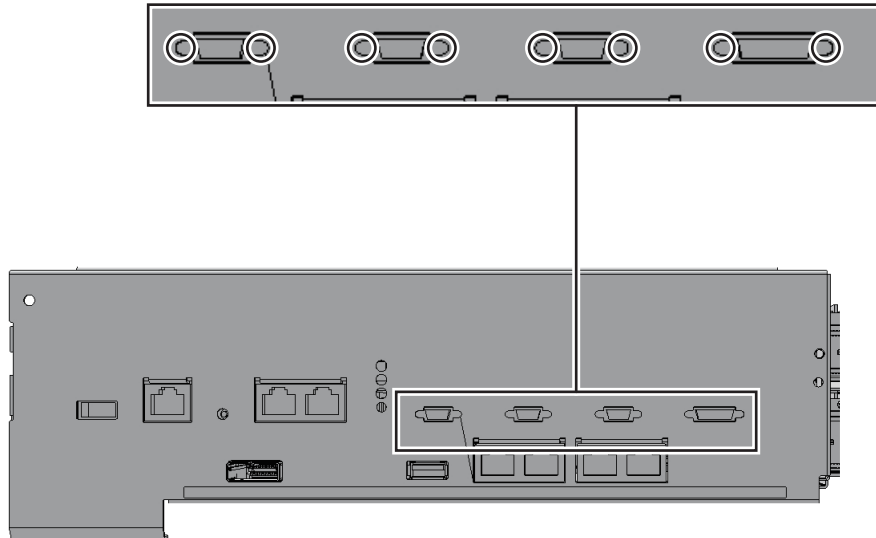
For SPARC M10-4, start with Step 2.

- Remove the eight screws at both ends of the XSCF cable connection port on the rear side of the CPU memory unit lower.**

Use a flathead screwdriver (small) to remove them.

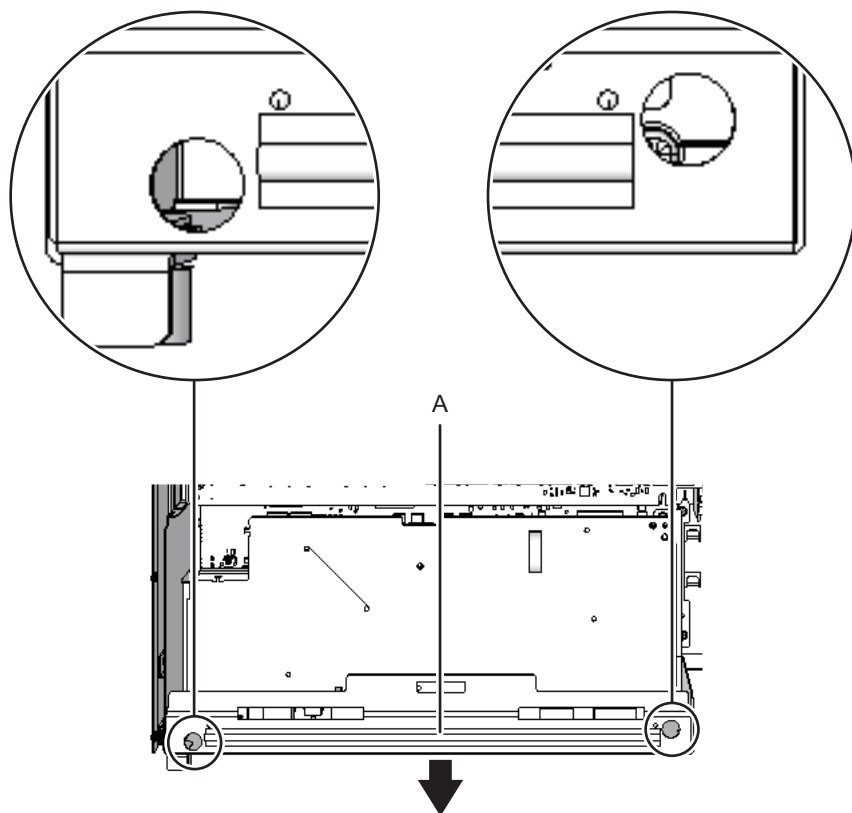
For SPARC M10-4, this procedure is not necessary.

Figure 8-10 Screw positions at both ends of XSCF cable connection port (for SPARC M10-4S)



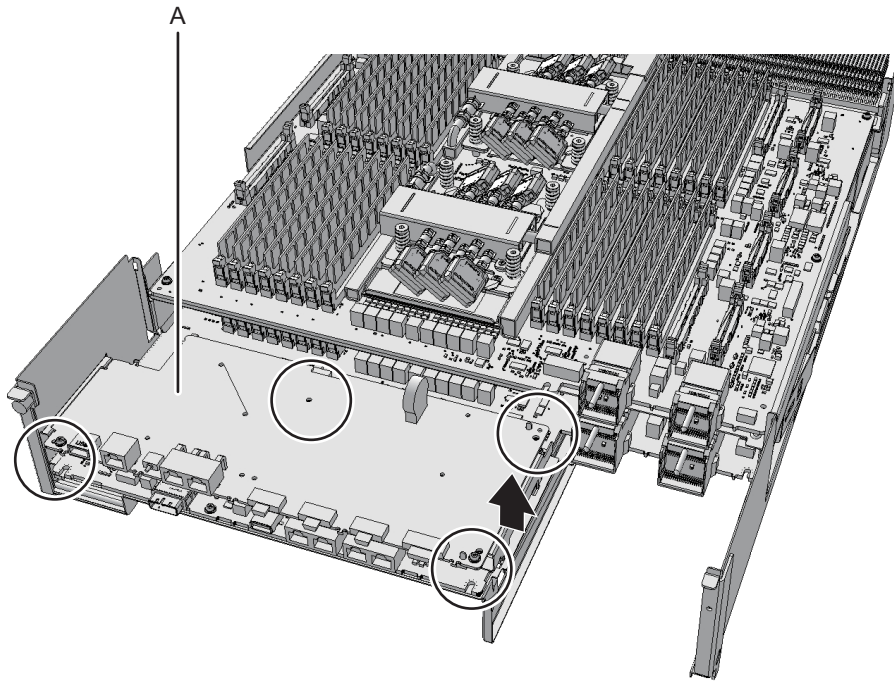
2. **Loosen the two screws from the upper part of the rear side of the CPU memory unit lower. Then, remove the rear cover (A in the figure) by pulling it to the direction of arrow.**

Figure 8-11 Removing rear cover



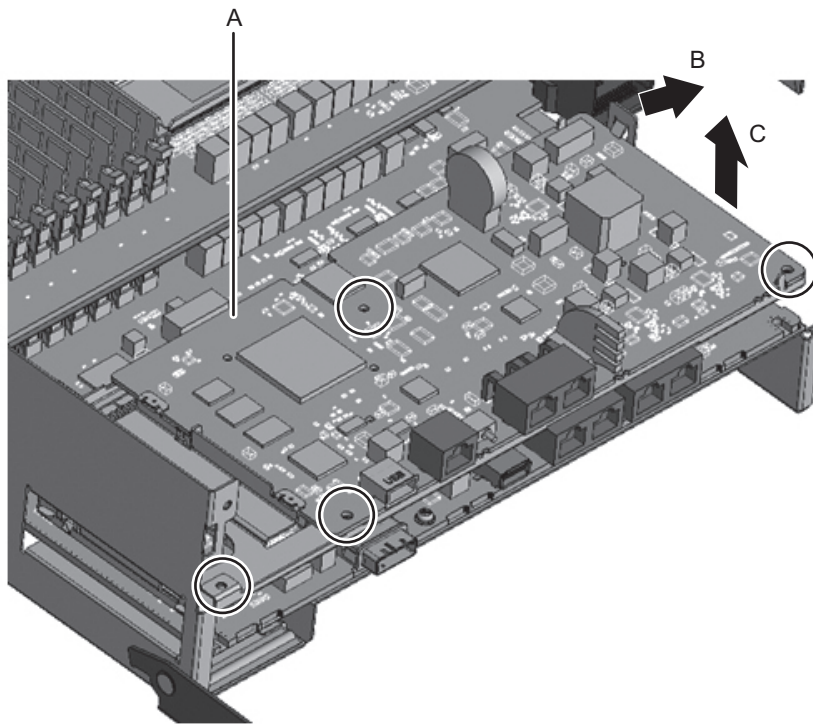
3. **Remove the XSCF board.**
 - For SPARC M10-4S, remove the four screws fixing the XSCF board (A in the figure). Then, lift the right side of the XSCF board to release connection of the connector.

Figure 8-12 Releasing connected XSCF board



- For SPARC M10-4, remove the four screws fixing the XSCF board (A in the figure) and rear cover. Tilt the right lever of the XSCF mount by fingers about 5 mm (0.2 in.) to the right (B in the figure). Lift up the right side of the XSCF board and release connection of the connector (C in the figure).

Figure 8-13 Releasing connection of XSCF board (for SPARC M10-4)



4. **Pull out the XSCF board obliquely to the right direction (arrow).**

Note - Place the removed XSCF board on a grounded static-removal ESD mat.

Figure 8-14 Pulling out XSCF board (for SPARC M10-4S)

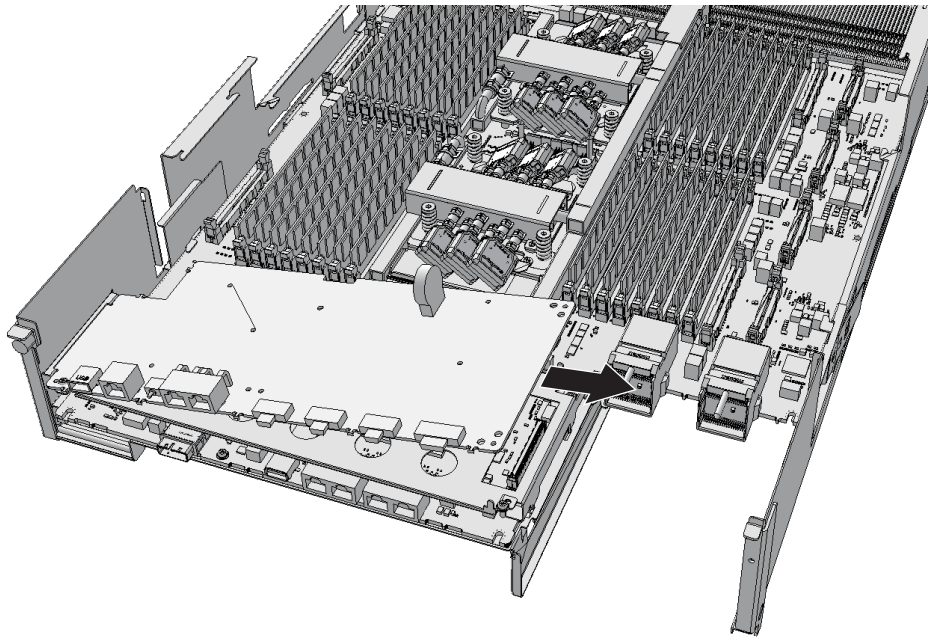
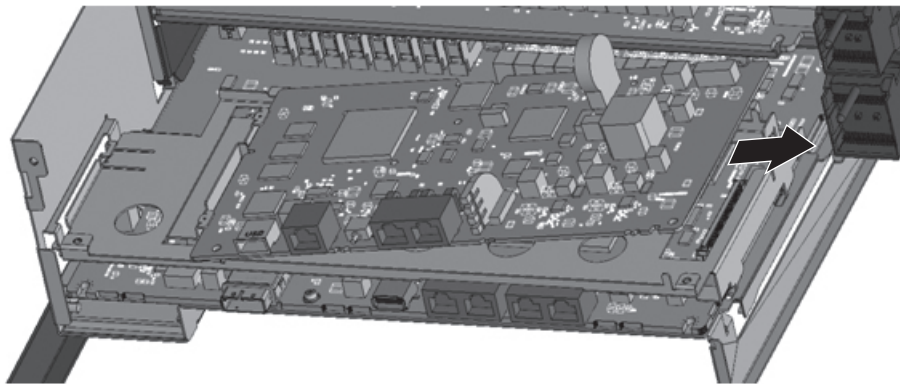


Figure 8-15 Pulling out XSCF board (for SPARC M10-4)



5. Remove the one screw fixing the XSCF mount (A in the figure).

Figure 8-16 Screw fixing XSCF mount (for SPARC M10-4S)

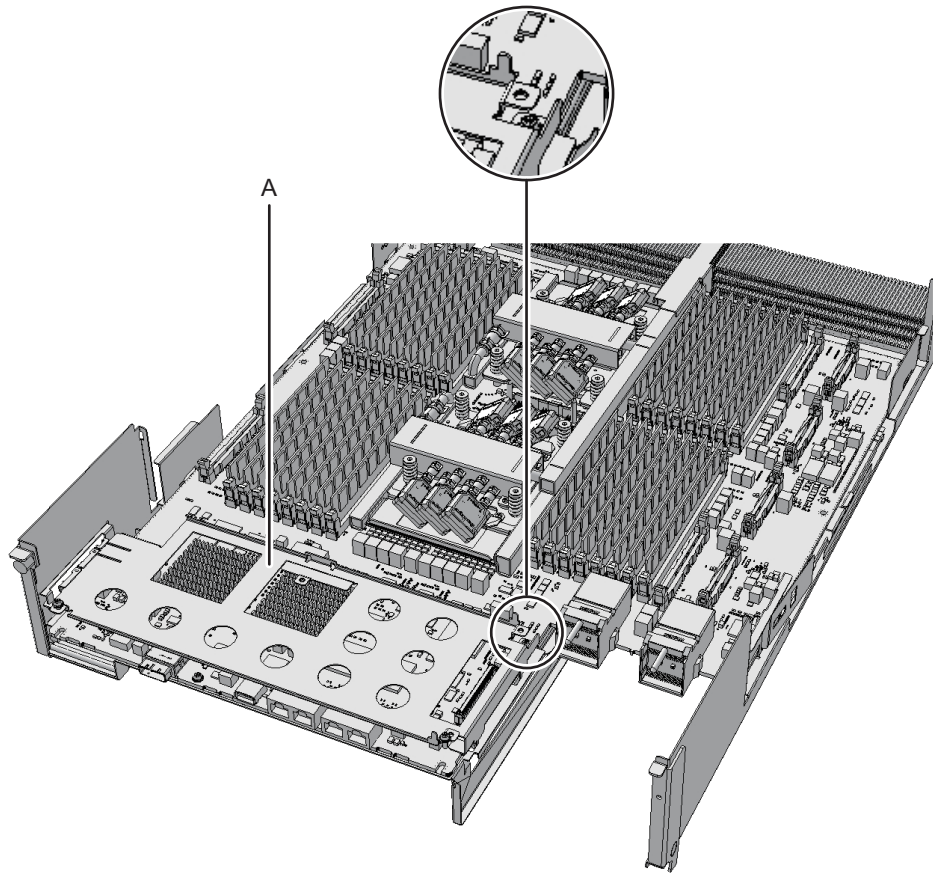
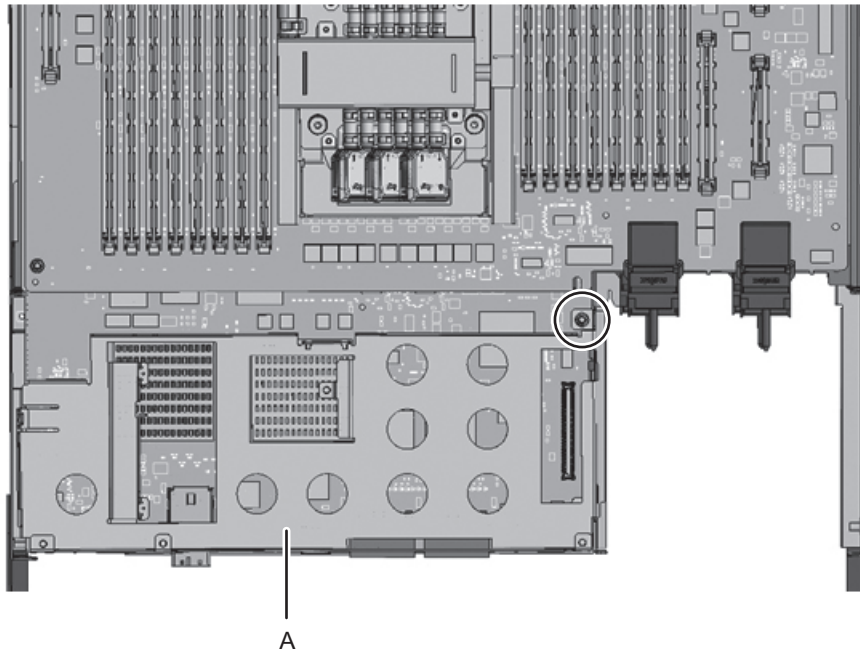


Figure 8-17 Screw fixing XSCF mount (for SPARC M10-4)



6. Lift up the left projecting lever of the XSCF mount (A in the figure) by fingers about 2 mm (0.1 in.) (B in the figure) and slide it to the front about 8 mm (0.4 in.) (C in the figure). Then, remove it upward (D in the figure).

Figure 8-18 Removing XSCF mount (for SPARC M10-4S)

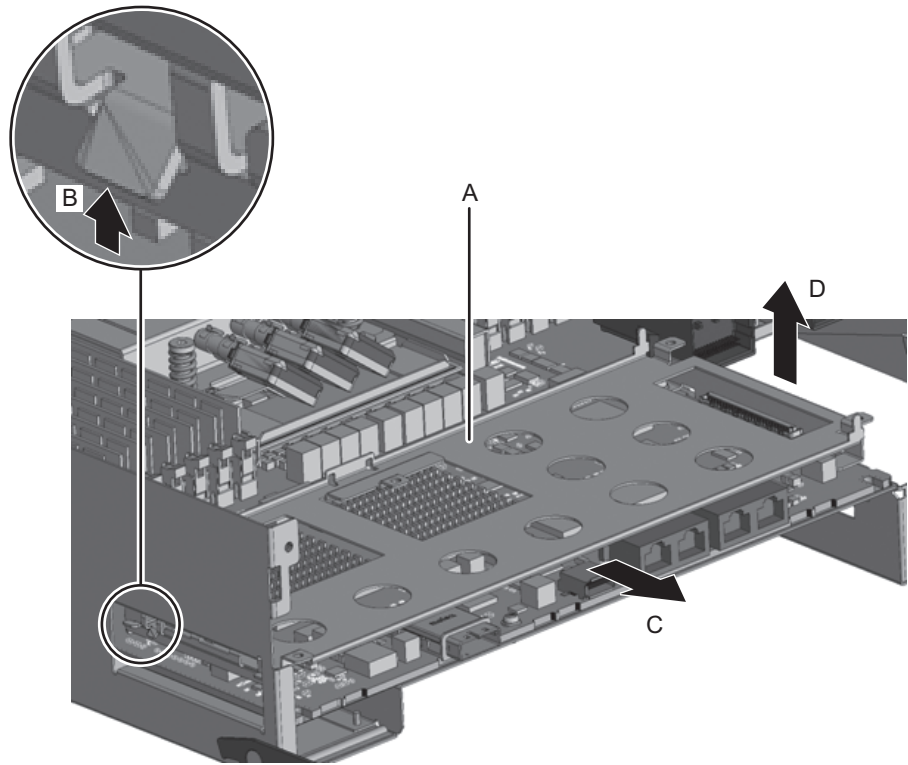
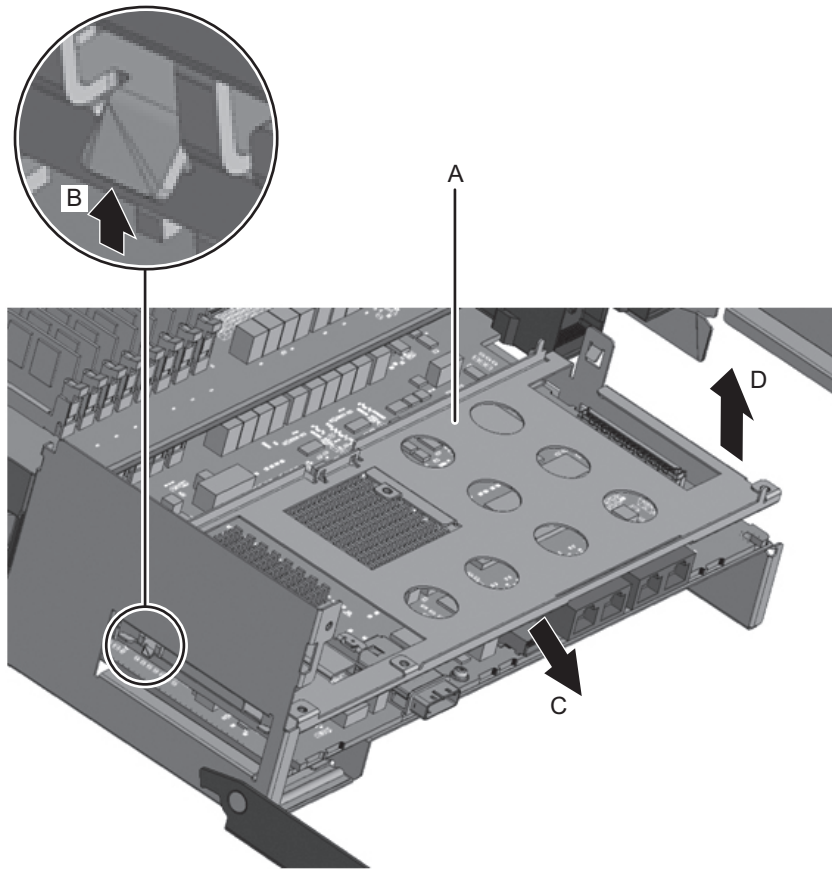
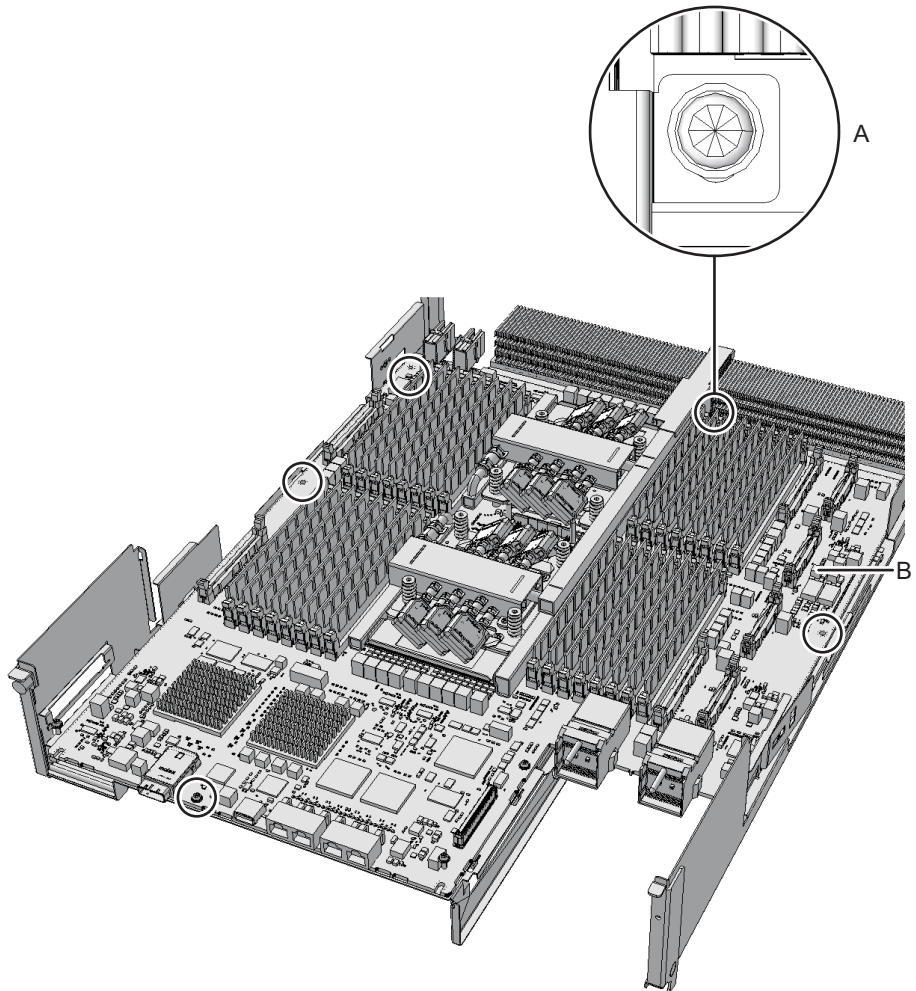


Figure 8-19 Removing XSCF mount (for SPARC M10-4)



7. Remove the one black screw (A in the figure) fixing the center part of the radiator on the front side and the four screws fixing the CPU memory unit board (B in the figure).

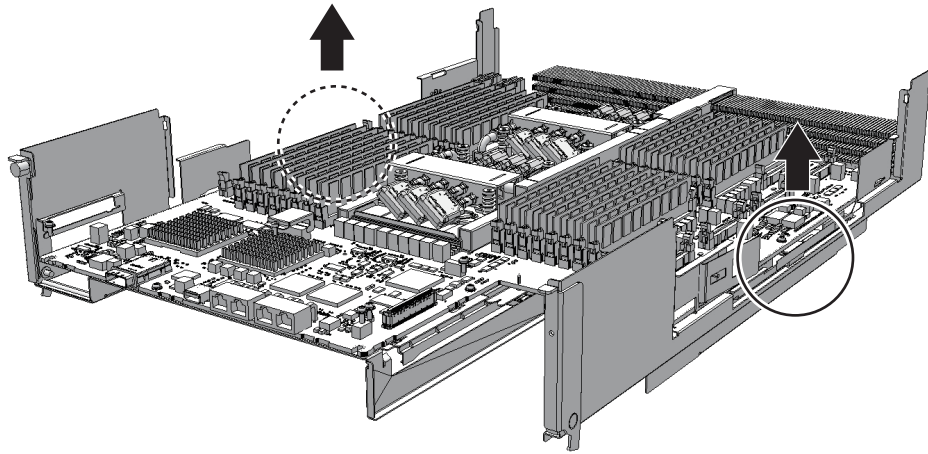
Figure 8-20 Positions of screws fixing CPU memory unit board



8. **Insert your fingers under the board of the connector unit located at the center of the right and left sides of the CPU memory unit board. Lift the CPU memory unit board, and disconnect and remove the connector.**

Note - Place the removed CPU memory unit board on a grounded antistatic ESD mat.

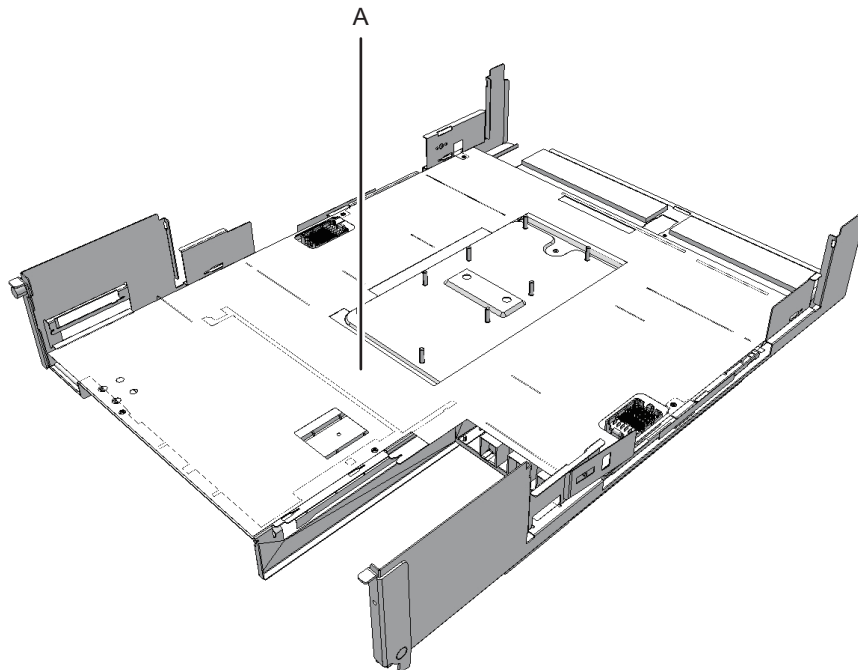
Figure 8-21 Removing CPU memory unit board



9. **Remove the sheet (A in the figure).**

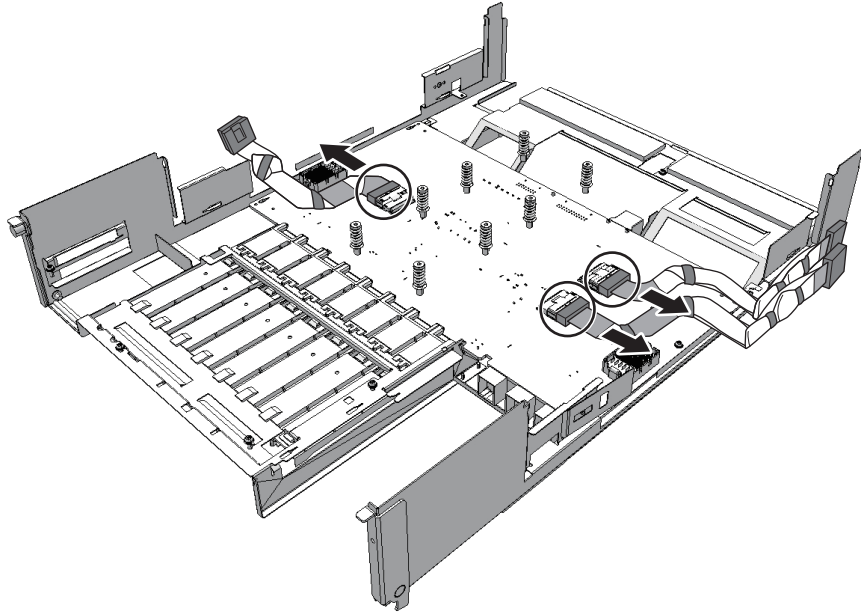
You can expand the CPU memory unit upper with the operations you have done so far. You do not have to perform Step 10.

Figure 8-22 Removing sheet



10. **Remove the three PCIe cables.**

Figure 8-23 Removing PCIe cable



Installing PCI Express cable

When expanding the CPU memory unit upper or when replacing the PCIe cable, connect the PCIe cable. You can reduce the CPU memory unit upper by performing the procedure from Step 2.

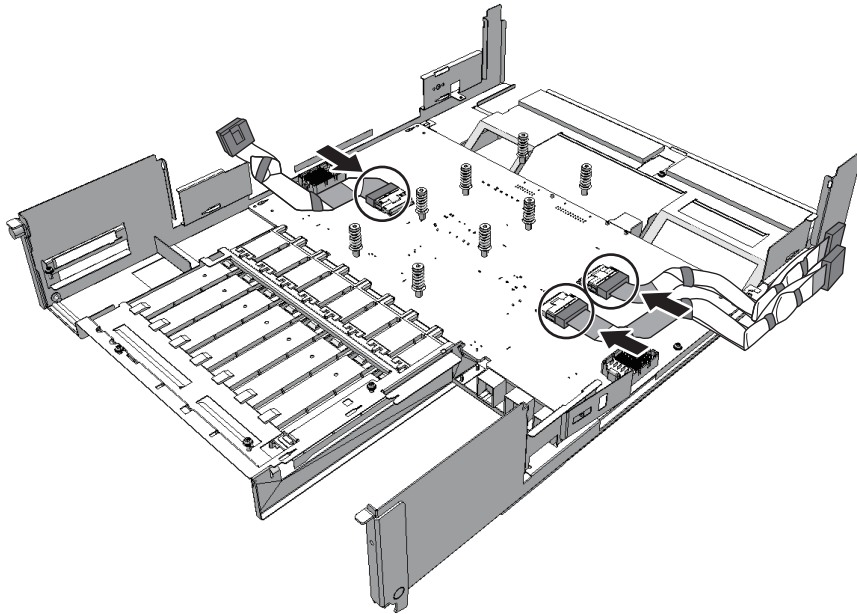
Note - When expanding the CPU memory unit upper, connect the PCIe cable in advance to the CPU memory unit lower. The PCIe cables are attached as an accessory of the CPU memory unit upper.

1. **Connect three PCIe cables.**

When reducing the CPU memory unit upper, you do not have to perform this step because PCIe cables are not connected.

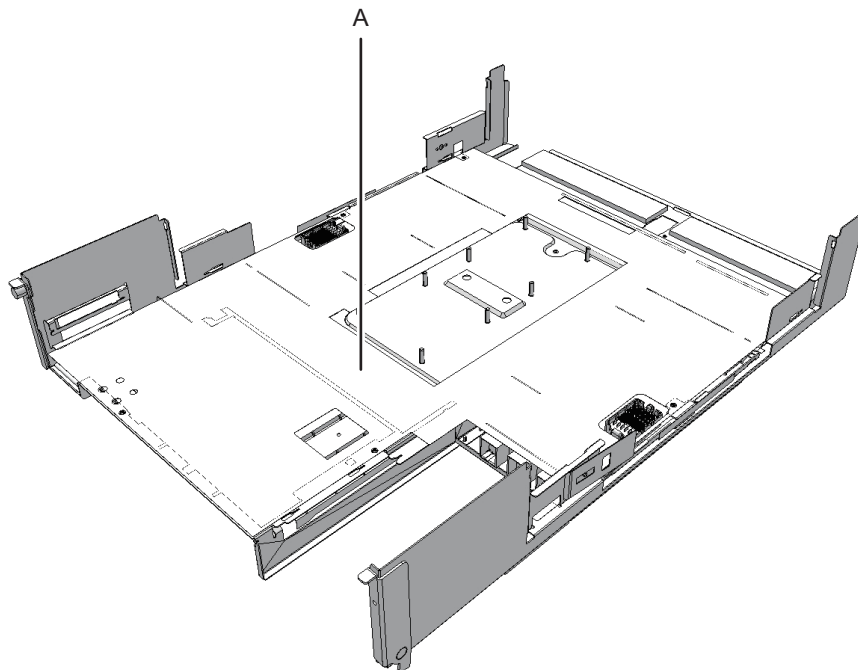
Note - Ensure that the PCIe cables are firmly attached and fixed.

Figure 8-24 Installing PCIe cable



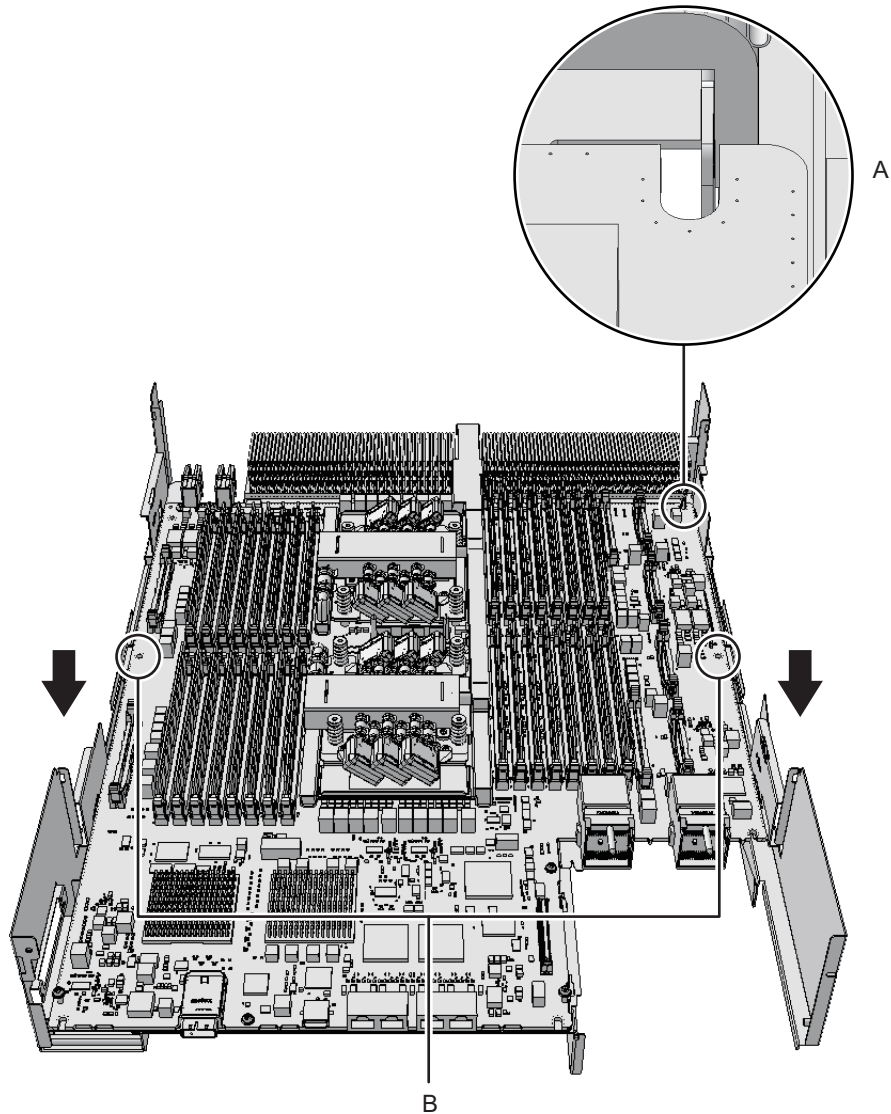
2. **Install a sheet (A in the figure).**

Figure 8-25 Installing sheet



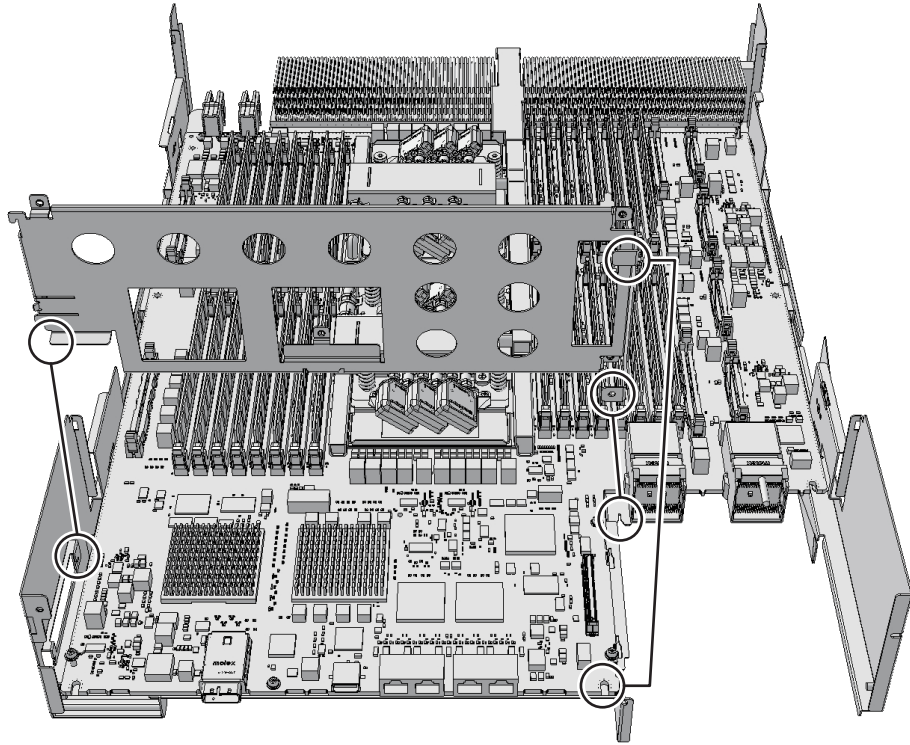
3. **Install the CPU memory unit board with the right guide (A in the figure) on the front side of the board as a guide. Press the connector unit (B in the figure) at the center of right and left sides of the CPU memory unit board to connect the connector.**

Figure 8-26 Installing CPU memory unit board



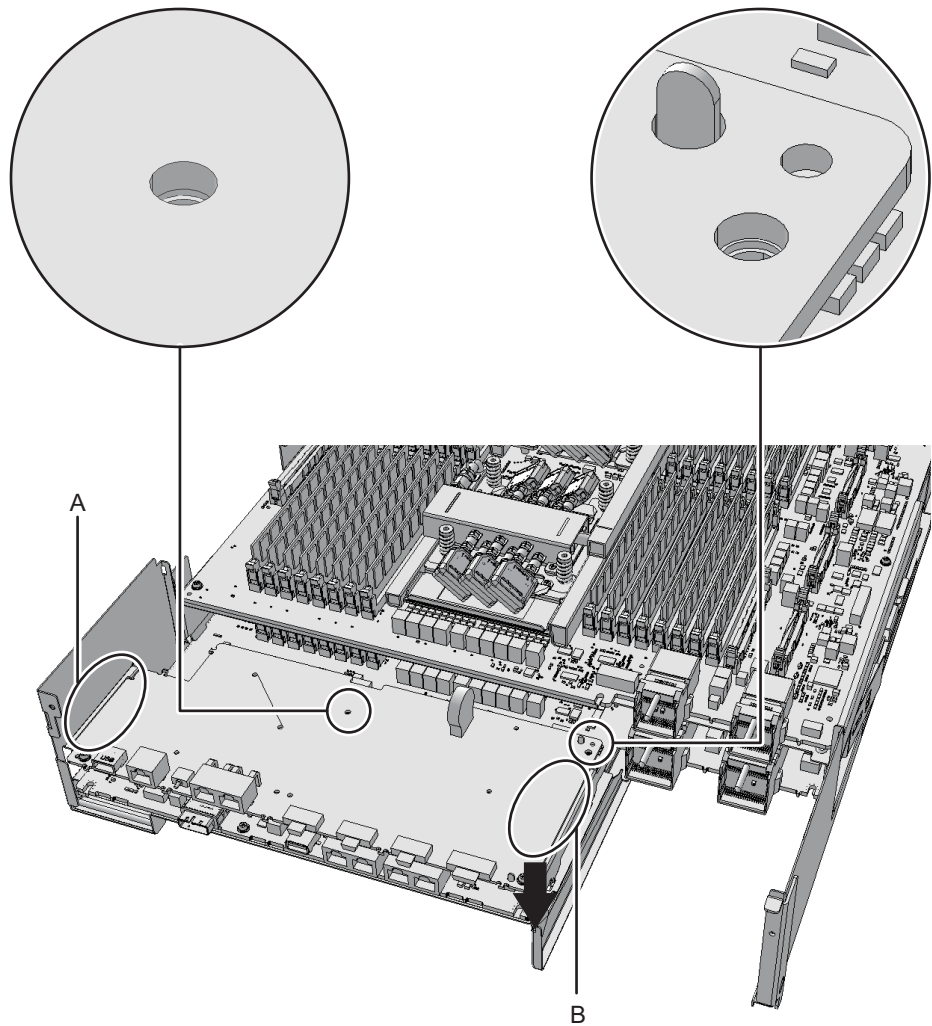
4. **Fix the CPU memory unit board with four screws and center part of the radiator on the front side with one black screw.**
5. **install the XSCF mount by sliding it to the front side, and fix it with one screw.** Align the guide on one part of the left side and the guides on two parts on the lower right side to install the XSCF mount.

Figure 8-27 Installing XSCF mount



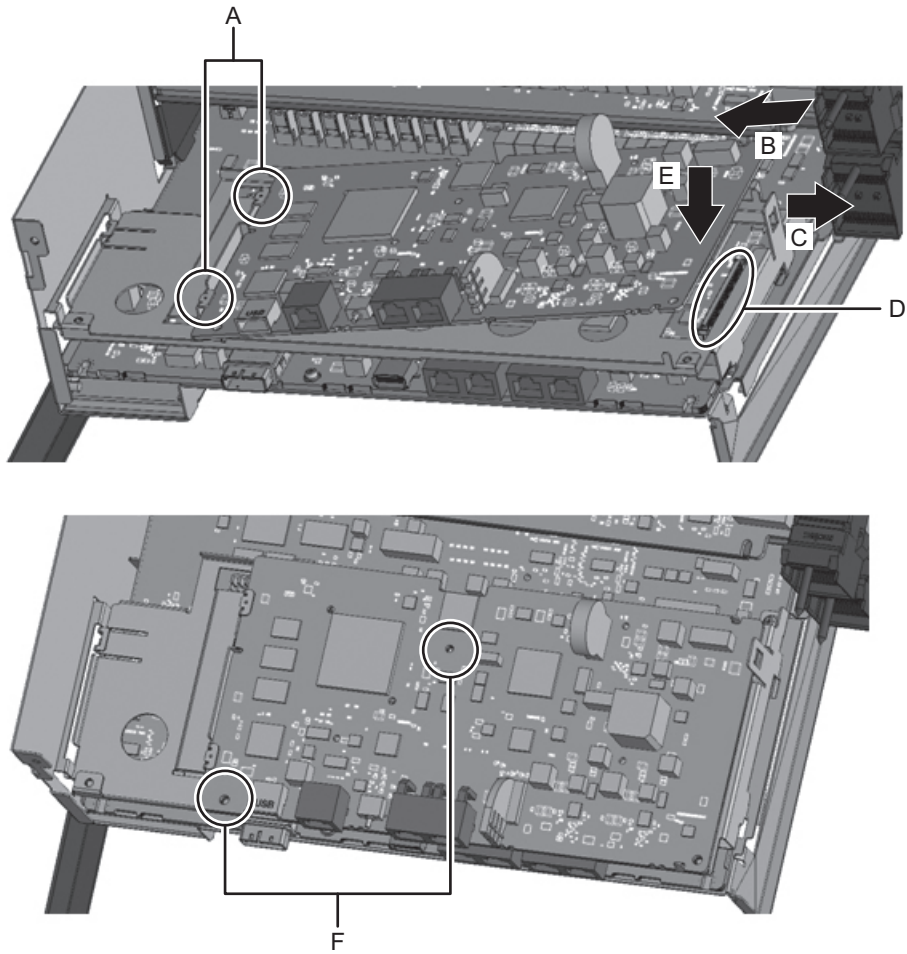
6. **Install the XSCF board.**
 - For SPARC 10-4S, insert the XSCF board into the left guide (A in the figure), and press down the right connector unit (B in the figure) to connect the connector. Then, fix it with two screws.

Figure 8-28 Installing XSCF board



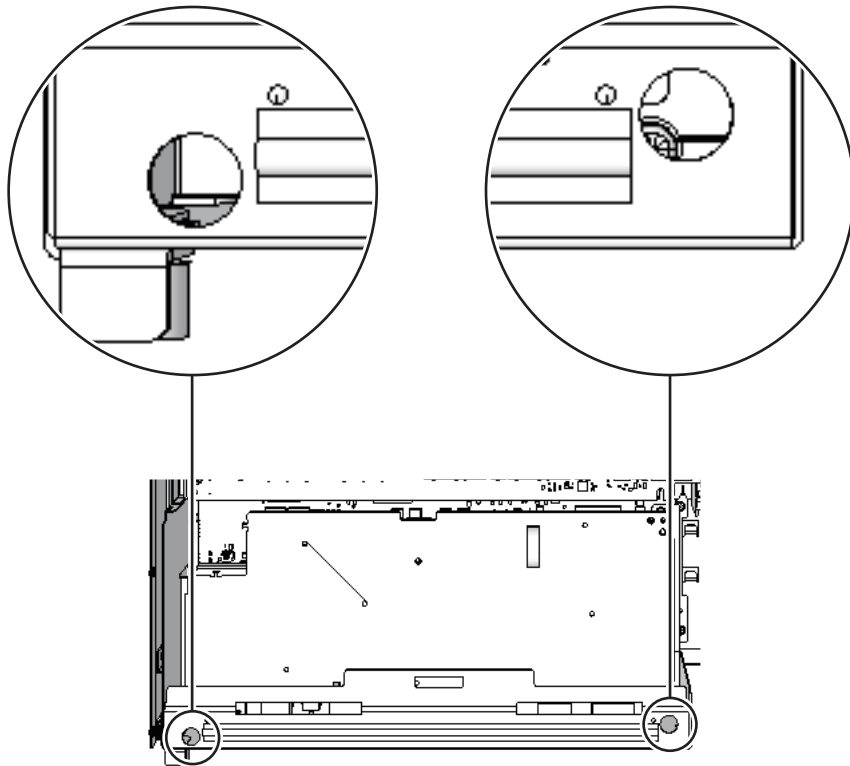
- For SPARC M10-4, insert the XSCF board into two positions (A in the figure) on the guide of the mount (B in the figure), and press the right lever of the mount about 5 mm (0.2 in.) to the right (C in the figure) to connect the connector unit (D in the figure). Then, fix it with two screws (F in the figure).

Figure 8-29 Installing XSCF board (for SPARC M10-4)



7. **Attach the rear cover with two screws from the upper part of the rear side of the CPU memory unit lower.**

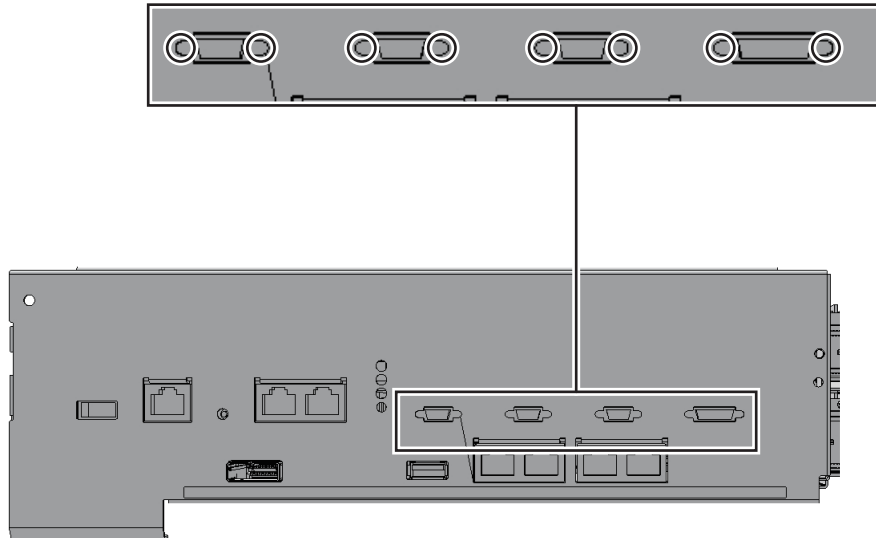
Figure 8-30 Screws for rear cover



8. **Install the eight screws at both ends of the XSCF cable connection port on the rear side of the CPU memory unit lower.**

For SPARC M10-4, this procedure is not necessary.

Figure 8-31 Screw positions at both ends of XSCF cable connection port (for SPARC M10-4S)



Installing CPU memory unit upper

4. **Install the right and left side guides.**

Each guide has four clips. Install the unit on the clips on each side, and slide the guide while pushing its lock.

Note—Be careful not to damage the PCIe cable when installing the right and left side guides.

Figure 8-32 Clip positions of right and left side guides

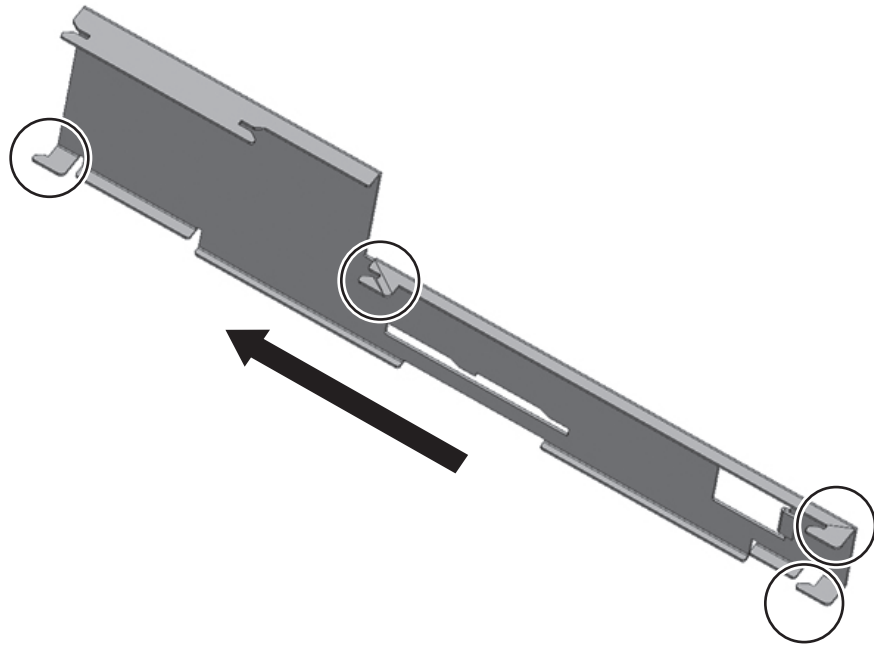
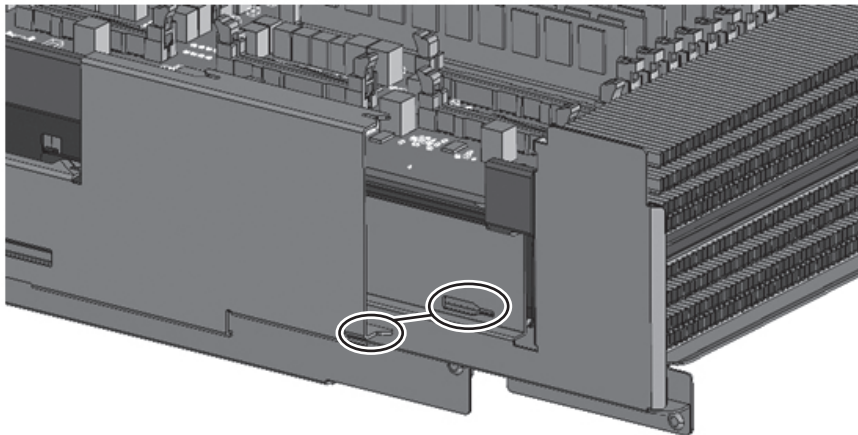
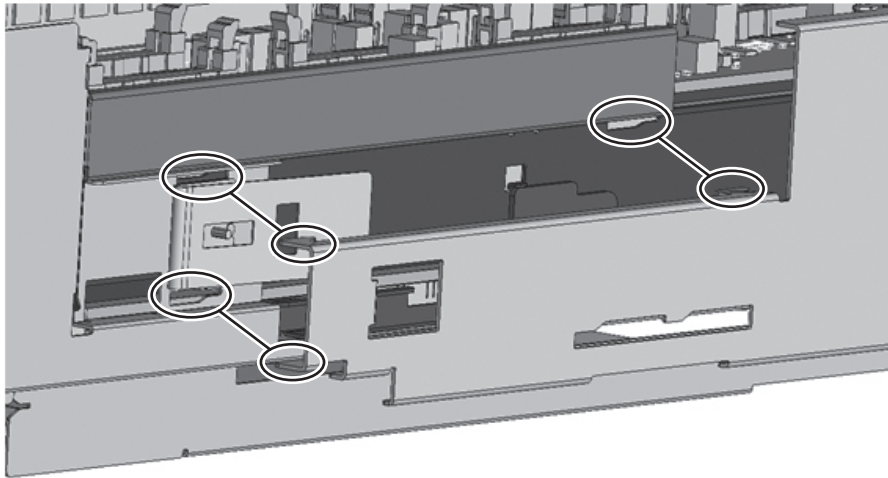


Figure 8-33 Clip positions of CPU memory unit and side guides

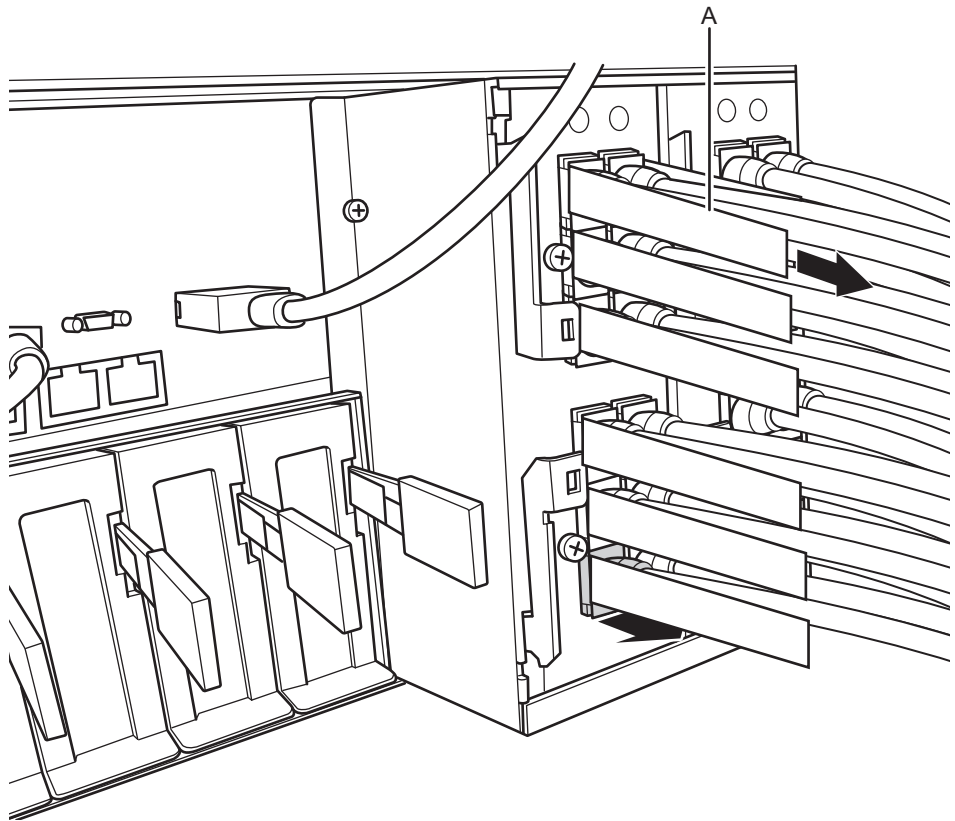


Removing Crossbar Cable (Electrical)

1. **Remove two crossbar cables (electrical) from SPARC M10-4S.**
Hold the tab (A in the figure) of the crossbar cable (electrical), and pull it straight in the arrow direction to remove it. At this time, do not pull out the crossbar cable by holding the cable part. If you pull the cable part, the connector is not unlocked completely, which may cause a damage.
2. **Remove two crossbar cables (electrical) from the other cabinet.**
Hold the tab (A in the figure) of the crossbar cable (electrical), and pull it straight

in the arrow direction to remove it. At this time, do not pull out the crossbar cable by holding the cable part. If you pull the cable part, the connector is not unlocked completely, which may cause a damage.

Figure 8-34 Removing crossbar cable (electrical)



Installing Crossbar Cable (Electrical)

2. **Connect two crossbar cables (electrical) to each cabinet.**
Hold the connector part of the crossbar cable (electrical), and insert it straight into the opening. Do not hold the cable part when inserting the cable.

Removing Crossbar Cable (Optical)

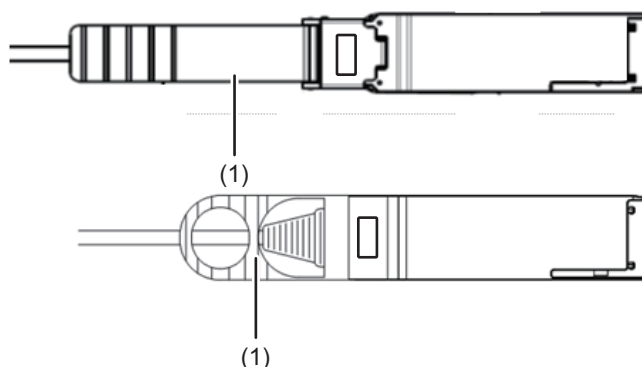
1. **Remove two crossbar cables (optical) from SPARC M10-4S.**
Hold the tab (A in the figure) of the crossbar cable (optical), and pull it straight

- in the arrow direction to remove it. At this time, do not pull out the crossbar cable by holding the cable part. If you pull the cable part, the connector is not unlocked completely, which may cause a damage.
2. **Remove two crossbar cables (optical) on the other side from the crossbar box.**
Hold the tab (A in the figure) of the crossbar cable (optical), and pull it straight in the arrow direction to remove it. At this time, do not pull out the crossbar cable by holding the cable part. If you pull the cable part, the connector is not unlocked completely, which may cause a damage.

Installing Crossbar Cable (Optical)

1. **Connect two crossbar cables (optical) each to SPARC M10-4S and the crossbar box.**
There are two types of crossbar cables (optical). Connect cables of a same type to a same port number. Cables can be distinguished by tab shape. For tab shape, see Figure 8-7.

Figure 8-35 Shape and tab of crossbar cable (optical)



Number in figure	Description
1	Tab

Hold the connector part of the crossbar cable (optical), and insert it straight into the opening. Do not hold the cable part when inserting the cable.

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 8-4 Contents of revision of *PCI Expansion Unit for SPARC M10 Systems Service Manual*

Section number or name	Contents of revision
1.2	The certification standards on the standard label described in "1.2 Labels/Tags" will be changed to the following: <ul style="list-style-type: none">■ Safety: NRTL/C■ Radio wave: VCCI-A, FCC-A, DOC-A, KCC, and C-Tick■ Safety and radio wave: CE and GOST-R
8.4.1	Note in Step 1 in "8.4.1 Accessing link board" will be changed. For details, see "Accessing link board."
8.5.2	Note in Step 2 in "8.5.2 Restoring cabinet" will be changed as follows; Note - Connect the cables correctly to the original positions according to the record before maintenance. Hold the connector part of the link cable (electrical) or link cable (optical), and insert it straight into the opening. Do not hold the cable part when inserting the cable.
10.2.3	"10.2.3 Precautions for replacement" will be changed. For details, see "Precautions for Replacement."

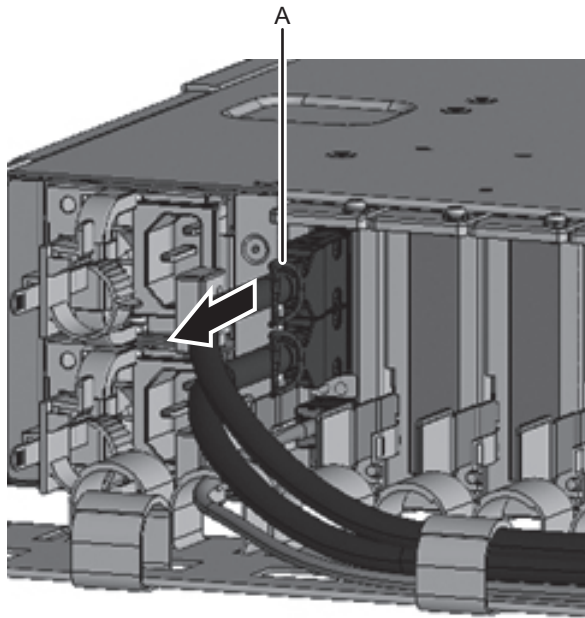
Accessing link board

1. **Remove the two link cables and one management cable connected to the link board under maintenance.**

Note - Record the connection positions of the cables before disconnection for correct restoration.

Hold the tab (A in the figure) for the link cable (electrical) or link cable (optical), and pull it straight to the cable side to remove it. At this time, do not pull out the crossbar cable by holding the cable part. If you pull the cable part, the connector is not unlocked completely, which may cause a damage.

Figure 8-36 Removing link cable



Precautions for Replacement

Pay attention to the point below on link cable replacement.

- Before using the link cable, confirm that labels of a same number (0 or 1) are attached to the connectors at both ends.
If no label is attached, attach labels supplied with the link cable so that the same number is displayed on the connectors at both ends. For state of the labels correctly attached, see Figure 8-37. For attachment positions, see Figure 8-38 and Figure 8-39.

Figure 8-37 State of labels correctly attached

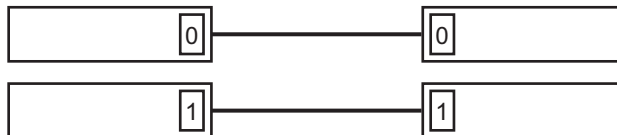
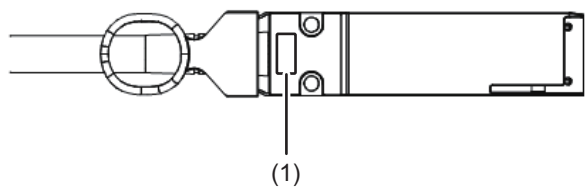
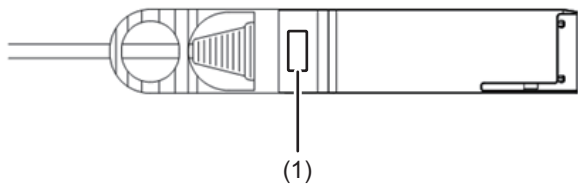


Figure 8-38 Label position of link cable (electrical)



Number in figure	Description
1	Label

Figure 8-39 Label position of link cable (optical)



Number in figure	Description
1	Label

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 8-5 Contents of revision of *SPARC M10 Systems System Operation and Administration Guide*

Section number	Contents of revision
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"
12.2.10	The procedure for re-enabling a hardware RAID volume in SPARC M10-4/M10-4S must be carried out after the replacement of the CPU memory unit (lower), not after the replacement of the PCI backplane. Accordingly, the opening description in "12.2.10 Re-enabling a hardware RAID volume" will be corrected as follows. This section describes how to re-enable a hardware RAID volume after replacement of the SPARC M10-4/M10-4S CPU memory unit (lower) or SPARC M10-1 motherboard unit.
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.

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 8-6 Contents of Revision of *SPARC M10 Systems Domain Configuration Guide*

Section number	Contents of revision
Preface	<p>The URL of Fujitsu documents provided in "Related Documentation" will be changed as follows:</p> <ul style="list-style-type: none">■ Fujitsu documents http://jp.fujitsu.com/platform/server/sparc/manual <p>The URL of the Japanese web site provided in "Documentation Feedback" will be changed as follows:</p> <ul style="list-style-type: none">■ Japanese site http://jp.fujitsu.com/platform/server/sparc/manual
3.6	<p>"Settable mode" in "Power save function" in "Table 3-5 Settable mode for PPAR" will be changed to the following: Enable/Disable (default value)</p>
4.3.2	<p>The description of "ldom" in "ldm add-vds command" in "4.3.2 Setting the default service" will be changed to the following:</p> <ul style="list-style-type: none">■ 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. <p>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).</p> <pre># svcadm enable svc:/ldoms/vntsd</pre>

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 8-7 Contents of revision of *SPARC M10 Systems XSCF Reference Manual*

Section number or command	Contents of revision
Intro(1)	The following command name will be corrected. Incorrect:dumpcondactivation Correct:dumpcodactivation
restoredefaults(8)	The following option will be added to initialize settings to the factory default including the information of the CPU core activation key. -r activation Delete a CPU core activation key. The CPU core activation key is not deleted if you specify the -c factory without specifying the -r option. You cannot specify it with the -c xscf.
setpparparam(8)	The input command example in Example 5 will be corrected as follows: XSCF> setpparparam -p 0 -s bootscript "setenv auto-boot? true setenv input-device virtual-console setenv output-device virtual-console"

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

Table 8-8 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/

Maintaining SPARC M10-1 Cable Kit

This section describes the maintenance procedure of the cable kit.

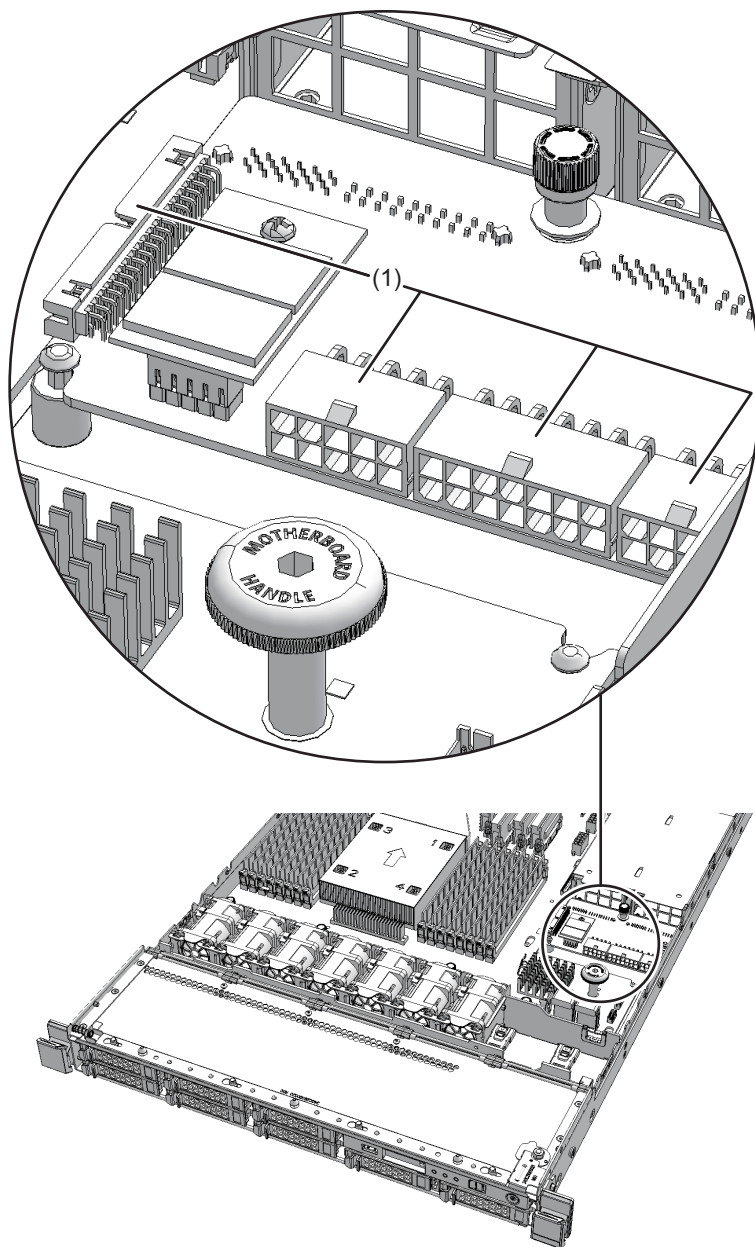
- [Location of Cable Kit](#)
- [Before Maintaining Cable Kit](#)
- [Enabling Removal of Cable Kit](#)
- [Removing Cable Kit](#)
- [Installing Cable Kit](#)
- [Restoring System](#)

Location of Cable Kit

This section describes the location of the cable kit.

The cable kit consists of four cables that connect the motherboard unit and the PSU backplane.

Figure A-1 Location of cable kit



Location number	Component
1	Cable kit

Before Maintaining Cable Kit

This section describes the types and the flow of maintenance of the cable kit.

Note - Make sure to check the explanation described here before starting the maintenance work. Also see contents of "Chapter 1 Before Starting Maintenance Work."

Types of maintenance

Table A-1 shows the types of maintenance for the cable kit. See "4.3 Understanding Types of Maintenance" for the definition of maintenance.

Table A-1 Types of maintenance for cable kit

Active/hot	Inactive/cold (system stopped)
Unavailable	Available

Enabling Removal of Cable Kit

This section describes preparation for removing the cable kit.



Note - To completely shut down the system, all the power cords must be disconnected. There is a risk of electrical failure if the power cords are not disconnected.

1. **Log in to the XSCF shell.**
2. **Execute the showlogs command to identify the cable kit to be maintained.**

```
XSCF> showlogs error
```

For details, see "3.3.5 Checking log information."

3. **Stop the system.**
For details, see "5.2 Stopping System."
4. **Open the rack door.**
5. **Remove all power cords from the power supply unit.**
For details, see "5.3.1 Removing power cord."

Note - When receiving power from the dual power supply, be sure to disconnect the power cord after taking notes on the connection position in order to reconnect the cord correctly.

Removing Cable Kit

This section describes the procedure to remove the cable kit.

Enable removal of the cable kit before you remove it. For details, see "Enabling Removal of Cable Kit."



Caution - Be sure to wear an antistatic wrist strap before handling the components. If you perform the work without it, the electronic parts and the system may suffer serious damage. For details, see "1.4 Notes Regarding Static Electricity."

Accessing cable kit

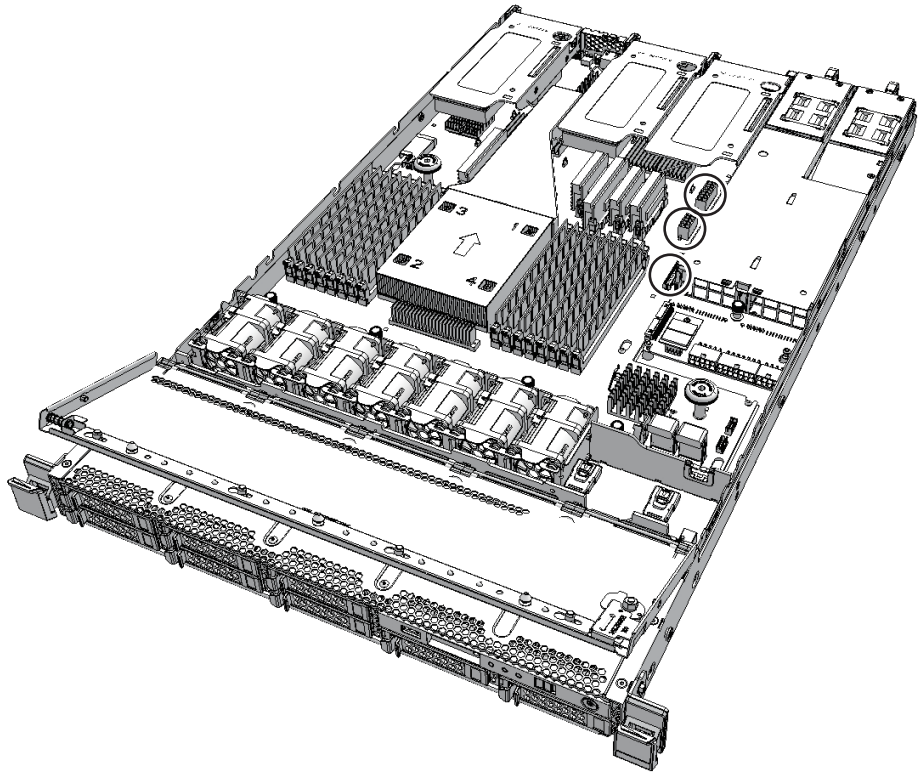
1. **Remove all the power supply units.**
For details, see "9.4 Removing Power Supply Unit."
2. **Pull out the cabinet from the rack.**
For details, see "5.3.2 Pulling out cabinet from rack."
3. **Open the fan cover.**
For details, see "5.3.3 Opening fan cover."
4. **Remove the upper cover.**
For details, see "5.3.4 Removing upper cover."
5. **Remove the air duct and the PSU backplane cover.**
For details, see "5.3.5 Removing air duct and PSU backplane cover."

Removing Cable Kit

1. **Remove the three cables on the motherboard unit that connect the PSU backplane with the mother board unit.**

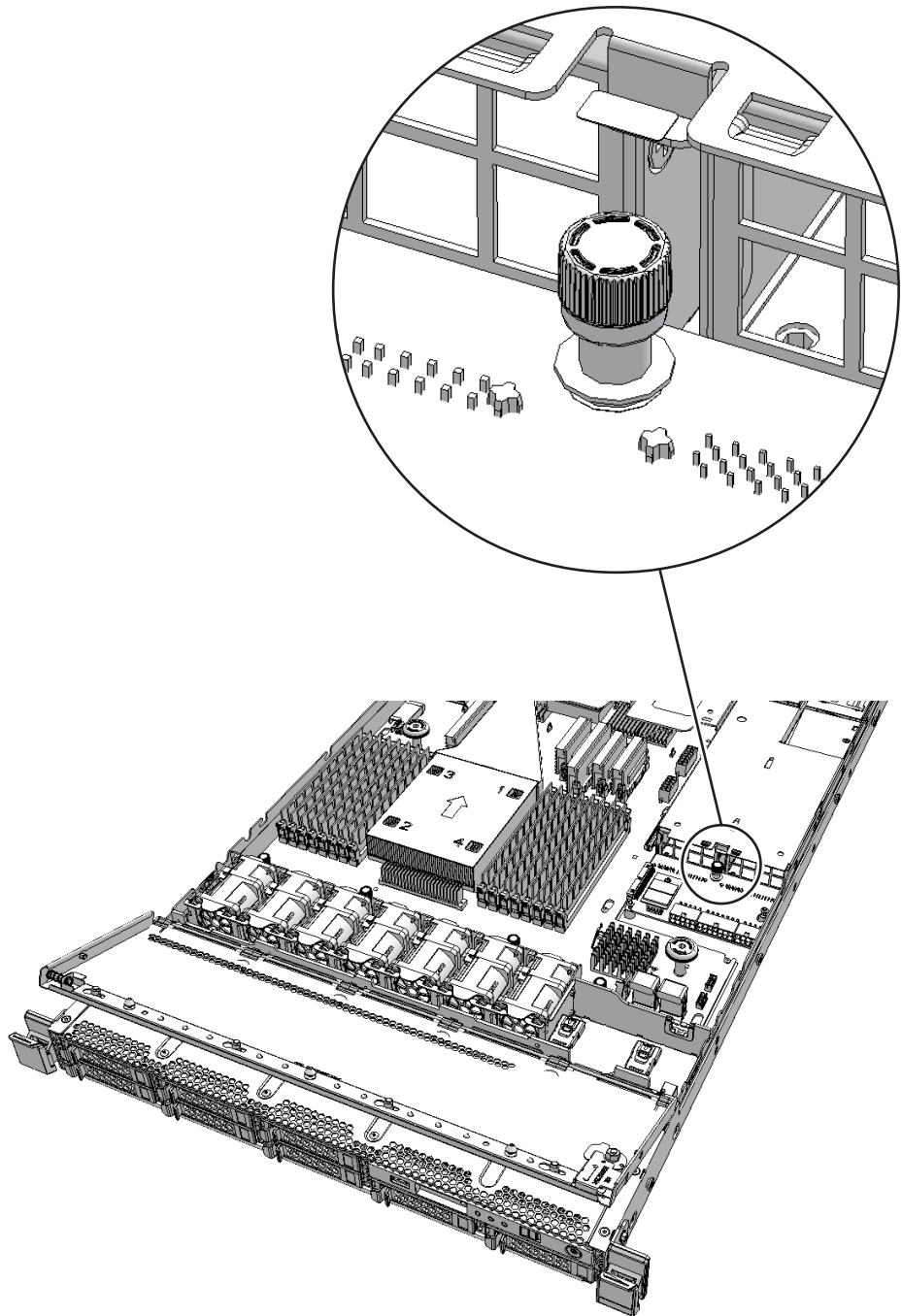
Note - Write down the connection positions for the cables before removing them to restore them correctly.

Figure A-2 Cables of motherboard unit



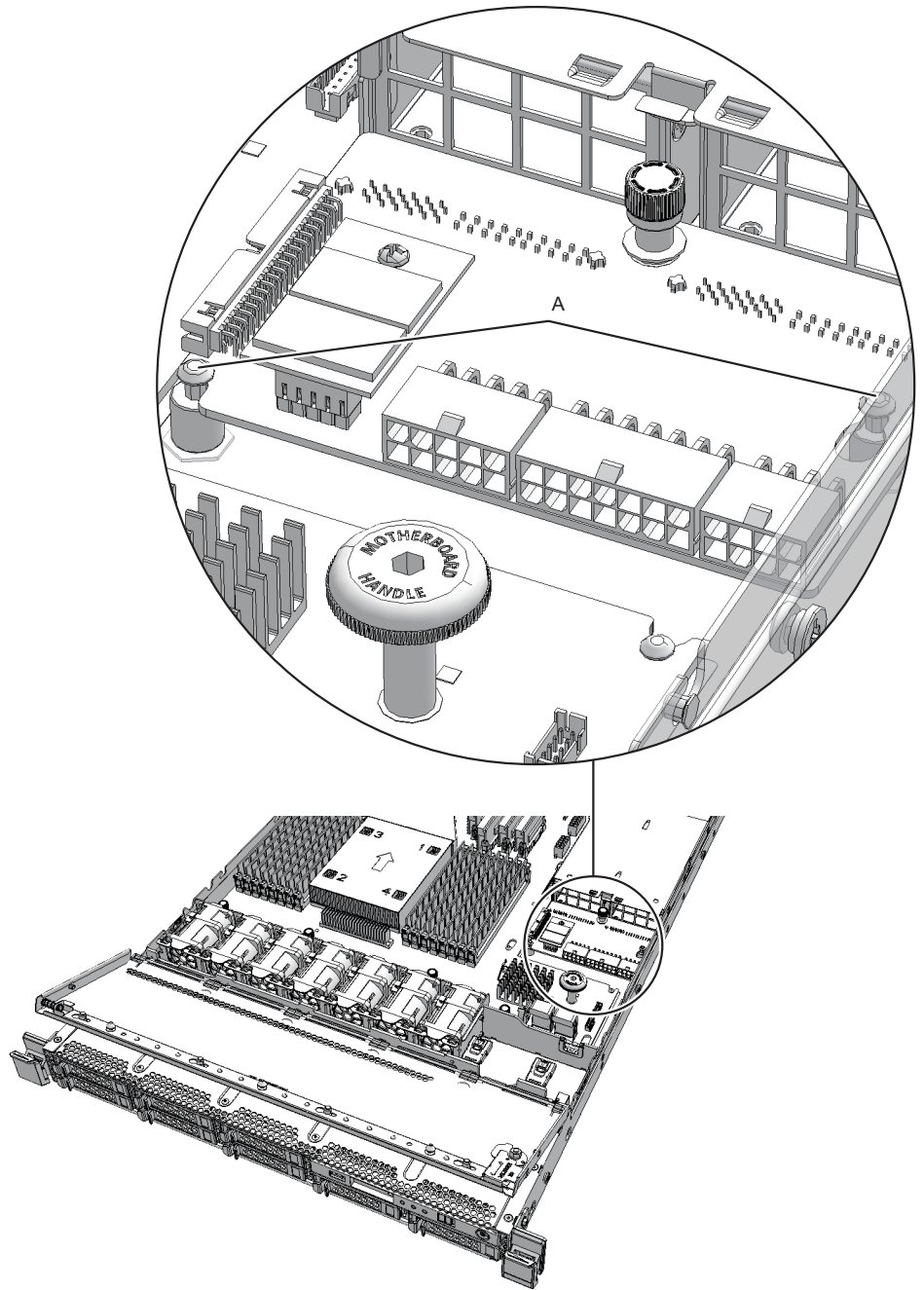
2. **Loosen one screw that fixes the PSU backplane.**

Figure A-3 Screws for PSU backplane



3. **Slide the PSU backplane to the rear side of the cabinet and remove it from the two fixing pins (A in the figure).**

Figure A-4 Fixing screws for PSU backplane

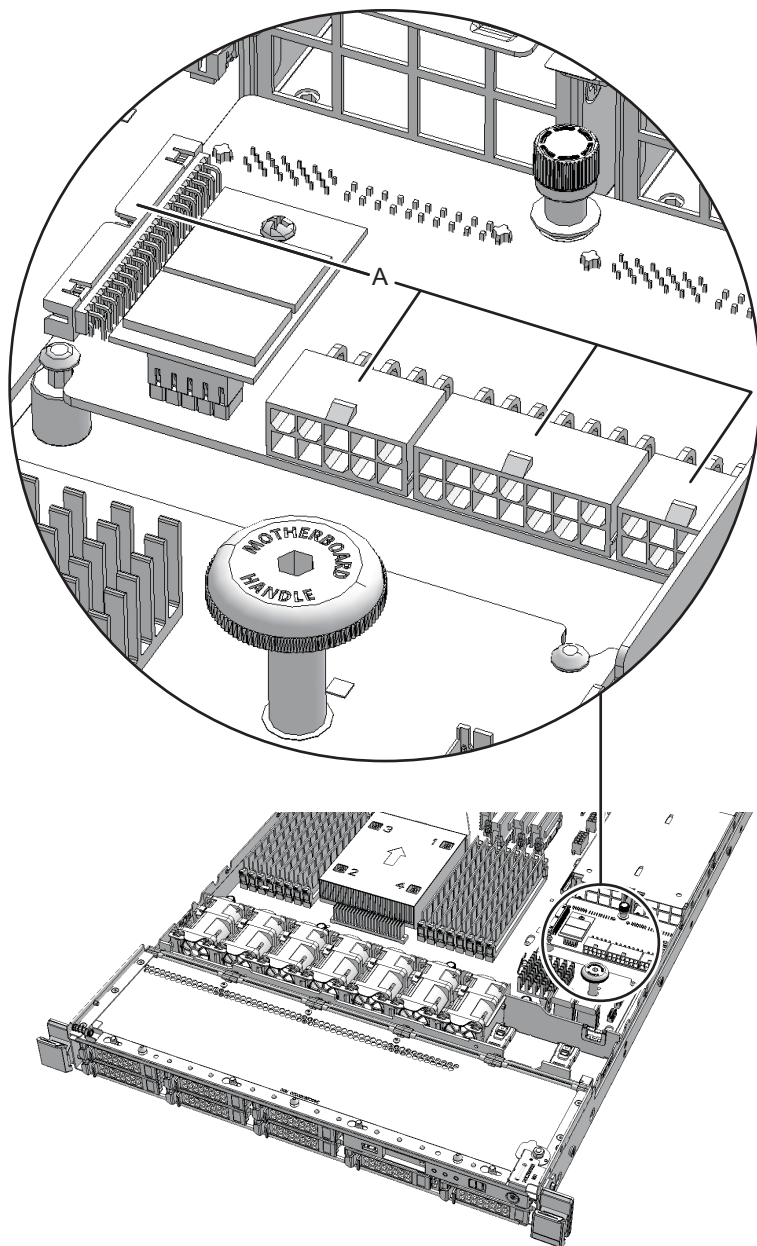


4. Lift the PSU backplane and remove the four cables (A in the figure).

Note - Write down the connection positions for the cables before removing them to restore them correctly.

Note - Place the removed PSU backplane on the ESD mat for static electricity removal.

Figure A-5 Cable for PSU backplane



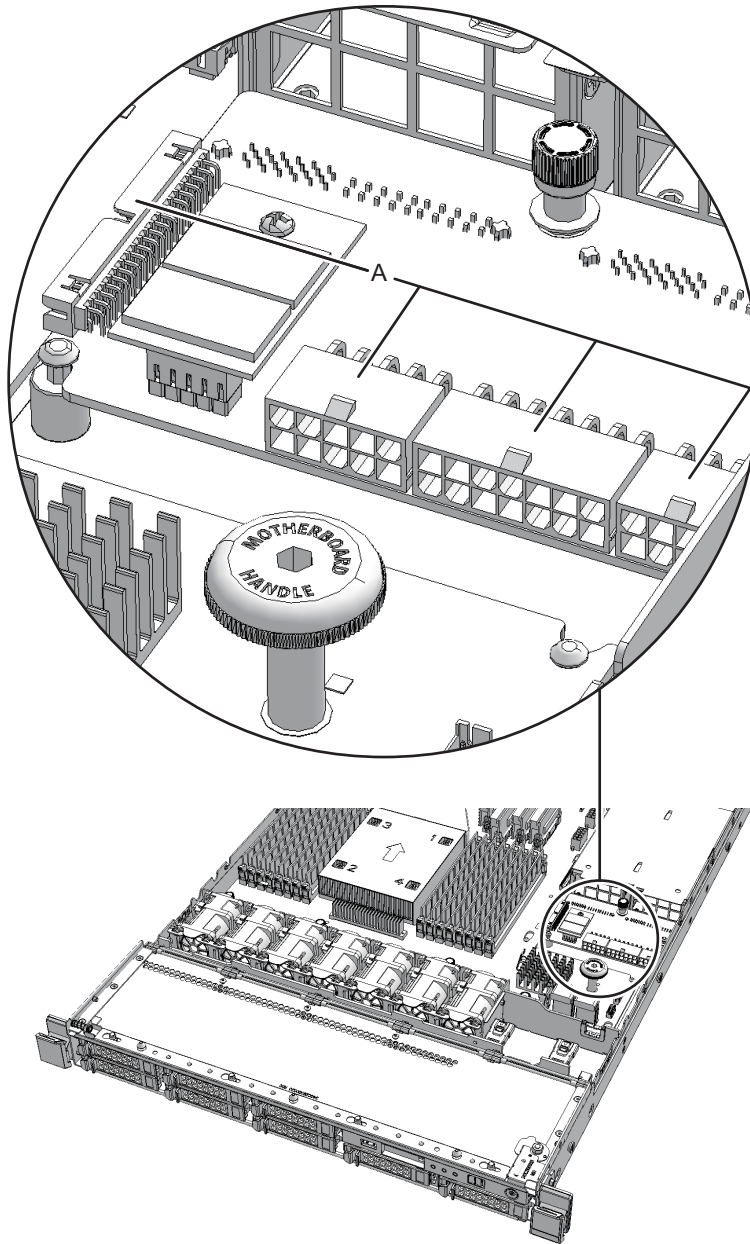
Installing Cable Kit

This section describes the procedure to install the cable kit.

Installing Cable Kit

1. **Hold the PSU backplane and connect the four cables (A in the figure).**

Figure A-6 Cable for PSU backplane

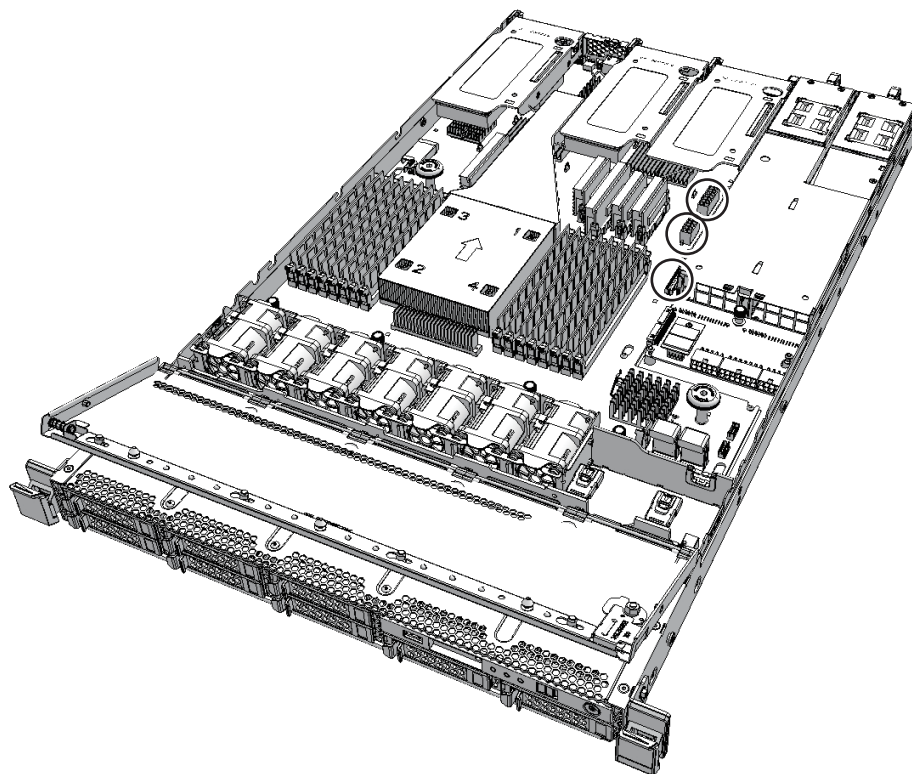


2. **Install the PSU backplane.**
3. **Confirm that the two fixing pins are inserted into the PSU backplane. Then, slide the PSU backplane to the rear side of the cabinet.**
4. **Tighten the one screw that fixes the PSU backplane.**
5. **Connect the three cables connecting the PSU backplane with the motherboard unit.**

Note - Connect the cables correctly to the original positions according to the record before maintenance.

Note - Ensure that the cables are firmly inserted.

Figure A-7 Cables of motherboard unit



Restoring cabinet

1. **Install the air duct and the PSU backplane cover.**
For details, see "6.3.1 Installing air duct and PSU backplane cover."
2. **Install the upper cover.**
For details, see "6.3.2 Installing upper cover."
3. **Close the fan cover.**
For details, see "6.3.3 Closing fan cover."
4. **Install all power supply units.**
For details, see "9.5 Installing Power Supply Unit."

Restoring System

This section describes the procedure to restore the system after installation of the PSU backplane.

1. **Mount the cabinet in the rack.**
For details, see "6.3.4 Putting cabinet in rack."
2. **Connect all the power cords to the power supply unit.**
For details, see "6.3.5 Installing power cord."

Note - In a dual power feed, be sure to connect the power cord to the original position correctly according to the notes written down before maintenance.

3. **Check that the XSCF STANDBY LED on the operation panel is on.**
4. **Switch the mode switch on the operation panel to the Locked mode.**
For details, see "2.2.2 Operation panel switches."
5. **Log in to the XSCF shell.**
6. **Start the system.**
For details, see "6.2 Starting System."
7. **Close the rack door.**

Maintaining Cable Kit of Crossbar Box

This chapter describes the procedure for maintaining the cable kit mounted on the crossbar box.

- [Configuration of Cable Kit](#)
- [Before Maintaining Cable Kit](#)
- [Enabling Removal of Cable Kit](#)
- [Removing Cable Kit](#)
- [Installing Cable Kit](#)
- [Restoring System](#)

Configuration of Cable Kit

This section describes the configuration and location of the cable kit.

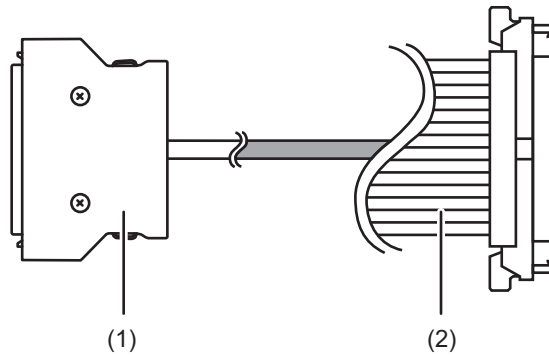
The cable kit is a set of cables for crossbar backplane unit-terminal board connection and terminal board-fan backplane connection.

The cable kit contains the following cables.

Cable for connecting crossbar backplane unit and terminal board

- Cable (SIG)
Cable for connecting the crossbar backplane unit and terminal board (SIG)

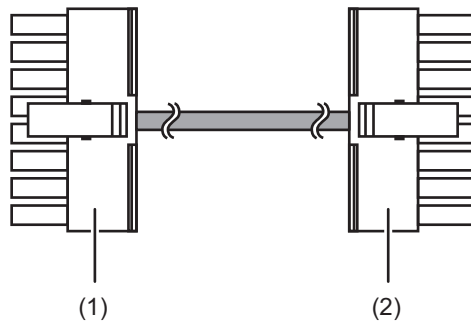
Figure B-1 Cable (SIG) (Between crossbar backplane unit and terminal board)



Location number	Component
1	Connector (terminal board (SIG) side)
2	Connector (crossbar backplane unit side)

- Cable (PWR)
Cable for connecting the crossbar backplane unit and terminal board (PWR)

Figure B-2 Cable (PWR) (Between crossbar backplane unit and terminal board)

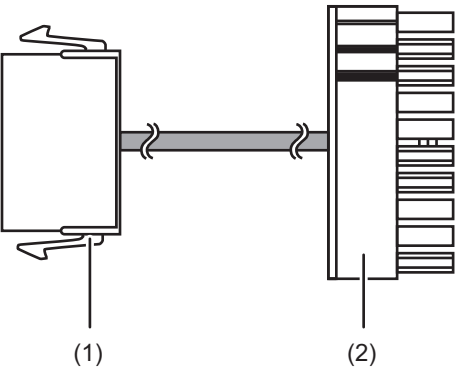


Location number	Component
1	Connector (terminal board (PWR) side)
2	Connector (crossbar backplane unit side)

Cable for connecting terminal board and fan backplane

- Cable (PWR)
Cable for connecting the terminal board and fan backplane (PWR)

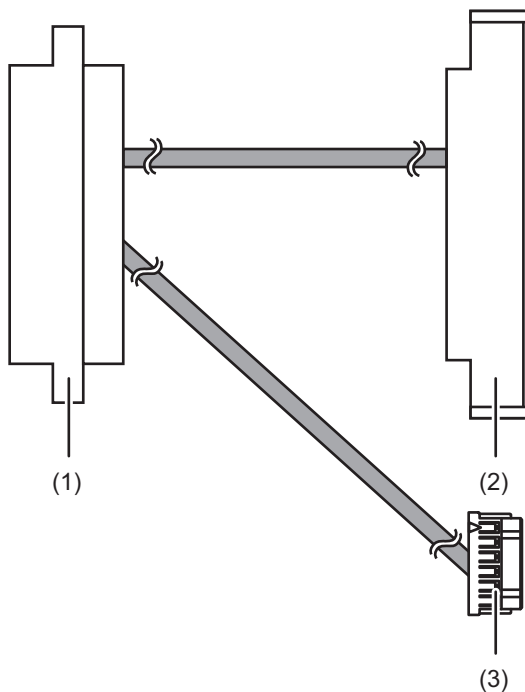
Figure B-3 Cable (PWR) (Between terminal board and fan backplane)



Location number	Component
1	Connector (terminal board side)
2	Connector (fan backplane (PWR) side)

- Cable (SIG)
Cable for connecting the terminal board and fan backplane (SIG) and operation panel

Figure B-4 Cable (SIG) (Between terminal board-fan backplane and operation panel)

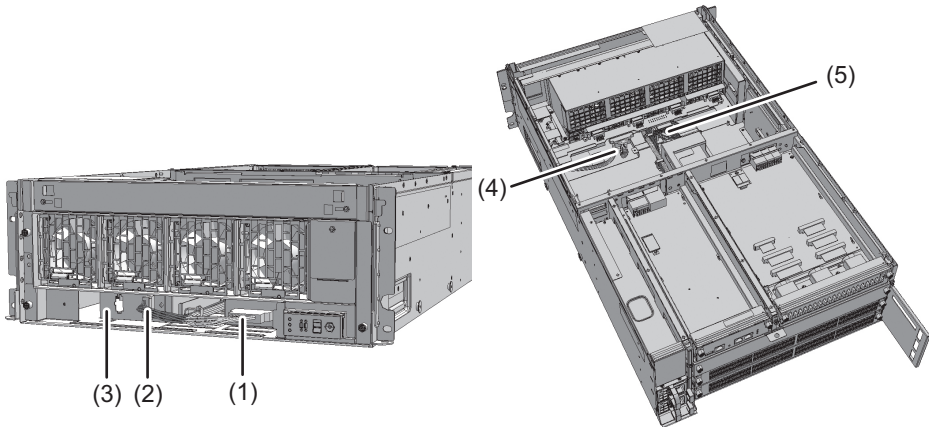


Location number	Component
1	Connector (terminal board side)
2	Connector (fan backplane (SIG) side)
3	Connector (operation panel side)

Location of cable kit

The connection positions of the cable kit are as follows.

Figure B-5 Location of cable kit



Location number	Component	Connection
1	Cable (SIG)	Crossbar backplane unit and terminal board (SIG)
2	Cable (PWR)	Crossbar backplane unit and terminal board (PWR)
3	Terminal board	
4	Cable (SIG)	Terminal board (SIG) and fan backplane
5	Cable (PWR)	Terminal board (PWR) and fan backplane

Before Maintaining Cable Kit

This section describes the types and the flow of maintenance of the cable kit.

Note - Read the instructions in this section before starting the maintenance work. Also see contents of "Chapter 1 Before Starting Maintenance Work."

Types of maintenance

Table B-1 shows the types of maintenance for the cable kit. See "4.3 Understanding Types of Maintenance" for the definition of maintenance.

Table B-1 Types of maintenance for cable kit

Configuration	Active/hot	Active/cold	Inactive/hot	Inactive/cold	System-stopped
Building block configuration	Unavailable	Unavailable (*1)	Unavailable	Unavailable (*1)	Available (*2)

*1: If there is any physical partition in operation, the crossbar box cannot be powered off.
*2: All physical partitions must be powered off, and the system must be completely shut down.

Maintenance flow

Table B-2 shows the sequence of maintenance work for the cable kit.

Table B-2 Maintenance flow

Task		Replacement
1	Preparation	Enabling Removal of Cable Kit
2	Removing cable kit	Removing Cable Kit
3	Installing cable kit	Installing Cable Kit
4	Restoring system	Restoring System

Enabling Removal of Cable Kit

This section describes preparation for removing the cable kit.



Note - To completely shut down the system, all the power cords must be disconnected. There is a risk of electrical failure if the power cords are not disconnected.

1. **Log in to the XSCF shell.**
2. **Execute the showlogs command to identify the maintenance-target component.**

```
XSCF> showlogs error
```

For details, see "3.3.5 Checking log information."

3. **Power off all the physical partitions.**
For details, see "5.2 Powering Off Physical Partition under Maintenance."
4. **Execute the replacefru command to release the maintenance-target crossbar backplane unit from the system.**

For details, see "5.1 Releasing FRU from System with replacefru Command."

5. **Remove all power cords from the power supply unit of the maintenance-target crossbar box.**

For details, see "5.4.2 Removing power cord."

Note - When receiving power from the dual power supply, be sure to disconnect the power cord after taking notes on the connection position in order to reconnect the cord correctly.

Removing Cable Kit

This section describes the procedure for removing the cable kit for the connection destination of each cable.

For connection destination of cables, see "[Configuration of Cable Kit](#)."

Enable removal of the cable kit before you remove it.

For details, see "[Enabling Removal of Cable Kit](#)."



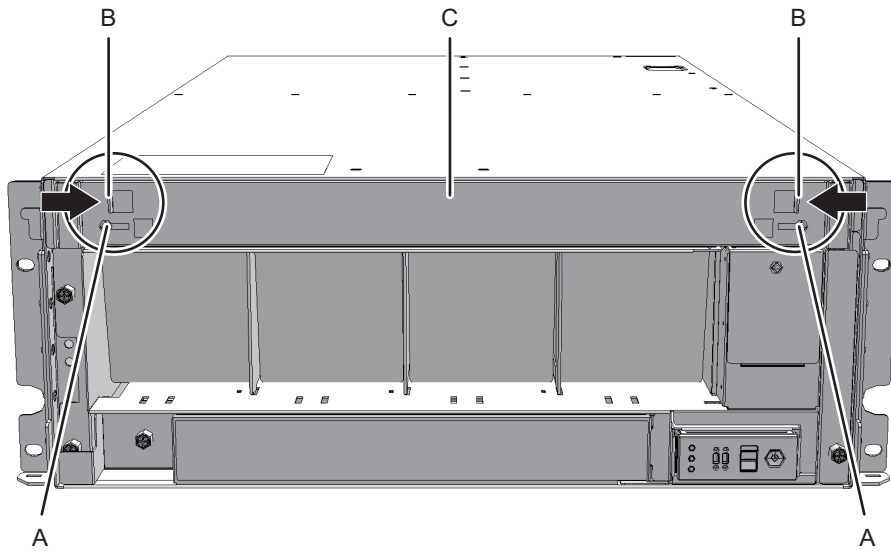
Caution - Be sure to wear an antistatic wrist strap before handling the components. If you perform the work without it, the electronic parts and the system may suffer serious damage. For details, see "1.5 Notes Regarding Static Electricity."

Removing cable for connecting crossbar backplane unit and terminal board

Remove the cable (SIG) or cable (PWR) connecting the crossbar backplane unit and terminal board.

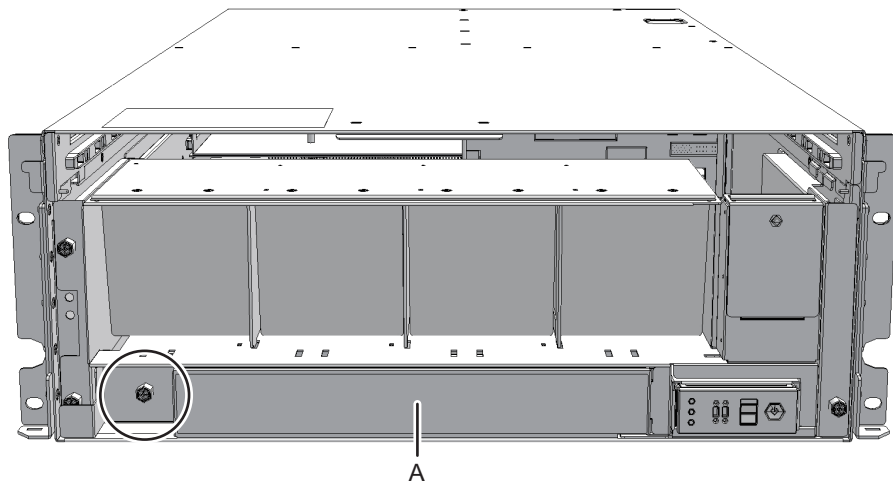
1. **Remove the front cover.**
For details, see "5.4.3 Removing front cover."
2. **Remove all the fan units.**
For details, see "19.4 Removing Fan Unit."
3. **Loosen two screws (A in the figure) of the upper cover and slide the right and left stoppers (B in the figure) inward. Then, remove the upper cover (C in the figure).**

Figure B-6 Removing upper cover



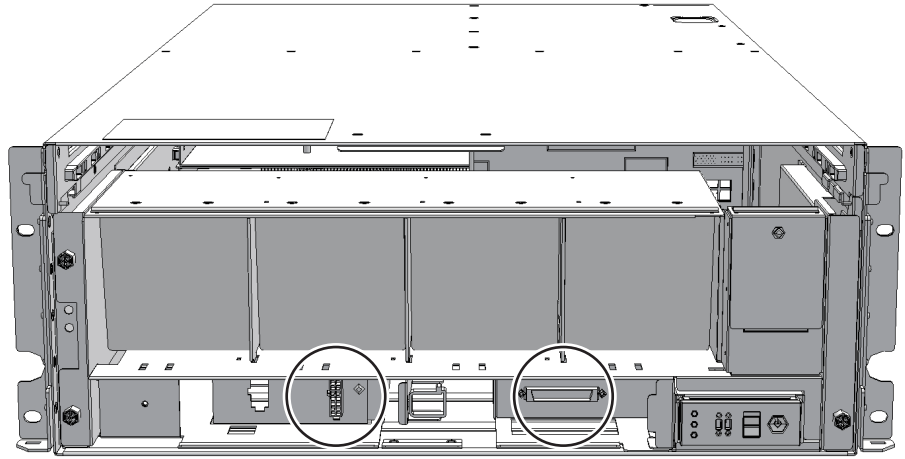
4. Loosen one screw (A in the figure) of the lower cover and slide the lower cover to the left to remove it.

Figure B-7 Removing lower cover



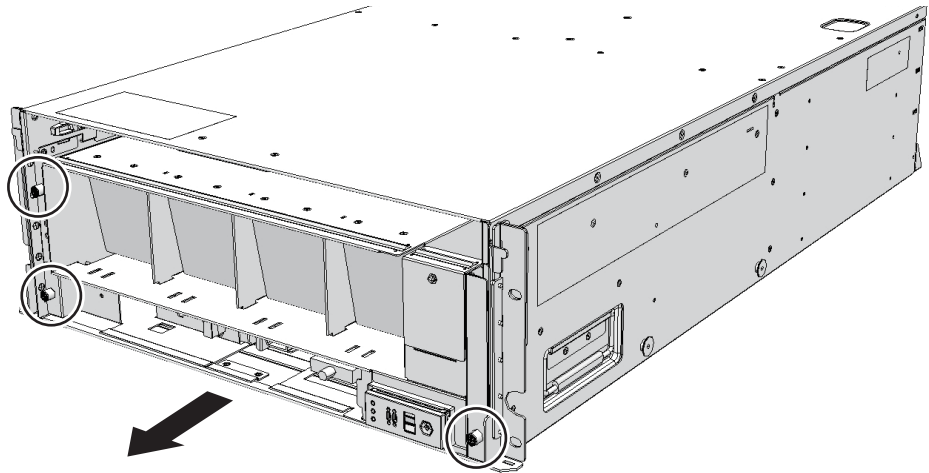
5. Remove the two cables connected to the fan shelf from the connectors. Arrange the removed cables in the center.

Figure B-8 Removing cables



6. **Loosen three screws of the fan shelf and partially pull out the fan shelf.**

Figure B-9 Removing fan shelf



7. **Support the fan shelf from the bottom with one hand and remove it carefully from the cabinet.**

Note - Remove the fan shelf with careful attention to the two cables arranged in the center.

Note - Place the removed fan shelf on a grounded antistatic ESD mat.

8. **Remove the cable connected to the crossbar backplane unit from the connector.**

Figure B-10 Removing cable (cable (SIG))

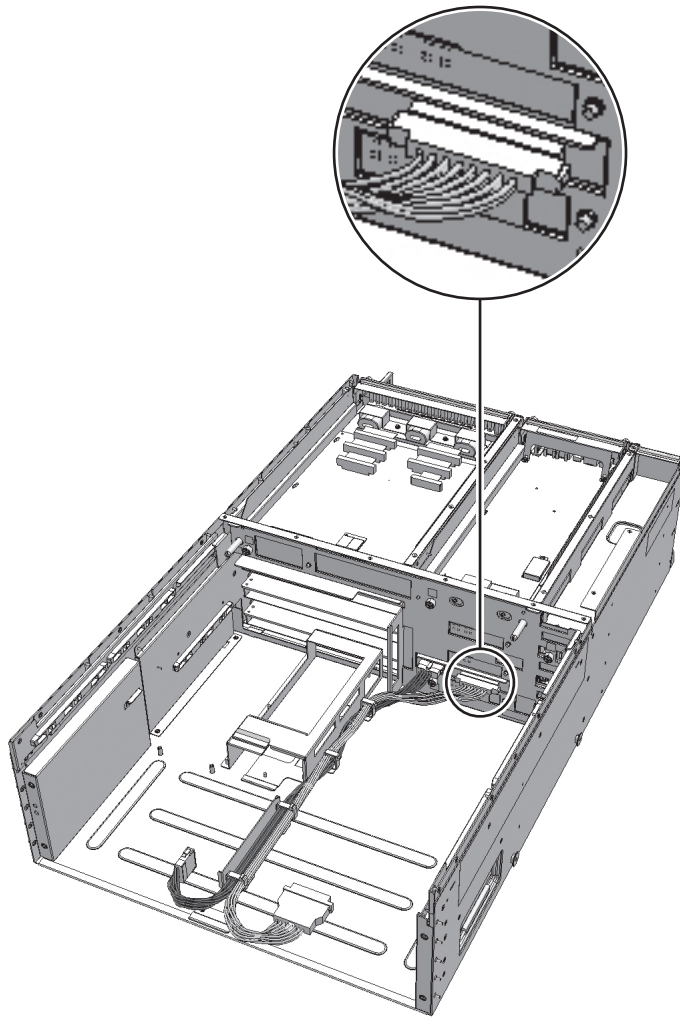
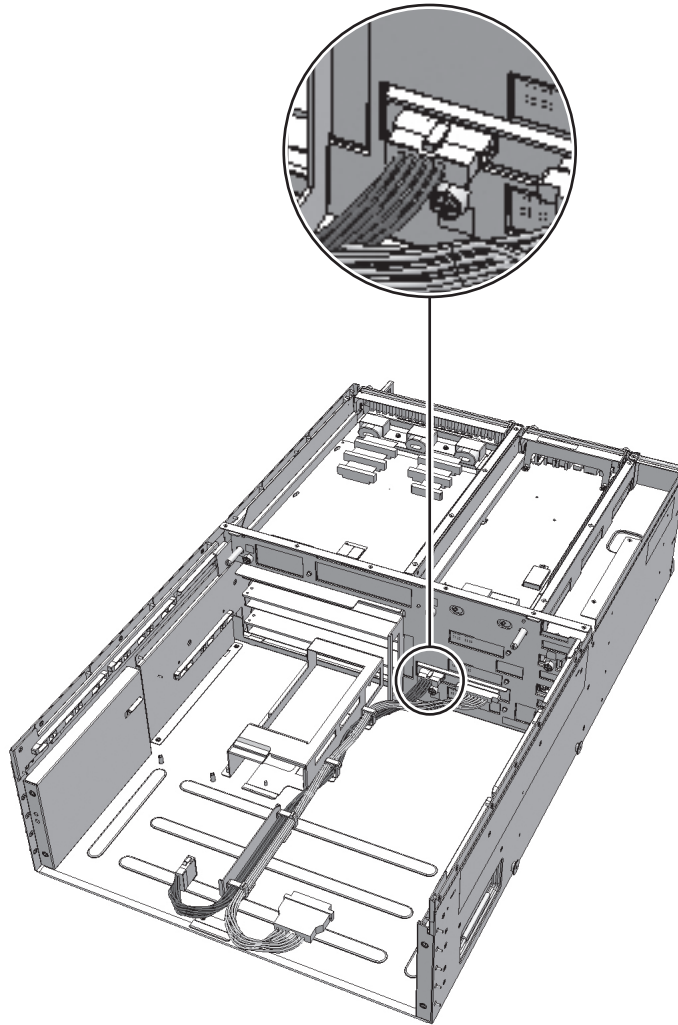
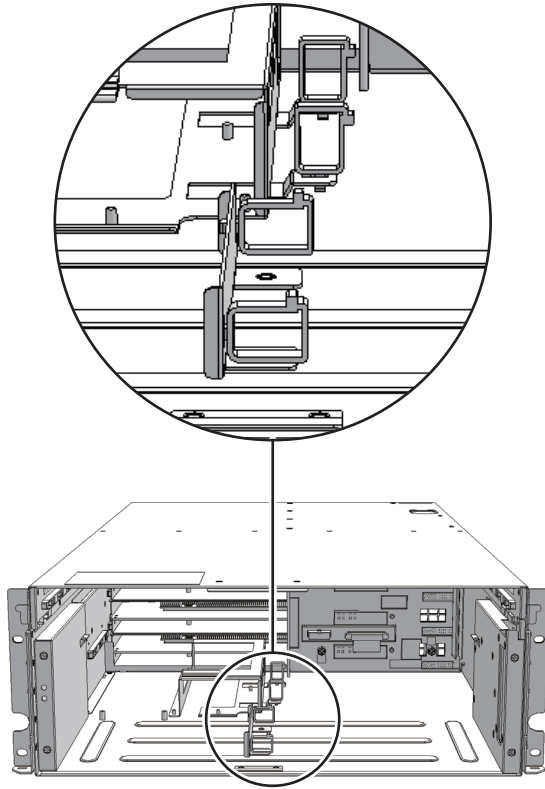


Figure B-11 Removing cable (cable (PWR))



9. **Remove the cable from the clamps.**

Figure B-12 Removing cables

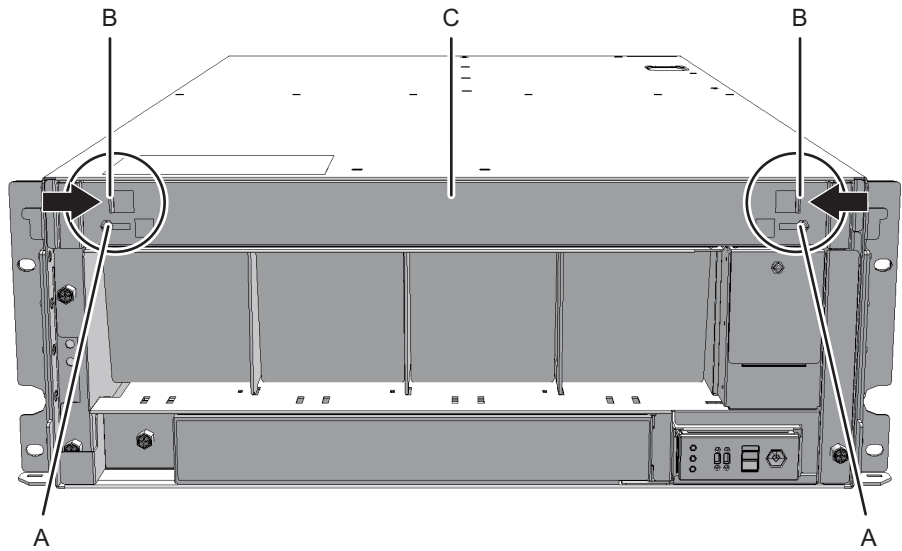


Removing cable for connecting terminal board and fan backplane

Remove the cable (SIG) or cable (PWR) connecting the terminal board and fan backplane.

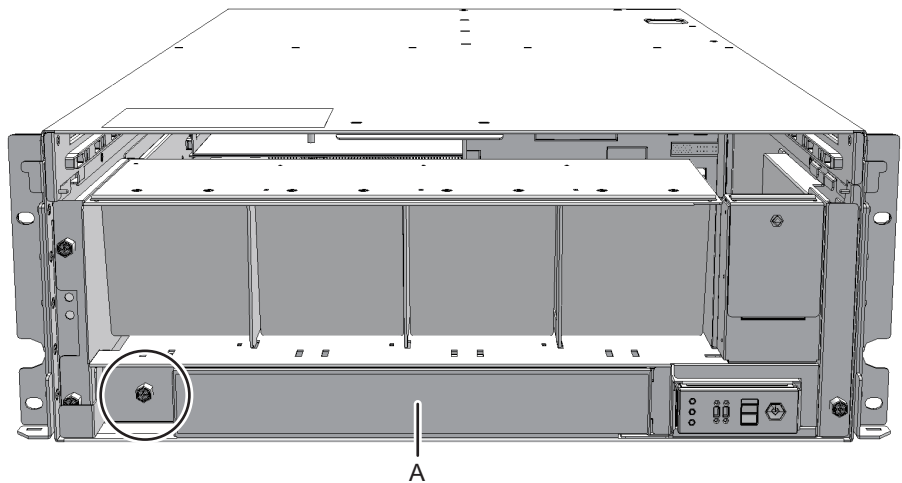
1. **Remove the front cover.**
For details, see "5.4.3 Removing front cover."
2. **Remove all the fan units.**
For details, see "19.4 Removing Fan Unit."
3. **Loosen two screws (A in the figure) of the upper cover and slide the right and left stoppers (B in the figure) inward. Then, remove the upper cover (C in the figure).**

Figure B-13 Removing upper cover



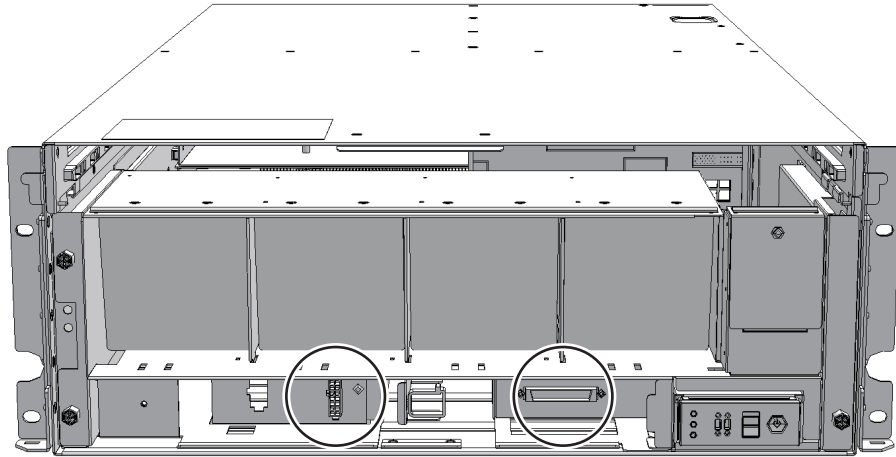
4. **Loosen one screw (A in the figure) of the lower cover and slide the lower cover to the left to remove it.**

Figure B-14 Removing lower cover



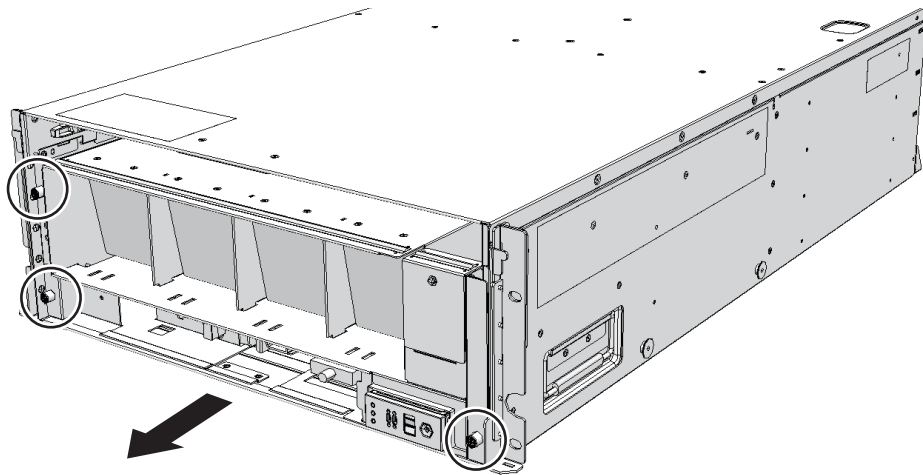
5. **Remove the two cables connected to the fan shelf from the connectors. Arrange the removed cables in the center.**

Figure B-15 Removing cables



6. Loosen three screws of the fan shelf and partially pull out the fan shelf.

Figure B-16 Removing fan shelf



7. Support the fan shelf from the bottom with one hand and remove it carefully from the cabinet.

Note - Remove the fan shelf with careful attention to the two cables arranged in the center.

Note - Place the removed fan shelf on a grounded antistatic ESD mat.

8. Remove the cable connected to the fan backplane from the connector.

Figure B-17 Removing cable (cable (PWR))

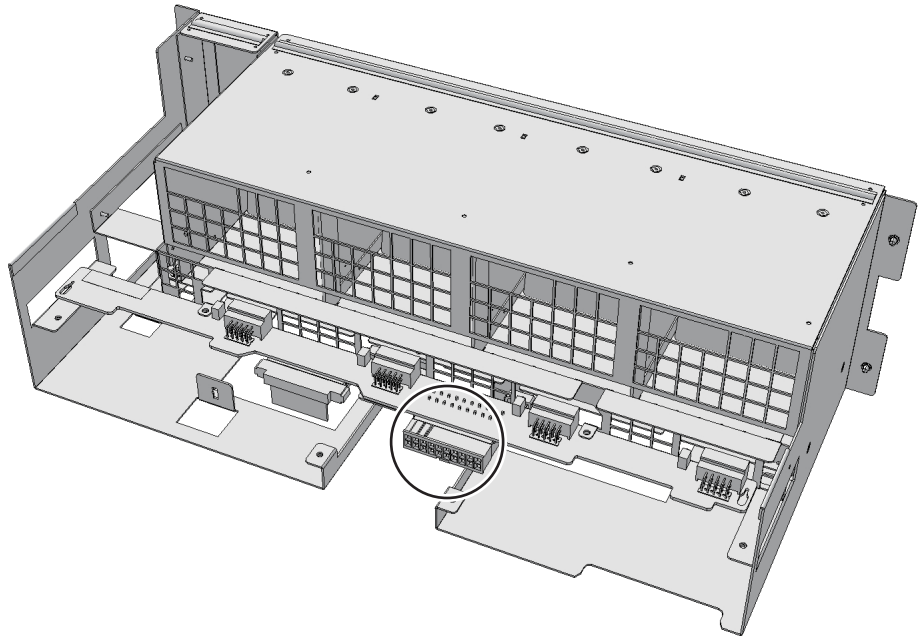
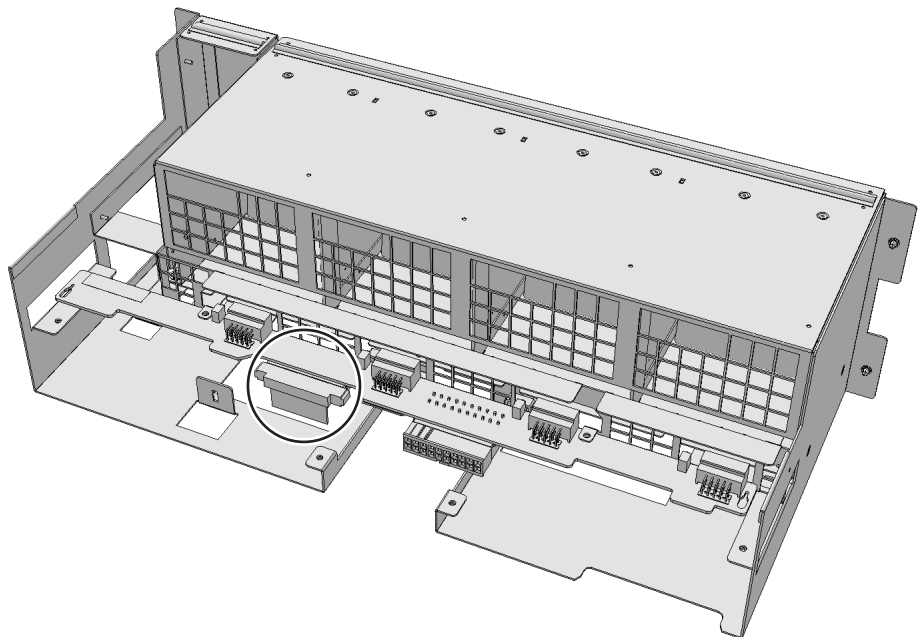


Figure B-18 Removing cable (cable (SIG))



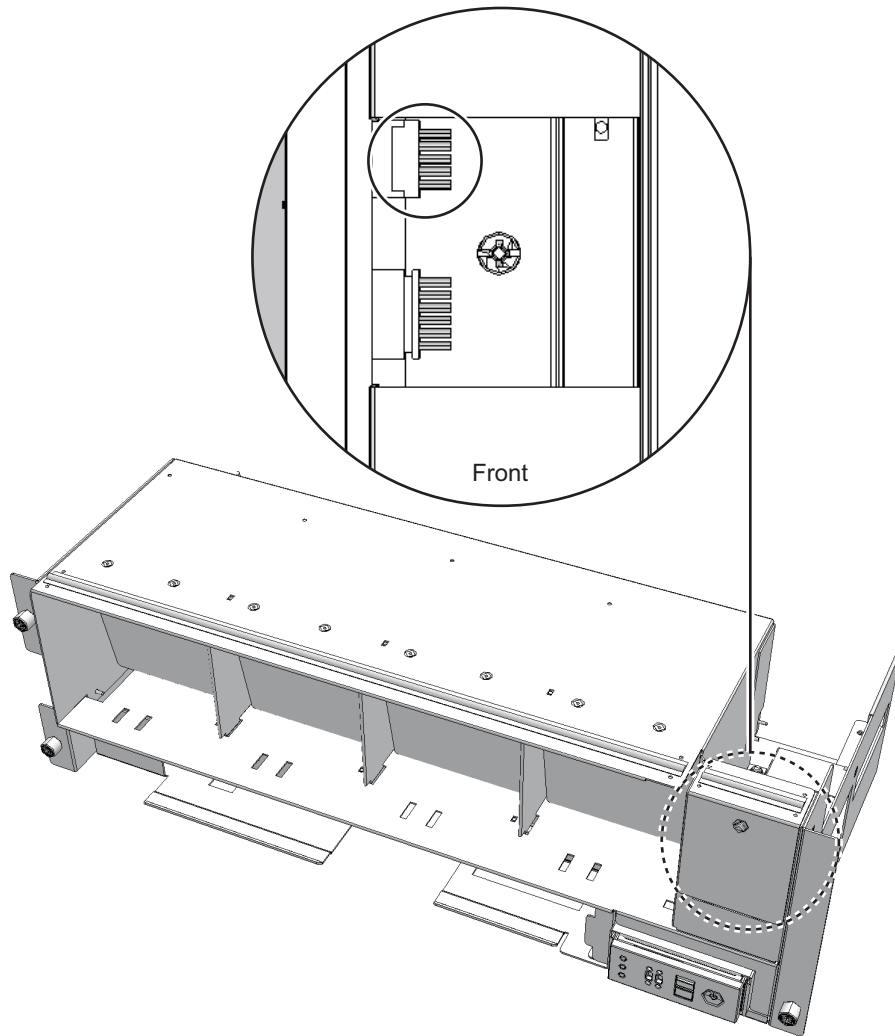
9. Remove the cable connecting the fan shelf and operation panel from the

connector on the operation panel side.

Perform this step only when you remove the cable (SIG).

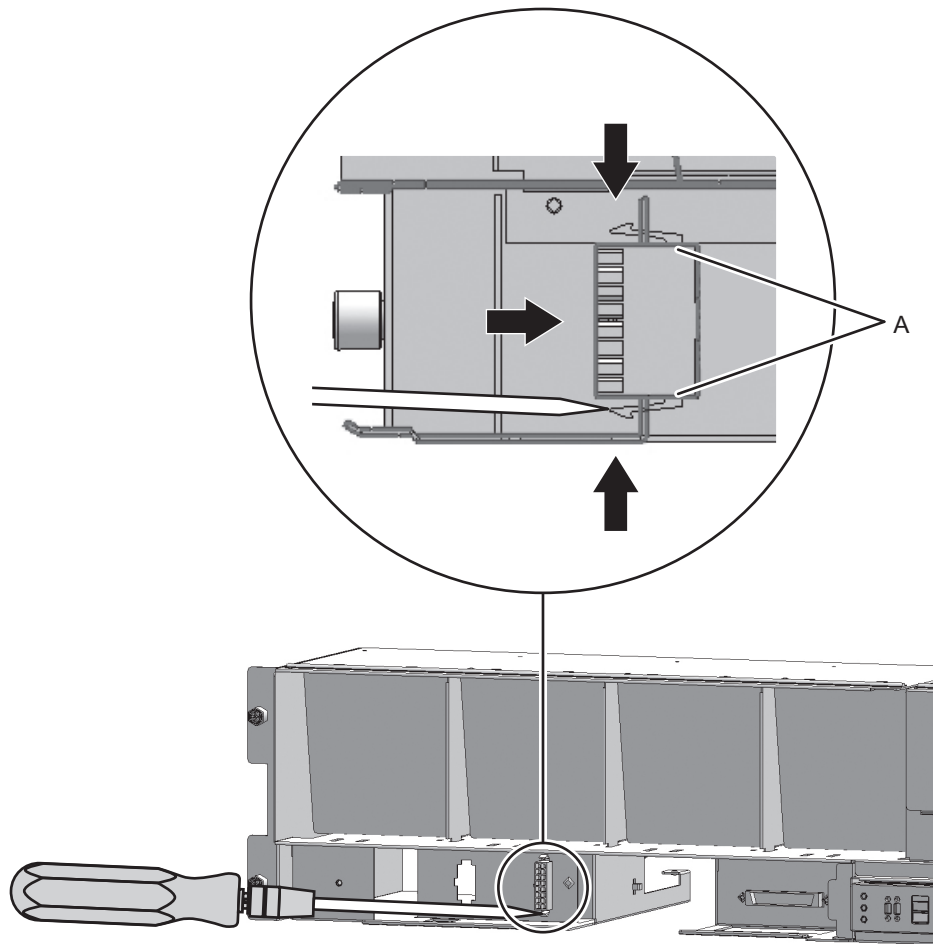
If you remove the cable (PWR), proceed on to Step 10.

Figure B-19 Operation panel cables



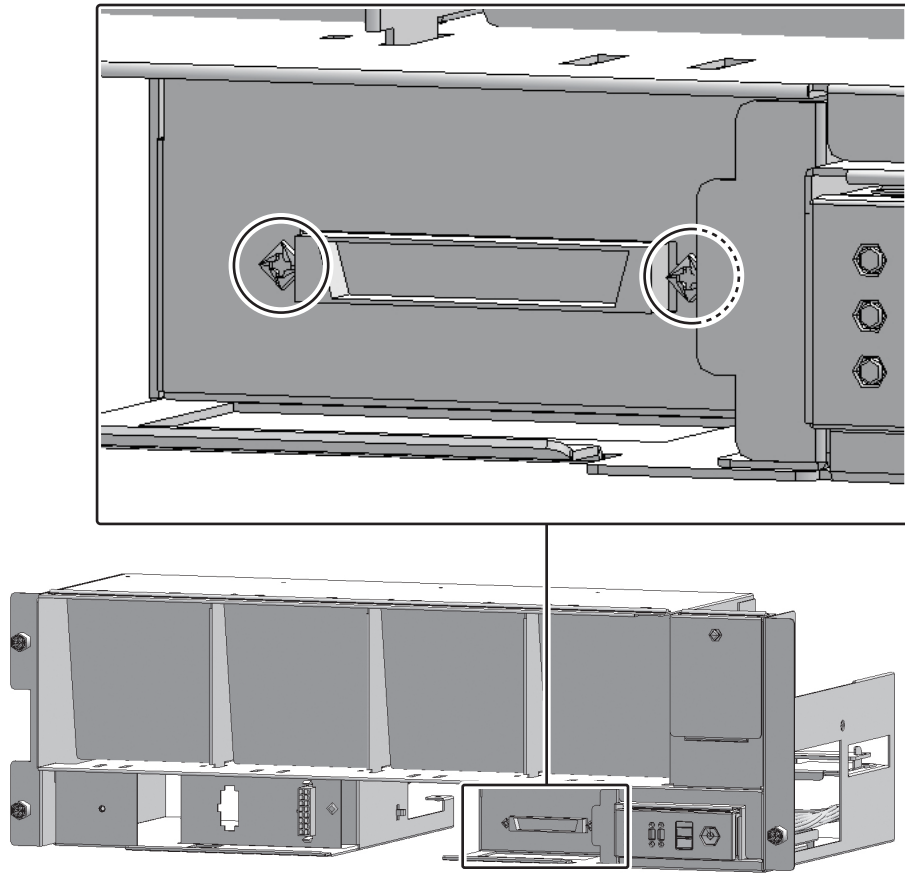
10. **Remove the cable from the terminal board.**
 - **For the cable (PWR), push the connector toward the far end, while pushing the lower latch (A in the figure) upward with a flathead screwdriver. Confirm that the lower latch (A in the figure) is pushed into the inside of the terminal board. Push the connector toward the far end, while pushing the upper latch downward with the flathead screwdriver.**

Figure B-20 Removing cable (cable (PWR))



- For the cable (SIG), remove the two screws of the cable connector with a Phillips screwdriver (bit No. 1), and then remove the cable from the terminal board.

Figure B-21 Removing cable (cable (SIG))



11. **Remove the cable from the clamps.**

Figure B-22 Removing cable (cable (PWR))

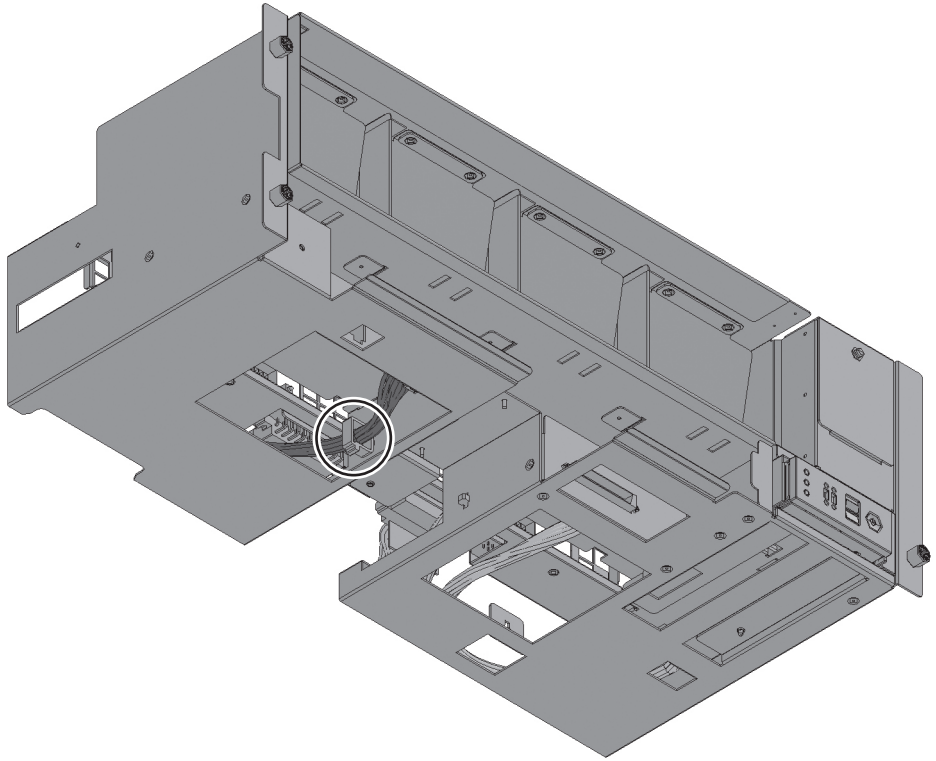
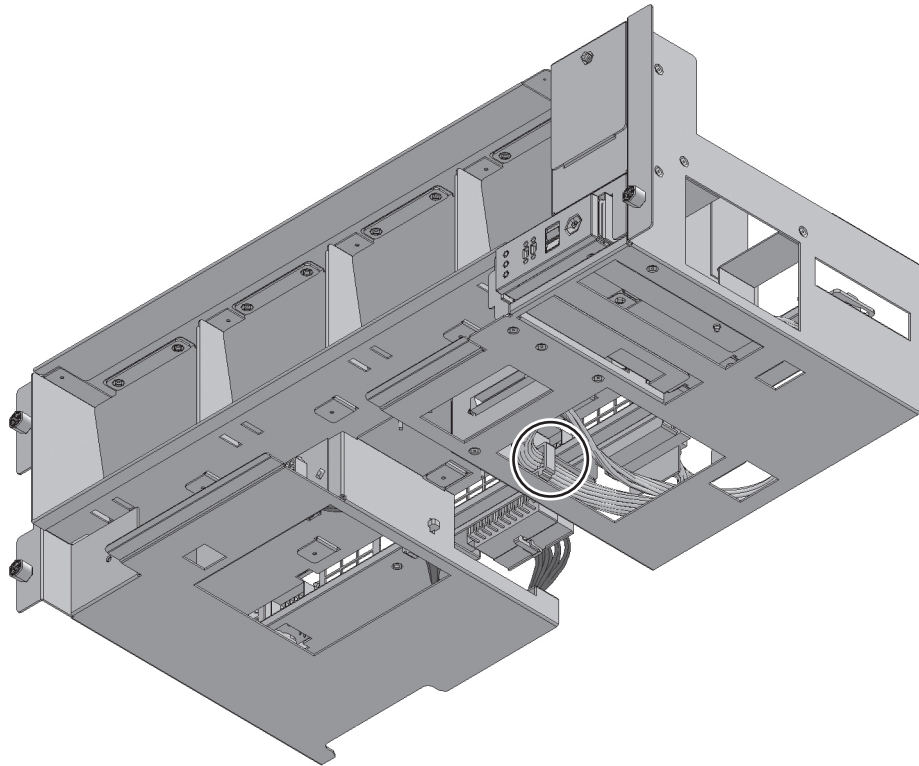


Figure B-23 Removing cable (cable (SIG))



Installing Cable Kit

This section describes the procedure for installing the cable kit for the connection destination of each cable.

For a connection destination of cable, see "[Configuration of Cable Kit](#)."

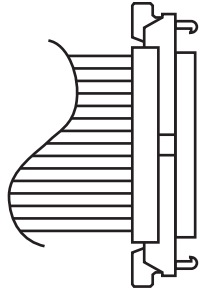
Install the cable that has the same shape as that of the removed cable.

Installing the crossbar backplane unit-terminal board cable

Install the cable (SIG) or cable (PWR) connecting the crossbar backplane unit and terminal board.

1. **Connect the cable to the connector of the crossbar backplane unit.**
Install the cable that has the same shape as that of the removed cable.

Figure B-24 Connector shape (cable (SIG))



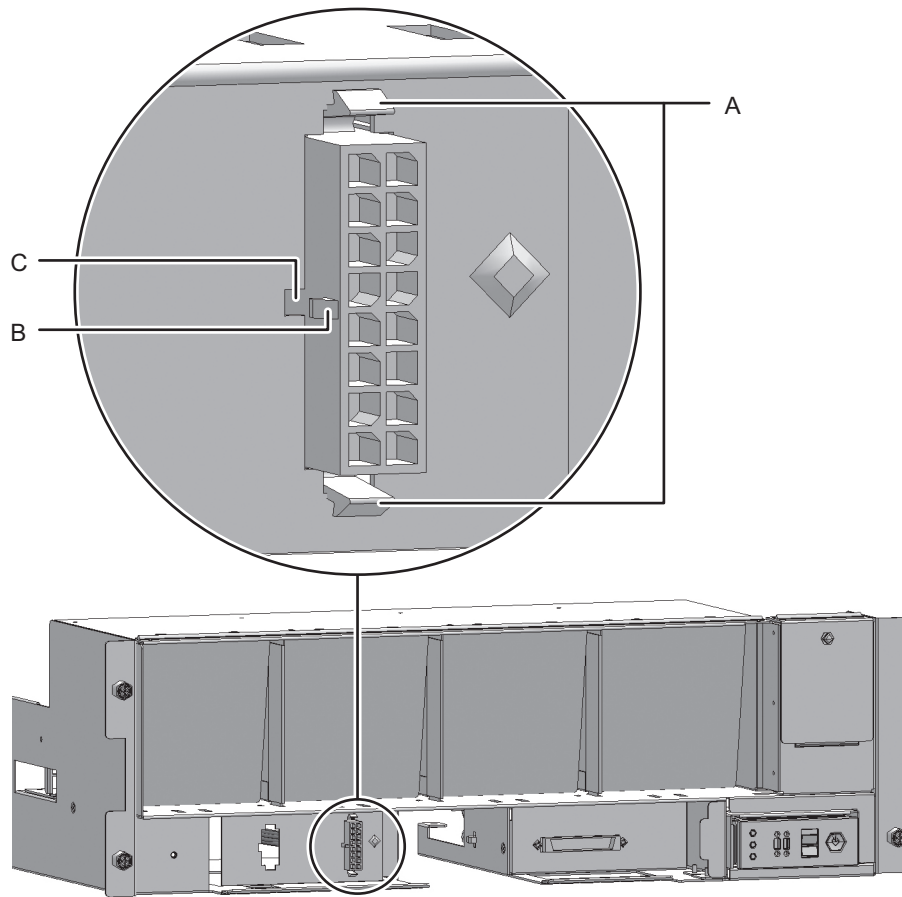
2. **Fix the cable with the clamps.**
3. **Support the fan shelf from the bottom with one hand and insert it carefully into the cabinet.**
Arranging the cables in the center makes it easier to install the fan shelf.
4. **Tighten three screws of the fan shelf.**
5. **Install two cables on the fan shelf.**
6. **Install the lower cover and tighten one screw to fix it.**
7. **Install the upper cover.**
8. **Slide the right and left stoppers of the upper cover outward and tighten two screws to fix it.**
9. **Install all the fan units.**
For details, see "19.5 Installing Fan Unit."
10. **Install the front cover.**
For details, see "6.4.3 Installing front cover."

Installing terminal board-fan backplane cable

Install the cable (SIG) or cable (PWR) connecting the terminal board and fan backplane.

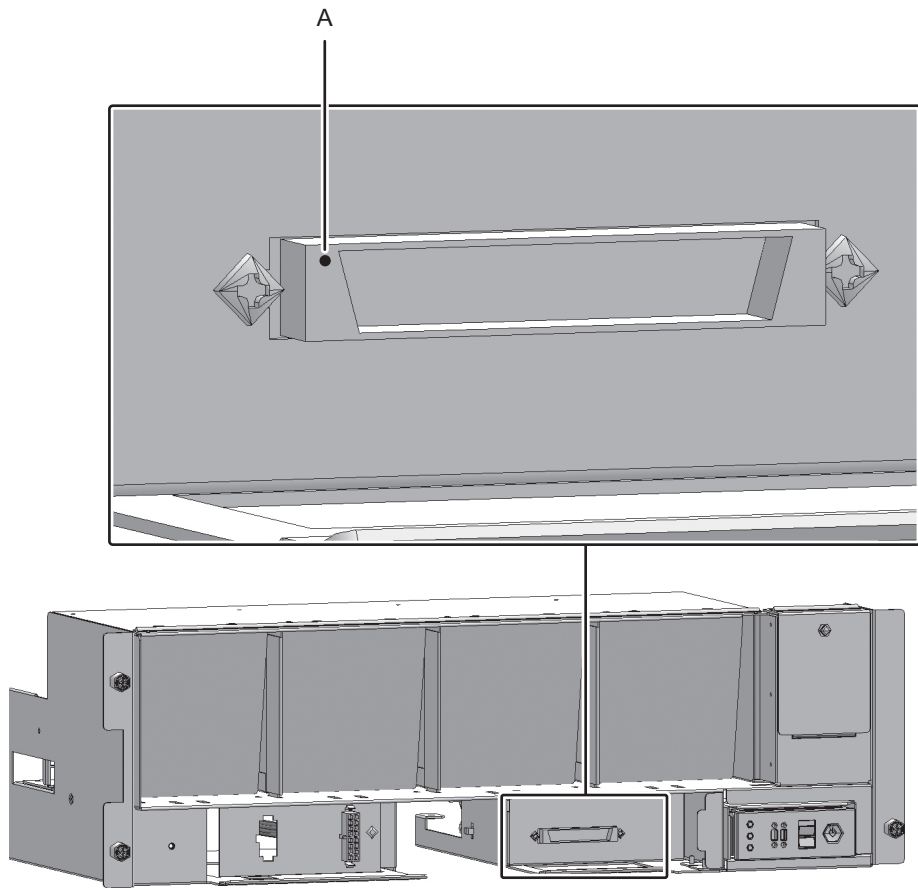
1. **Install the cable on the terminal board.**
 - **For the cable (PWR), install the connector that has latches (A in the figure) on its both ends to the terminal board.**
Install the tab (B in the figure) of the connector to fit it to the notched section (C in the figure) of the terminal board.

Figure B-25 Installing cable (cable (PWR))



- **For the cable (SIG), install the connector that has a threaded hole on itself to the terminal board.**
Use the screw that has been removed from the same location before. Tighten the screw with a Phillips screwdriver (bit No. 1). When installing the connector, orient the connector so that the dot mark (A in the figure) shown in Figure B-26 is to the left.

Figure B-26 Installing cable (cable (SIG))

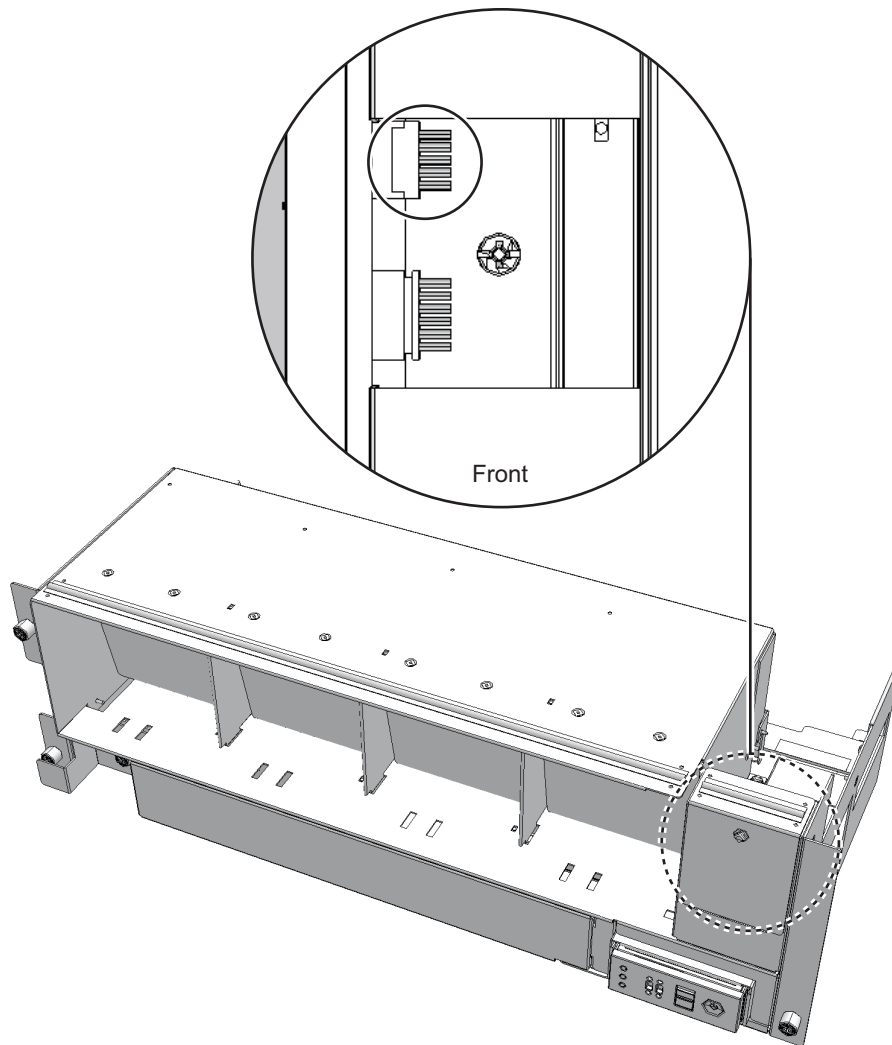


2. **Connect the cable to the connector of the fan backplane.**
3. **Connect the cable connecting the fan shelf and operation panel to the connector on the operation panel side.**

Perform this step only when you install the cable (SIG).

If you install the cable (PWR), proceed on to Step 4.

Figure B-27 Operation panel cables



4. Fix the cable with the clamps.

Figure B-28 Fixing cable (cable (PWR))

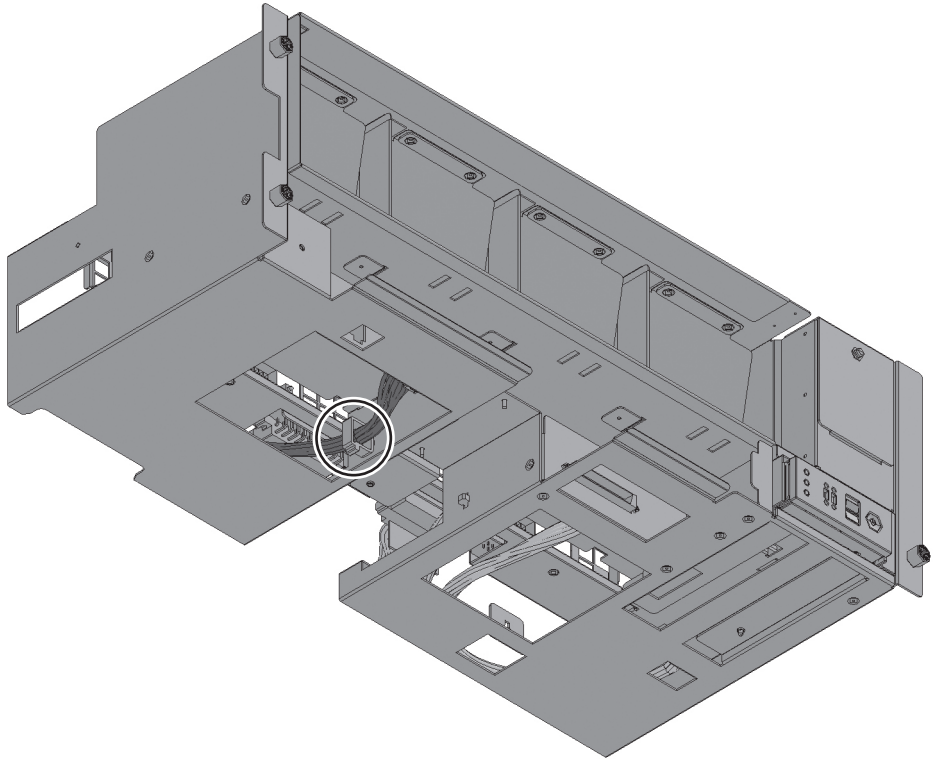
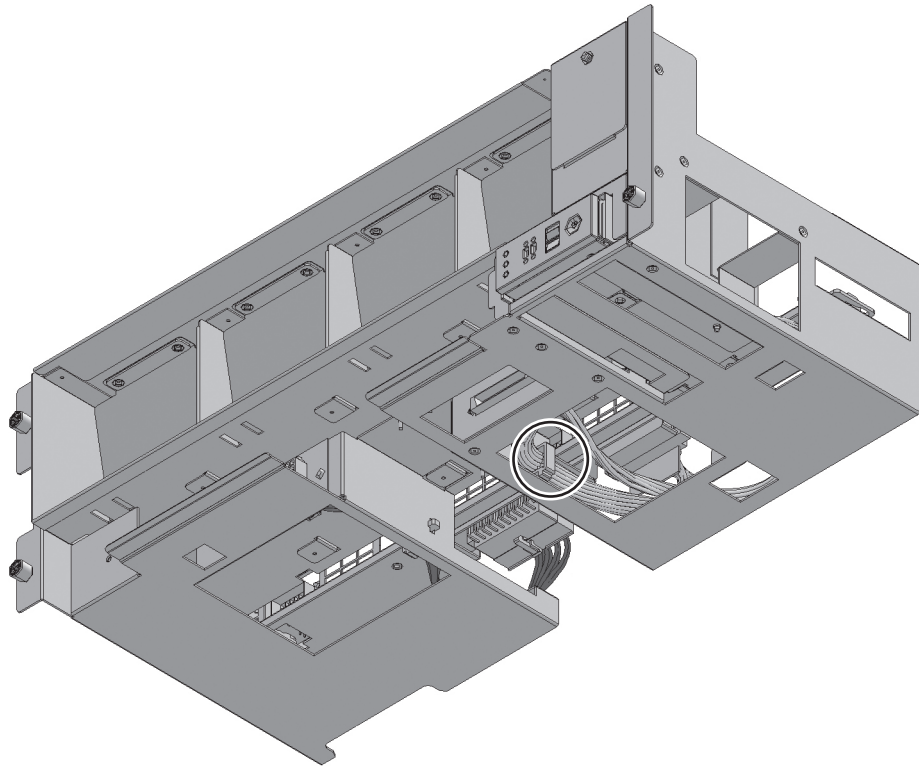


Figure B-29 Fixing cable (cable (SIG))



5. **Support the fan shelf from the bottom with one hand and insert it carefully into the cabinet.**
Arranging the cables in the center makes it easier to install the fan shelf.
6. **Tighten three screws of the fan shelf.**
7. **Install two cables on the fan shelf.**
8. **Install the lower cover and tighten one screw to fix it.**
9. **Install the upper cover.**
10. **Slide the right and left stoppers of the upper cover outward and tighten two screws to fix it.**
11. **Install all the fan units.**
For details, see "19.5 Installing Fan Unit."
12. **Install the front cover.**
For details, see "6.4.3 Installing front cover."

Restoring System

This section describes the procedure for restoring the system after installing the cable kit.

1. **Connect all power cords to the power supply unit of the maintenance-target crossbar box.**

For details, see "6.4.1 Installing power cord."

Note - In a dual power feed, be sure to connect the power cord to the original position correctly according to the notes written down before maintenance.

2. **Return to the operation of the XSCF firmware replacefru command to confirm that the crossbar backplane unit is incorporated into the system.**

For details, see "6.1 Incorporating FRU into System with replacefru Command."

3. **Diagnose the crossbar cables.**

- When the system board of the cabinet connected with the crossbar cables is not incorporated into the physical partition, or when the incorporated physical partition is powered off
bb_id: Input the BB-ID of the cabinet to start the diagnosis.
target_bb: Input the BB-ID of the cabinet with which the crossbar cables are connected. (You can specify more than one of this.)

```
XSCF> diagxbu -y -b bb_id -t target_bb
```

- When the system board of the cabinet connected with the crossbar cables is incorporated into the physical partition, and the incorporated physical partition is powered on
bb_id: Input the BB-ID of the cabinet to start the diagnosis.
ppar_id: Input the PPAR-ID of the cabinet with which the crossbar cables are connected. (You can specify only one of this.)

```
XSCF> diagxbu -y -b bb_id -p ppar_id
```

4. **Execute the showlogs command to ensure that no error has occurred.**

```
XSCF> showlogs error
```

For details, see "3.3.5 Checking log information."

5. **Power on all the physical partitions.**

For details, see "6.2 Powering On Physical Partition under Maintenance."

