Cisco C880 M5 Server Service Guide

November 2017

Contents

SET0100000

1 Preparations

This chapter provides an overview, including the addition procedure and addition preparations.

ANNT)

If the work procedure for upgrading starts with AC power off status, set power restoration policy setting "Restore to powered state prior to power loss" or "Always off" before AC power off.
Make sure the setting with the system administrator and modify it if necessary.
Set the default setting after completing the work procedure for upgrading.
See Appendix E.9 "Power Restore Policy setting" for more information.

SET0101000

1.1 Outline

This chapter provides an overview, including the installation procedure and installation preparations.

SET0101010

1.1.1 Scope

This section describes the scope of the addition instructions, typical time required for assembling options, work assignment, and notes.

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1.1.2 Typical time required for assembling options

The following table lists the typical time required for assembling options.

Table 1.1.2 Typical time required for assembling options

Option	Option work time (minute)
System board	46 / unit
CPU	20 / set
Memory	31 / set
PCI card	36 / card
I/O unit B (IOUB)	36 / unit
Disk unit for SAS (DU_SAS)	46 / unit
Disk unit for PCIe SFF (DU_PCIE)	46 / unit
Internal hard disk drive (HDD) Internal solid state drive (SSD)	31 / drive
Internal PCIe SSD SFF	31 / drive
Power Supply Unit (PSU)	27 / unit
M.2 Flash Device	36 / unit
eLCM Activation License	36 / unit
TPM	36 / unit

1.1.3 Work assignment

"Table 1.1.3-1" lists the relevant addition work items and how they are to be assigned.

Table 1.1.3-1 Assignment of addition work

Work item	Person or department in charge
Preparing for addition work	Service Engineer
Checking the delivered items	Service Engineer
Installing options	Service Engineer
Setup	Service Engineer
Verifying operation	Service Engineer
Preparation of handing over to the System Administrator	Service Engineer
Handover to system administrator	System Administrator and Service Engineer

1.1.4 Notes

ANNT) Notes on unit delivery

If, after bringing the unit to the installation site, condensation due to differences between the internal and external temperatures can be anticipated on the magnetic surface of the disk unit, wait for the unit to be sufficiently acclimatized to the indoor environment before turning it on.

ANNT) Notes on handling the unit

The components mounted in the unit are sensitive to mechanical forces and static electricity. When handling these components, take the following precautions.
- Before handling the unit, ground it and then wear a wrist strap to ground your body.
- To extract a component from the unit, extract it from the unit placed on a static dissipative mat laid out on a flat workbench before starting to work on it.
- After removing a unit from the system board, store it in an antistatic bag.

ANNT) Notes on using an antistatic bag

- Make sure that the antistatic bag is not ripped or torn.
- Confirm that no part of the unit sticks out from the antistatic bag.
- When the opening of the antistatic bag is folded, the fold must be at least 30 mm.

ANNT) Antistatic measures for connecting twisted pair cables for LAN

When connecting a twisted pair cable for LAN to a device, ensure the following measures are fully taken to avoid the risk of equipment destruction caused by electrostatic discharge:
(1) Before connecting twisted pair cables, first connect the modular connector to the specified jig, and then bring the end of the jig cable into contact with the FG for at least one minute to remove any static electricity from the cables. (Tool name: LAN cable ESD tool.)
(2) After the electro-static discharging is finished, promptly connect the twisted pair cable to the equipment.
(3) Connect the cables to the building ground, power system FG, and water pipe whenever possible, and avoid connecting them to the FG of the electronic equipment.
(4) When using the power system FG, be careful to avoid any short-circuiting with the AC power supply.

<Detail of static-electricity removal from twisted pair cables>
The time required to remove static electricity is over one minute.

Outline drawing of LAN cable ESD tool
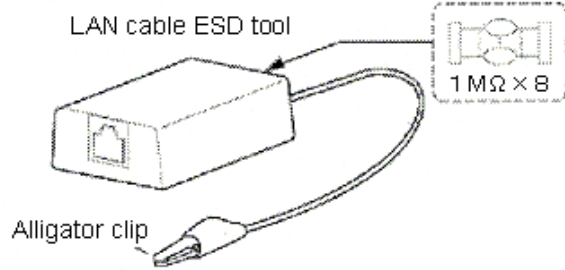
RMRK) Body grounding

When connecting a twisted pair cable, wear a wrist strap to ground your body, just as when handling printed circuit assemblies.

ANNT) Connecting a twisted pair cable to a network environment

Do not connect a twisted pair cable to network devices such as a hub in the customer's network environment until the completion of its setup. (This precaution helps avoid a possible network failure triggered by network congestion.)

ANNT) Connecting cables

To prevent incorrect cable connections, affix a "destination label" to the cable and cabinet.
See Appendix H "Prevention of Improper Cable Connections"

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1.2 Preparing Tools for Installation

This section covers the tools, measuring instruments, test program, references, and other items to be prepared in advance.

SET0102010

1.2.1 Tools and measuring instruments

"Table 1.2.1" lists the tools and measuring instruments to be prepared in advance.

Table 1.2.1

Tool or measuring instrument name	Remarks
General tool set for maintenance worker	
FST (PC for maintenance worker)	
Wrist strap	
LAN cable ESD tool	
LAN straight cable in category 5 or higher	
Digital voltmeter	
Cable labels	To prevent incorrect cable connections
Cable labels with ties	To prevent incorrect cable connections

1.2.2 Configuration and setting information

"Table 1.2.2" lists the information to be obtained in advance from the sales representative or SE in charge.
   Verify the information got in advance.

Table 1.2.2

Configuration and setting information	Remarks
Installation Instructions Sheet	This sheet provides such customer-specified information as IP addresses and passwords provided through sales/SE departments.

1.3 Checking Installation Requirements

This section describes requirements for installing the Base Unit.
If you find any problems, contact the related department and take appropriate action.

1.3.1 Environmental requirements

Confirm that the environmental requirements for installing the system fall within the range listed in "Table 1.3.1-1".
To make sure the operating environments are satisfied, check them when the system is operating.

Table 1.3.1-1 System environmental requirements

Operating		Non-operating	
Temperature [^{o}C]	Humidity [%RH]	Temperature [^{o}C]	Humidity [%RH]
5 to 35 (without ATD) 5 to 40 (with ATD)	20 to 80	0 to 50	8 to 80

ANNT) The temperature requirements depend on the altitude of the installation location.
   - When the system is installed at an altitude of 0 to 1000 m (0 to 3,281 ft.) above sea
     level: 5 to 40 ^{o}C (41 to 104.0 ^{o}F)
   - When the system is installed at an altitude of 1,000 to 1,500 m (3,281 to 4,921 ft.) above sea
     level: 5 to 38 ^{o}C (41 to 100 ^{o}F)
   - When the system is installed at an altitude of 1, 500 to 2,000 m (4, 921 to 6,562 ft.) above sea
     level: 5 to 36 ^{o}C (41 to 96.8 ^{o}F)
   - When the system is installed at an altitude of 2,000 to 3, 000 m (6,562 to 9, 843 ft.) above sea
     level: 5 to 33 ^{o}C (41 to 91.4 ^{o}F)

The service engineer department should make the following checks related to environmental
 requirements.
If there is a problem with the installation environment, ask the customer to implement the required
improvements.

   - Measure items related to the installation environment (humidity and leakage current).
   - Check the installation conditions (location, computer room, power supply facility,
     and air conditioning).
   - Confirm that the cold air flow from air conditioning and the hot equipment exhaust do not collide,

resulting in a degraded cooling effect.
- Check the operation conditions (operating time, system and facility ON/OFF control methods, extent of disaster handling facilities, etc.)

"Table 1.3.1-2" lists the specific check items and examples of failures that occurred in the past.

Table 1.3.1-2 Check items and examples of past problems

Environmental condition	Check item	Example of failure
Dust	There should be no electric conductive matter such as concrete particles or iron dust under the device floor.	There was a large amount of iron dust under the device floor, some of which penetrated the unit and triggered a failure. Numeral parts had to be replaced.
	There should be no foreign matter that may clog the filter.	A plastic bag on the floor was drawn in and ended up clogging the filter. Parts were damaged due to the resulting rise in temperature.
Temperature and humidity	The temperature, relative humidity, and maximum wet-bulb temperature gradient should comply with the specifications.	The power could not be turned on because of high humidity levels in a new building.
	The room temperature should be evenly maintained throughout the room.	A temperature alarm was triggered because heat was not dissipated, because of the poor layout of the air conditioning for the units.
	A sufficient amount of cool air should be provided through the floor outlets.	-
	There should be sufficient clearance under the device floor.	The temperature rose because cables under the device floor were blocking the air conditioning inlets.
Air conditioner	The air velocity should be even.	The air velocity was unusually high because of installation next to an air conditioner, which generated an air wall inside the unit. This caused the temperature to rise, which in turn triggered an alarm.
Humidifier	Only pure water should be used for ultrasonic humidifiers.	There was a buildup of a white residue because of the use of tap water, which resulted in a failure caused by leakage.

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1.3.2 Input power

Confirm the allowable range of input power supplied to the Base Unit. (See "Table 1.3.2".)

Table 1.3.2 Input power requirements

Input power voltage	Frequency
200 to 240VAC ±10% single phase	50/60Hz +2%/-4%

1.3.3 Input power system

- For the power shutoff feature of the circuit breakers, see Appendix B "Customer's Distribution Panel Breaker Requirements".
  Also confirm the connection configuration of the customer distribution panels and check the power outlet shapes and power shutoff feature of the circuit breakers.

  - For the power outlet shapes, see Appendix C "Plug Types".
  - For connection configurations for customer distribution panels, see "Table 1.3.3".

Table 1.3.3

Amount of PSU	Refer to "Input Power Systems"
2	See Appendix D.1 "2 PSUs"
3	See Appendix D.2 "3 PSUs"
4	See Appendix D.3 "4 PSUs"

1.3.4 Installation area

Confirm installation area when 19-inch rack mounted.

Figure 1.3.4

| A | 700mm | · Model 2724/2737/2742 |
| | 600mm | · Model 2616/2624/2642 |
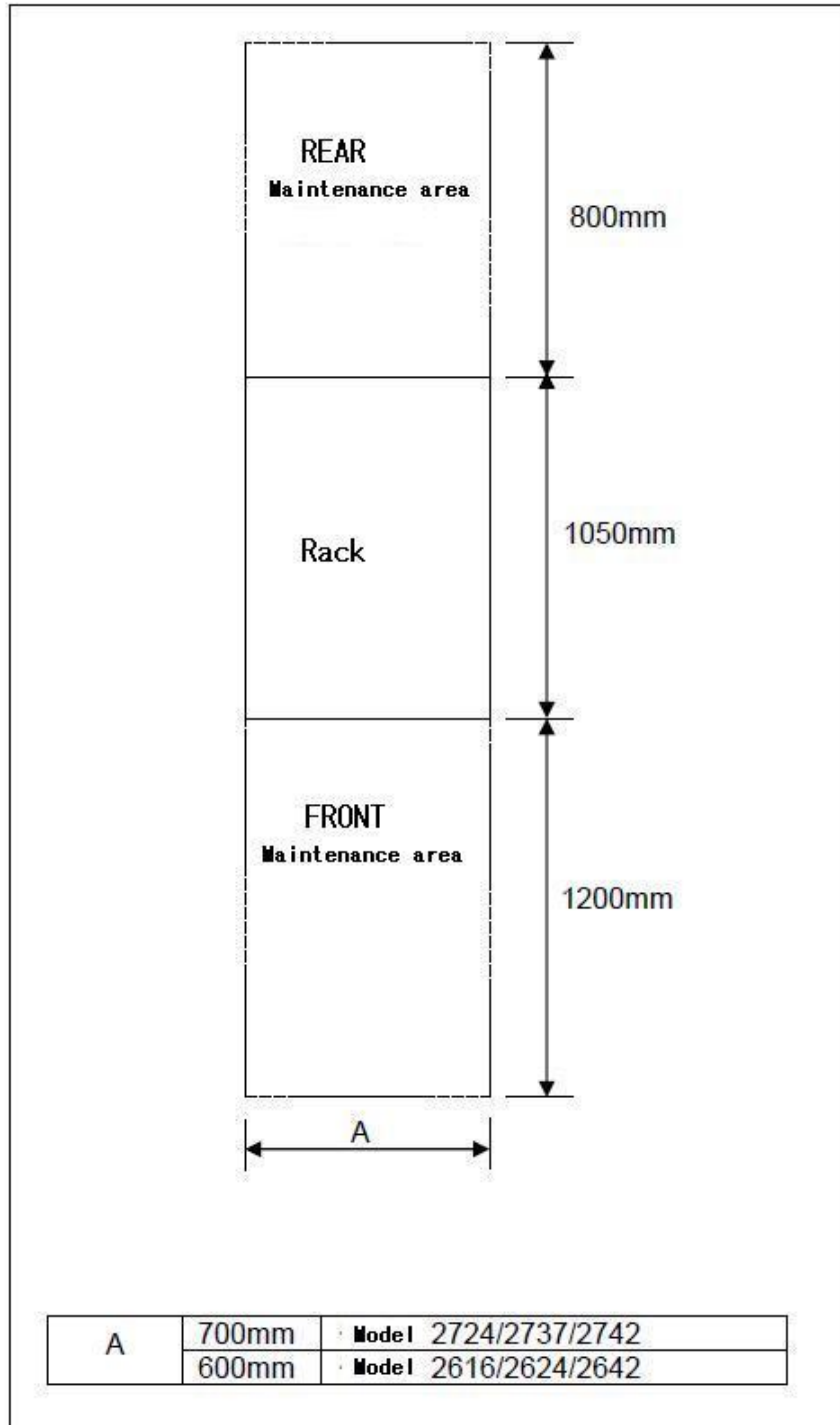
1.4 Setting the FST

This chapter describes setting the FST used for installation.

(1) Web browser

Figure 1.4-1

Confirmation and set item	IE11
Disable pop-up block.	○
Enable cookie.	○
Disable XSS filter.	○
Enable JAVAscript.	○
Disable SmartScreen filter.	○
Enable file download.	○
Disable "Display intranet sites in Compatibility View" of Compatibility View Settings	○

○ : It applies.

Figure 1.4-2 Compatibility View Settings
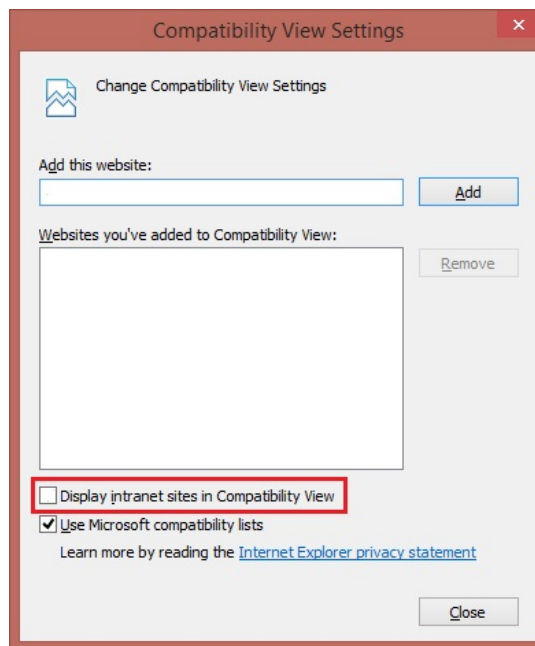
RMRK) If Internet Explorer v11 cannot be used, the following web browsers can be used.
When the following browsers are used, the setting of a browser like Internet Explorer v11 is not needed.
- Microsoft Edge Browser
- Google Chrome v50 and higher version
- Firefox v46 and higher version

1.5 Request to system administrator

Request the following items to the system administrator.

(1) Get iRMC connection information.
   The server has no maintenance dedicated LAN port.
   It is necessary to connect FST with the network switch port according to the network
   environment. See Appendix E.1 "Operation terminal connection" for details.
(2) Confirm unit location and quantity with installing to the system administrator.
(3) When the BitLocker function enable, request to suspend the BitLocker function.
(4) When the BIOS password enable, request to disable the BIOS password.
(5) When expansion of unit cannot work possible in the state of system power on,
    request system power off.
(6) When the [Email Alerting] function enable, request to the disable it.
(7) Obtain the permission of the use of the Video Redirection (HTML5) to the system administrator.

SET0200000

2 Installing System Board

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This chapter describes the procedure for installing System Board.

SET0201000

2.1 Conditions for installing components

- Confirm completion of the work described in Chapter 3 "Installing CPUs".
- Confirm completion of the work described in Chapter 4 "Installing Memory".

SET0201010

2.1.1 Firmware version

- No conditions.

SET0201020

2.1.2 Maximum installation amount

- 4 system boards.

SET0201030

2.1.3 Conditions concerning combined use of System Board

- The conditions for installing components described in Chapter 3 "Installing CPUs" must be satisfied.
- The conditions for installing components described in Chapter 4 "Installing Memory" must be satisfied.

SET0201040

2.1.4 Base Unit state

- AC power to the Base Unit is off.

2.2 Work Items, Work Assignment, and Work Time

"Table 2.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 2.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	30
Verifying operation	Service engineer	5
Preparation of handing over to the system administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

2.3 Procedure for installing a system board

2.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "2.3.2 Installing option".

2.3.2 Installing option

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.
    - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the system board dummy.
(3) Install the system board.
(4) Turn on AC power of the Base Unit.
    → Wait about a minute until green indicator of the "System Power" is turned off.
(5) Make sure that the Alarm indicator of the system board is not lit. (See "Figure 2.3.2".)

Figure 2.3.2
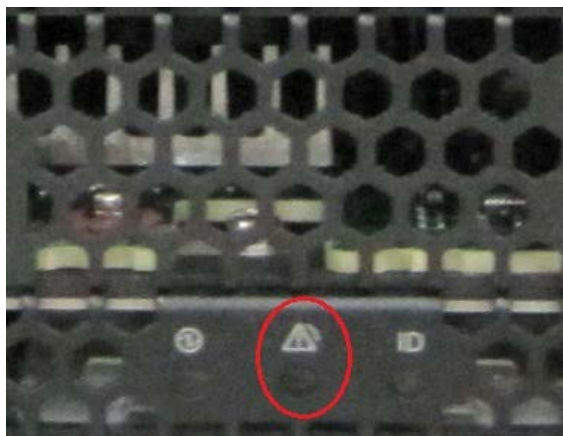
(6) Proceed to "2.4 Verifying operation".

SET0204000

2.4 Verifying operation

Confirm the installed system board according to the following procedures.

(1) Connect the operation terminal.
    See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
    See Appendix E.2.1 "Login".
(3) Start Video Redirection.
    See Appendix E.3.1"Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
    See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
    See Appendix E.5.1 "Power On".
  → Wait for a few minutes until "Figure 2.4-1" is displayed. (Max. 10 minutes)

Figure 2.4-1
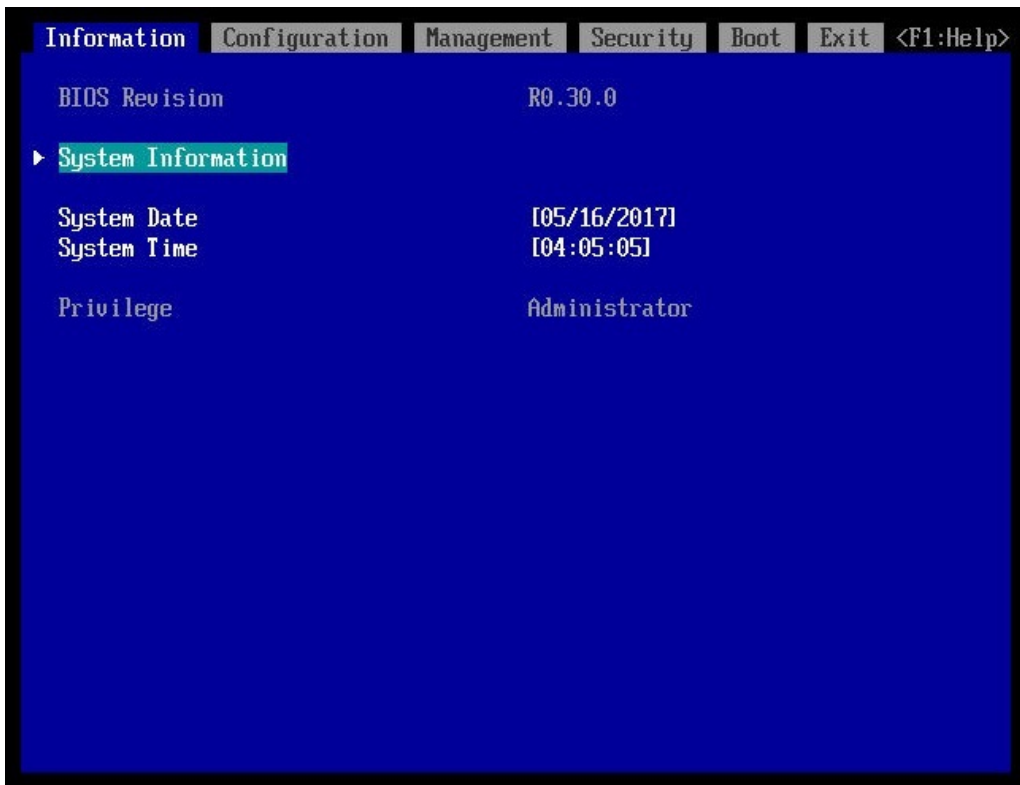

```
 Information  Configuration  Management  Security  Boot  Exit  <F1:Help>

    BIOS Revision                    R0.30.0

  ▶ System Information

    System Date                      [05/16/2017]
    System Time                      [04:05:05]

    Privilege                        Administrator
```

(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
    See "Table 2.4-1", for CPU.   See "Table 2.4-2", for DIMM type.
    A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 2.4-2 Example

```
--------------------------------------------------------------------------------
SB#2 (Install) : A3C40202223        : QM17108065        :
--------------------------------------------------------------------------------
SB#2-CPU#0 (Install) : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
SB#2-CPU#1 (Install) : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
--------------------------------------------------------------------------------
SB#2-DIMM#0A0 (Install) : DPRD-0016014
SB#2-DIMM#0A1 (Install) : DPRD-0016014
SB#2-DIMM#0B0 (Install) : DPRD-0016014
SB#2-DIMM#0B1 (Install) : DPRD-0016014
SB#2-DIMM#0C0 (Install) : DPRD-0016014
SB#2-DIMM#0C1 (Install) : DPRD-0016014
SB#2-DIMM#0D0 (Install) : DPRD-0016014
SB#2-DIMM#0D1 (Install) : DPRD-0016014
SB#2-DIMM#0E0 (Install) : DPRD-0016014
SB#2-DIMM#0E1 (Install) : DPRD-0016014
SB#2-DIMM#0F0 (Install) : DPRD-0016014
SB#2-DIMM#0F1 (Install) : DPRD-0016014
SB#2-DIMM#1A0 (Install) : DPRD-0016014
SB#2-DIMM#1A1 (Install) : DPRD-0016014
SB#2-DIMM#1B0 (Install) : DPRD-0016014
SB#2-DIMM#1B1 (Install) : DPRD-0016014
SB#2-DIMM#1C0 (Install) : DPRD-0016014
SB#2-DIMM#1C1 (Install) : DPRD-0016014
SB#2-DIMM#1D0 (Install) : DPRD-0016014
SB#2-DIMM#1D1 (Install) : DPRD-0016014
SB#2-DIMM#1E0 (Install) : DPRD-0016014
SB#2-DIMM#1E1 (Install) : DPRD-0016014
SB#2-DIMM#1F0 (Install) : DPRD-0016014
SB#2-DIMM#1F1 (Install) : DPRD-0016014
--------------------------------------------------------------------------------
```

Table 2.4-1

Display of installed CPU	Product name
Intel(R) Xeon(R) Platinum 8180M CPU @ 2.50GHz	Intel Xeon Platinum 8180M Processor
Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz	Intel Xeon Platinum 8180 Processor
Intel(R) Xeon(R) Platinum 8176M CPU @ 2.10GHz	Intel Xeon Platinum 8176M Processor
Intel(R) Xeon(R) Platinum 8176 CPU @ 2.10GHz	Intel Xeon Platinum 8176 Processor
Intel(R) Xeon(R) Platinum 8170M CPU @ 2.10GHz	Intel Xeon Platinum 8170M Processor
Intel(R) Xeon(R) Platinum 8170 CPU @ 2.10GHz	Intel Xeon Platinum 8170 Processor
Intel(R) Xeon(R) Platinum 8164 CPU @ 2.00GHz	Intel Xeon Platinum 8164 Processor
Intel(R) Xeon(R) Platinum 8168 CPU @ 2.70GHz	Intel Xeon Platinum 8168 Processor
Intel(R) Xeon(R) Platinum 8160M CPU @ 2.10GHz	Intel Xeon Platinum 8160M Processor
Intel(R) Xeon(R) Platinum 8160 CPU @ 2.10GHz	Intel Xeon Platinum 8160 Processor
Intel(R) Xeon(R) Platinum 8153 CPU @ 2.00GHz	Intel Xeon Platinum 8153 Processor
Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz	Intel Xeon Platinum 8158 Processor
Intel(R) Xeon(R) Platinum 8156 CPU @ 3.60GHz	Intel Xeon Platinum 8156 Processor

Table 2.4-2

Display of Installed DIMM	DIMM Type	DIMM capacity (GB)	RANK
DPRD-0008014	RDIMM	8	1
DPRD-0016014	RDIMM	16	1
DPRD-0016024	RDIMM	16	2
DPRD-0032024	RDIMM	32	2
DSRD-0064044	RDIMM	64	4
DPLR-0064044	LRDIMM	64	4
DSRD-0128084	RDIMM	128	8

(9) Confirm that installed system board is displayed as "Install".　(See "Figure 2.4-2".)
(10) Confirm that CPU and Memory in added system board are displayed as "Install".
　　(See "Figure 2.4-2".)
(11) Confirm the amount of CPU and memory same as the system administrator indicated.
　　(See "Figure 2.4-2".)
(12) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
　　(See "Figure 2.4-3".)

Figure 2.4-3
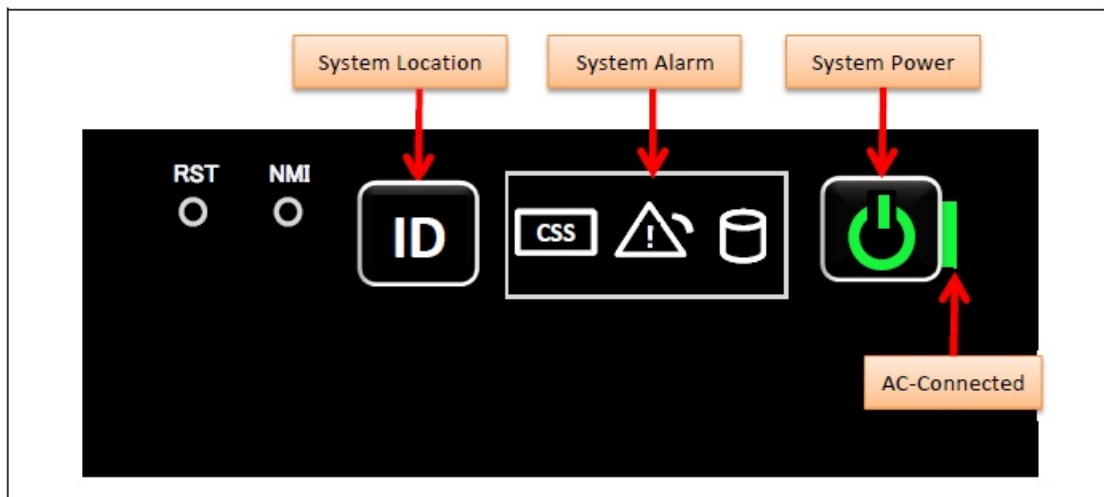
(13) Turn off the system power. See Appendix E.5.2 "Power Off".
(14) Proceed to "2.5 Preparation of handing over to the system administrator".

2.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.　See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "2.6 Handover to the system administrator".

2.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of iRMC or BIOS has been temporarily changed for work, the setting change is
　　requested to the system administrator.
(3) The work is ended.

SET0300000

3 Installing CPUs

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This chapter describes the procedure for installing CPUs.
In this chapter, SB represents a System Board.

SET0301000

3.1 Conditions for installing components

- Only when new SB is installed, install of the CPU is applied.
- Installing the memories. See chapter 4 "Installing Memory".
- Install the CPU to the position CPU#0 and CPU#1 on SB without fail.

SET0301010

3.1.1 Firmware version

- No conditions.

SET0301020

3.1.2 Maximum installation amount

- 2 CPUs per a SB.

SET0301030

3.1.3 Conditions concerning mixing different types of CPU

- All CPUs must be same product name.

SET0301040

3.1.4 Base Unit state

- AC power to the Base Unit is off.

SET0302000

3.2 Work Items, Work Assignment, and Work Time

"Table 3.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 3.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	15

SET0303000

3.3 Procedure for installing CPUs

SET0303010

3.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The target functions can be used with the specifications and version level of units delivered separately due to delivery considerations.

(2) Proceed to "3.3.2 Installing option".

SET0303020

3.3.2 Installing option

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.

(1) Prepare a new system board.
(2) Installing the CPUs. (See Appendix F.7 "CPU".)
(3) Next procedure follows to chapter 2 "Installing System Board".

SET0400000

4 Installing Memory

31

This chapter describes the procedure for installing memory.
In this chapter, SB represents a System Board.

SET0401000

4.1 Conditions for installing components

By installing the memory, confirm to the system administrator whether it is necessary to change the "Memory Operation Mode" setting.

SET0401010

4.1.1 Firmware version

- No conditions.

SET0401020

4.1.2 Number of mounted DIMMs

The system configuration and the setting are confirmed to the system administrator.
(See "Table 4.1.2".)

Table4.1.2

Memory Operation Mode			
Normal Mode	Full Mirror Mode	Address Range Mirror Mode	Spare Mode
1 set per addition	2 sets per addition	2 sets per addition	1 set per addition

set: same 2 DIMMs.

SET0401030

4.1.3 Conditions on mixing different types of DIMM

- When mixing DIMMs with different capacities within system, follow the specification in "Figure 4.1.3-1".
- Confirm the status (capacity, rank and mounting locations) of the DIMMs currently installed on the SB. See Appendix E.7 "Checking memory type".

Table 4.1.3-1

	16GB Memory (8GB-1R-RDIMMx2)	32GB Memory (16GB-1R-RDIMMx2)	32GB Memory (16GB-2R-RDIMMx2)	64GB Memory (32GB-2R-RDIMMx2)	128GB Memory (64GB-4R-LRDIMMx2)	128GB Memory (64GB-4R-RDIMMx2)	256GB Memory (128GB-8R-RDIMMx2)
16GB Memory (8GB-1R-RDIMMx2)	●						
32GB Memory (16GB-1R-RDIMMx2)		●	●	●			
32GB Memory (16GB-2R-RDIMMx2)		●	●				
64GB Memory (32GB-2R-RDIMMx2)		●		●			
128GB Memory (64GB-4R-LRDIMMx2)					●		
128GB Memory (64GB-4R-RDIMMx2)						●	
256GB Memory (128GB-8R-RDIMMx2)							●

●：Permitted

Table 4.1.3-2

Memory Operation Mode		CPU#0						CPU#1					
		A#0			A#1			A#0			A#1		
Memory Mode	Lockstep	0A0	0B0	0C0	0D0	0E0	0F0	1A0	1B0	1C0	1D0	1E0	1F0
		0A1	0B1	0C1	0D1	0E1	0F1	1A1	1B1	1C1	1D1	1E1	1F1
Normal	Disable	□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
		□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
	Enable	□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
		□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
Spare	Disable	□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
		□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
Full Mirror	Disable	□	□	□	△	△	△	■	■	■	▲	▲	▲
		□	□	□	△	△	△	■	■	■	▲	▲	▲
Address Range Mirror	Disable	□	□	□	△	△	△	■	■	■	▲	▲	▲
		□	□	□	△	△	△	■	■	■	▲	▲	▲

RMRM) Symbol

The same symbol for each Memory Operation Mode represents the same type of DIMMs.
All DIMMs must have the same type.

SET0401040

4.1.4 Memory installing order

- Memory installing order is see "Table 4.1.4-1".
- The system configuration and the setting are confirmed to the system administrator.

Table 4.1.4-1

Memory Operation Mode		CPU#0						CPU#1						Remark
Memory Mode	Lockstep	A#0			A#1			A#0			A#1			
		0A0	0B0	0C0	0D0	0E0	0F0	1A0	1B0	1C0	1D0	1E0	1F0	
		0A1	0B1	0C1	0D1	0E1	0F1	1A1	1B1	1C1	1D1	1E1	1F1	
Normal	Disable	1	2	4(*1),8	1	2	4(*1),8	1	3	5(*1),9	1	3	5(*1),9	(*3)
		6	6(*2)	10	6	6(*2)	10	7	7(*2)	11	7	7(*2)	11	
	Enable	1	4	8	2	6	10	1	5	9	3	7	11	(*3)
		1	4	8	2	6	10	1	5	9	3	7	11	
Spare	Disable	1	4	8	2	6	10	1	5	9	3	7	11	(*3)
		1	4	8	2	6	10	1	5	9	3	7	11	
Full Mirror	Disable	1	1	4	1	1	4	1	1	5	1	1	5	
		2	2	4	2	2	4	3	3	5	3	3	5	
		1	1	2	1	1	2	1	1	3	1	1	3	(*4)
		–	–	–	–	–	–	–	–	–	–	–	–	
Address Range Mirror	Disable	1	1	4	1	1	4	1	1	5	1	1	5	
		2	2	4	2	2	4	3	3	5	3	3	5	
		1	1	2	1	1	2	1	1	3	1	1	3	(*4)
		–	–	–	–	–	–	–	–	–	–	–	–	

(*1)(*2): In the case of four DIMMs in A#x, remove DIMM installed in (*1) slot and then install DIMM to (*2) slot.
(*3): When the CPU which memory capacity is 768GB is installed, 128GB DIMM can be installed up to number 5 and cannot be installed after number
(*4): Only when the CPU which memory capacity is 768GB and 128GB DIMM are installed together, this installation order is applied.

Table 4.1.4-2 CPU of memory capacity 768GB

Display of installed CPU	Product name
Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz	Intel Xeon Platinum 8180 Processor
Intel(R) Xeon(R) Platinum 8176 CPU @ 2.10GHz	Intel Xeon Platinum 8176 Processor
Intel(R) Xeon(R) Platinum 8170 CPU @ 2.10GHz	Intel Xeon Platinum 8170 Processor
Intel(R) Xeon(R) Platinum 8164 CPU @ 2.00GHz	Intel Xeon Platinum 8164 Processor
Intel(R) Xeon(R) Platinum 8168 CPU @ 2.70GHz	Intel Xeon Platinum 8168 Processor
Intel(R) Xeon(R) Platinum 8160 CPU @ 2.10GHz	Intel Xeon Platinum 8160 Processor
Intel(R) Xeon(R) Platinum 8153 CPU @ 2.00GHz	Intel Xeon Platinum 8153 Processor
Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz	Intel Xeon Platinum 8158 Processor
Intel(R) Xeon(R) Platinum 8156 CPU @ 3.60GHz	Intel Xeon Platinum 8156 Processor

SET0401050

4.1.5 Base Unit state

- AC power to the Base Unit is off.

4.2 Work Items, Work Assignment, and Work Time

"Table 4.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 4.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	5
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

4.3 Procedure for installing Memory

4.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to the net procedure according to the following procedures.
    → When installing the existing SB.
      Proceed to "4.3.2 Installing option (Existing SB)" .

    → When installing the new SB.
      Proceed to "4.3.3 Installing option (New SB)".

4.3.2 Installing option (Existing SB)

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.
    - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the SB that installs memory.
   See Appendix F.2.2 "Removing SB".

(3) Follow the instructions of the system administrator to install memories.
　　See Appendix F.8 "Memory".
(4) Install the SB.
　　See Appendix F.2.1 "Installing SB".
(5) Turn on AC power of the Base Unit.
　　　→Wait about a minute until green indicator of the "System Power" turns off.
(6) Make sure that the Alarm indicator of SB is not lit.　（See "Figure 4.3.2".）

ANNT) About Alarm indicator
　　Memory Operation Mode When the memory expansion that requires setting value change is
　　made, the SB Alarm indicator lights temporarily.
　　However, it turns off when Memory Operation Mode setting ends normally.

Figure 4.3.2
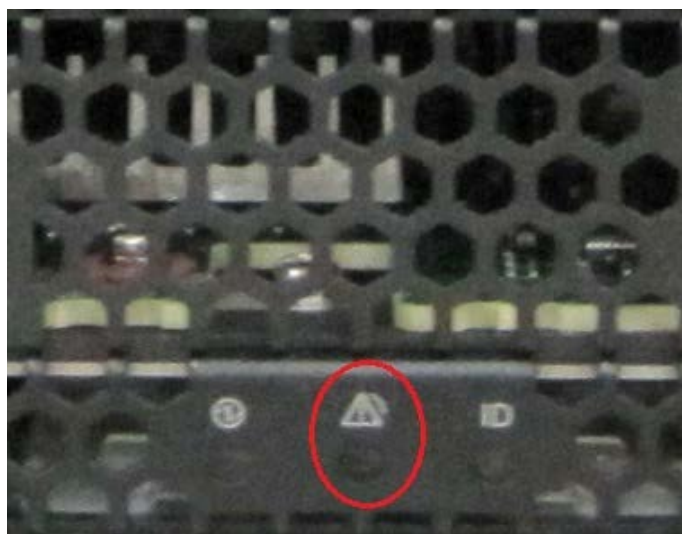
(7) Connect the operation terminal.
　　　See Appendix E.1 "Operation terminal connection".
(8) Log in to the iRMC S5 Web from the operation terminal.
　　　See Appendix E.2.1 "Login".
(9) Proceed to the next procedure according to the following procedures.
　　　→ When changing "Memory Operation Mode".
　　　　Change "Memory Operation Mode" instructed by the system administrator and proceed to
　　　　"4.4 Verifying operation".
　　　　　See Appendix E.6 "Memory Operation Mode setting".

　　　→ When not changing "Memory Operation Mode".
　　　　　Proceed to "4.4 Verifying operation)".

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SET0403030

4.3.3 Installing option (New SB)

Install according to the following procedures.

ANNT)
- The installation location and quantity have to indicate by the system administrator.
- Confirm connecting position of power cable of the Base Unit beforehand.

(1) Prepare the new SB.
(2) Follow the instructions of the system administrator to install memories.
    See Appendix F.8 "Memory".
(3) Next procedure follows to chapter 2 "Installing System Board".

SET0404000

4.4 Verifying operation

Confirm the installed memory according to the following procedures.

(1) Start Video Redirection.
    See Appendix E.3.1 "Video Redirection start".
(2) Set "BIOS Setup" at "Boot Device Selector".
    See Appendix E.4 "Boot Device Selector setting".
(3) Turn on the system power.
    See Appendix E.5.1 "Power On".
  → Wait for a few minutes until "Figure 4.4-1" is displayed. (Max. 10 minutes)

Figure 4.4-1


```
  Information   Configuration   Management   Security   Boot   Exit   <F1:Help>

     BIOS Revision                        R0.30.0

  ▶ System Information

     System Date                       [05/16/2017]
     System Time                       [04:05:05]

     Privilege                         Administrator
```
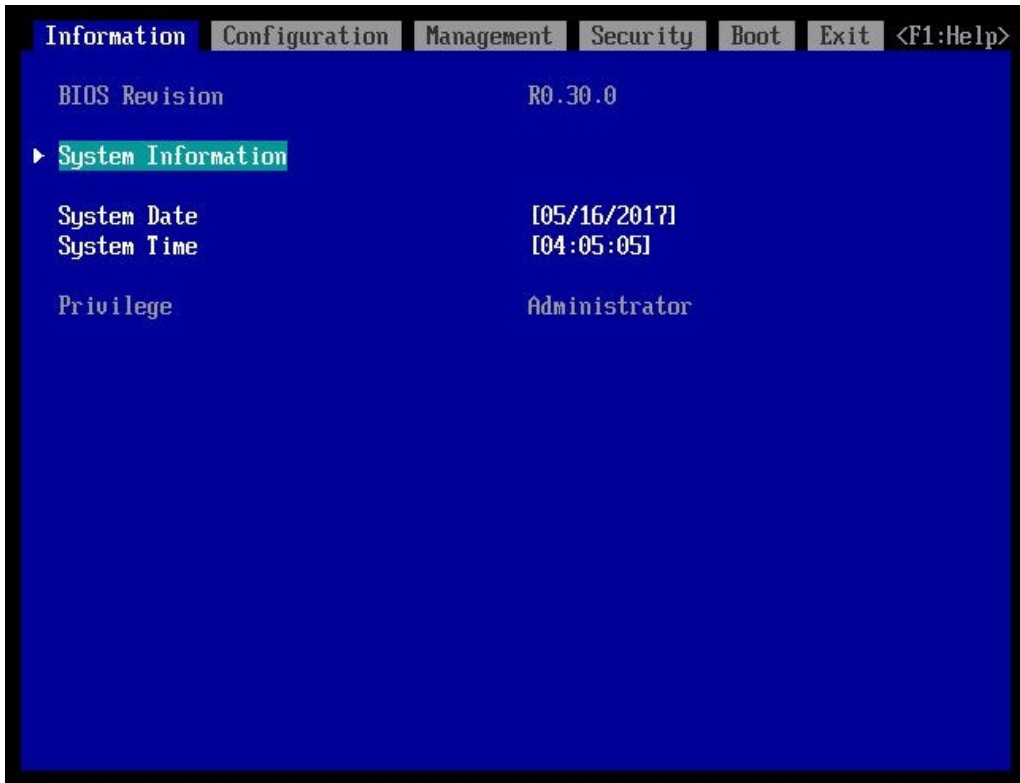
(4) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(5) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(6) Open the "config.txt" with text editor.
　　See "Table 4.4-1", for CPU type. See "Table 4.4-2", for DIMM type.
　　A slot with (Install) indicates that the slot is populated, and (　　　) not populated.

Figure 4.4-2 Example

```
------------------------------------------------------------------------------
SB#2 (Install) : A3C40202223          : QM17108065          :
------------------------------------------------------------------------------
SB#2-CPU#0 (Install) : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
SB#2-CPU#1 (Install) : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
------------------------------------------------------------------------------
SB#2-DIMM#0A0 (Install) : DPRD-0016014
SB#2-DIMM#0A1 (Install) : DPRD-0016014
SB#2-DIMM#0B0 (Install) : DPRD-0016014
SB#2-DIMM#0B1 (Install) : DPRD-0016014
SB#2-DIMM#0C0 (Install) : DPRD-0016014
SB#2-DIMM#0C1 (Install) : DPRD-0016014
SB#2-DIMM#0D0 (Install) : DPRD-0016014
SB#2-DIMM#0D1 (Install) : DPRD-0016014
SB#2-DIMM#0E0 (Install) : DPRD-0016014
SB#2-DIMM#0E1 (Install) : DPRD-0016014
SB#2-DIMM#0F0 (Install) : DPRD-0016014
SB#2-DIMM#0F1 (Install) : DPRD-0016014
SB#2-DIMM#1A0 (Install) : DPRD-0016014
SB#2-DIMM#1A1 (Install) : DPRD-0016014
SB#2-DIMM#1B0 (Install) : DPRD-0016014
SB#2-DIMM#1B1 (Install) : DPRD-0016014
SB#2-DIMM#1C0 (Install) : DPRD-0016014
SB#2-DIMM#1C1 (Install) : DPRD-0016014
SB#2-DIMM#1D0 (Install) : DPRD-0016014
SB#2-DIMM#1D1 (Install) : DPRD-0016014
SB#2-DIMM#1E0 (Install) : DPRD-0016014
SB#2-DIMM#1E1 (Install) : DPRD-0016014
SB#2-DIMM#1F0 (Install) : DPRD-0016014
SB#2-DIMM#1F1 (Install) : DPRD-0016014
------------------------------------------------------------------------------
```

Table 4.4-1

Display of installed CPU	Product name
Intel(R) Xeon(R) Platinum 8180M CPU @ 2.50GHz	Intel Xeon Platinum 8180M Processor
Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz	Intel Xeon Platinum 8180 Processor
Intel(R) Xeon(R) Platinum 8176M CPU @ 2.10GHz	Intel Xeon Platinum 8176M Processor
Intel(R) Xeon(R) Platinum 8176 CPU @ 2.10GHz	Intel Xeon Platinum 8176 Processor
Intel(R) Xeon(R) Platinum 8170M CPU @ 2.10GHz	Intel Xeon Platinum 8170M Processor
Intel(R) Xeon(R) Platinum 8170 CPU @ 2.10GHz	Intel Xeon Platinum 8170 Processor
Intel(R) Xeon(R) Platinum 8164 CPU @ 2.00GHz	Intel Xeon Platinum 8164 Processor
Intel(R) Xeon(R) Platinum 8168 CPU @ 2.70GHz	Intel Xeon Platinum 8168 Processor
Intel(R) Xeon(R) Platinum 8160M CPU @ 2.10GHz	Intel Xeon Platinum 8160M Processor
Intel(R) Xeon(R) Platinum 8160 CPU @ 2.10GHz	Intel Xeon Platinum 8160 Processor
Intel(R) Xeon(R) Platinum 8153 CPU @ 2.00GHz	Intel Xeon Platinum 8153 Processor
Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz	Intel Xeon Platinum 8158 Processor
Intel(R) Xeon(R) Platinum 8156 CPU @ 3.60GHz	Intel Xeon Platinum 8156 Processor

Table 4.4-2

Display of Installed DIMM	DIMM Type	DIMM capacity (GB)	RANK
DPRD-0008014	RDIMM	8	1
DPRD-0016014	RDIMM	16	1
DPRD-0016024	RDIMM	16	2
DPRD-0032024	RDIMM	32	2
DSRD-0064044	RDIMM	64	4
DPLR-0064044	LRDIMM	64	4
DSRD-0128084	RDIMM	128	8

(7) Confirm that added system board is displayed as "Install".   (See "Figure 4.4-2".)
(8) Confirm that CPU and Memory in installed system board are displayed as "Install".
  (See "Figure 4.4-2".)
(9) Confirm the amount of memory same as the system administrator instructions.
  (See "Figure 4.4-2".)
(10) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
  (See "Figure 4.4-3".)

Figure 4.4-3
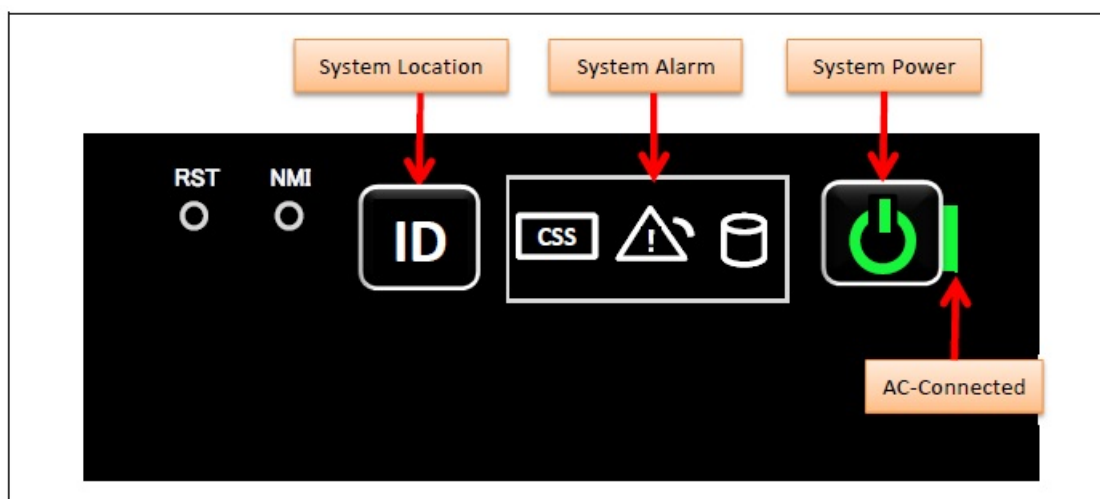
(11) Turn off the system power. See Appendix E.5.2 "Power Off".
(12) Proceed to "4.5 Preparation of handing over to the system administrator".

4.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "4.6 Handover to the system administrator".

4.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of iRMC or BIOS has been temporarily changed for work, the setting change is
   requested to the system administrator.
(3) The work is ended.

5 Installing PCI Card

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- This chapter describes the procedure for installing PCI card into the IOUB. When FBU is added, it contains it.
- When installing PCI card and IOUB as a set, work according to chapter 10 "Installing I/O Unit B (IOUB)".
- When installing SAS array controller card, work according to chapter 6 "Installing Disk Unit for SAS (DU_SAS)".

- In this chapter, SB represents a System Board.
- In this chapter, IOUB represents I/O Unit B.
- In this chapter, FBU (BBU) represents FBU for Ext. SAS RAID Card.

5.1 Conditions for installing components

- When installing PCI card, SB must be installed as indicated by "Table 5.1".
- For example, when installing the PCI card in slot#4 of IOU#0, it is necessary installed SB in SB#1.

Table 5.1

SB installation location	IOUB installation location and PCI slot number	
	IOU#0	IOU#1
SB#0	Slot#0,#1,#2,#3	-
SB#1	Slot#4,#5,#6,#7	-
SB#2	-	Slot#0,#1,#2,#3
SB#3	-	Slot#4,#5,#6,#7

5.1.1 Firmware version

- No conditions.

5.1.2 Maximum installation amount

- 8 PCI cards per an IOUB.

5.1.3 Conditions concerning combined use of PCI card

-No conditions.

SET0501040

5.1.4 Base Unit state

"Table 5.1.4" shows whether or not to work in each state of the Base Unit.
 *1: Confirm it to the system administrator to depend on OS and the PCI card.

Table 5.1.4

Base Unit state	Work possible?	
	PCI slot#2,#3	PCI slot #0, #1, #4, #5, #6, #7
AC Power Off	Yes	Yes
AC Power On, System Power Off	Yes	Yes
AC Power On, System Power On	Yes *1	No

SET0502000

5.2 Work Items, Work Assignment, and Work Time

"Table 5.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 5.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	System administrator and Service engineer	10
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

SET0503000

5.3 Procedure for installing a PCI card

SET0503010

5.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
   1. The types and quantities of delivered options match those written on the order sheet.
   2. The delivered items match those listed in the List of Accessories.
   3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
   4. The target functions can be used with the specifications and version level of the units delivered separately due to delivery considerations.

(2) Proceed to the next procedure according to the following procedures.
   → When installing the PCI card into slot#2 or slot#3 of the IOUB.
      Proceed to "5.3.2 Installing option (Slot#2 or Slot#3)".

   → When installing the PCI card into other than slot#2 and slot#3 of the IOUB.
      Proceed to "5.3.3 Installing PCI card (Other than slot#2 and slot#3)".

5.3.2 Installing option (Slot#2 or Slot#3)

Install according to the following procedures.

ANNT)
- The installation location and quantity have to indicate by the system administrator.

(1) Proceed to the net procedure according to the following procedures.
　　→ When the Base Unit state is "AC Power On, System Power On". Proceed to procedure (2).
　　→ When the Base Unit state is "AC Power On, System Power Off" or "AC Power Off".
　　　Proceed to procedure (3).

(2) The system administrator makes the PCI card installable state.
(3) Remove the PCI cassette of installation slot.
　　See Appendix F.9.4 "Removing PCI card (slot#2 and slot#3)".
(4) Mount the PCI card in PCI cassette.
　　See Appendix F.9.3 "Installing PCI card (slot#2 and slot#3)".
(5) Install the PCI cassette into the IOUB.
　　→ Wait about 10 seconds
(6) When the Base Unit state is "AC Power Off", turn on AC power then wait about a minute.
(7) Make sure that the Alarm indicator of the PCI cassette is not lit. (See "Figure 5.3.2".)

Figure 5.3.2

(8) Install SPF+module if you have one.
　　See Appendix F.13 "Installing LAN card module".
(9) Proceed to the next procedure according to the following procedures.
　　→ When the Base Unit state is "AC Power On, System Power On".
　　　Proceed to "5.5 Preparation of handing over to the system administrator".

　　→ When the Base Unit state is "AC Power On, System Power Off".
　　　Proceed to "5.4 Verifying operation".

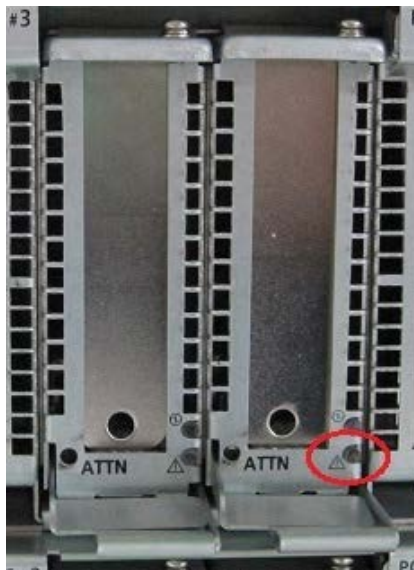## 5.3.3 Installing PCI card (Other than slot#2 and slot#3)

Install according to the following procedures.

ANNT)
 - The installation location and quantity have to indicate by the system administrator.
 - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the IOUB out of the Base Unit.
   See Appendix F.3.2 "Removing IOUB".
(3) Install the PCI card into the IOUB.
   See Appendix F.9.1 Installing PCI card (other than slot#2 and slot#3)".
      Refer to Appendix F.16 "FBU for Ext. SAS RAID Card" When "SAS RAID Card" is installed in
      Slot#0, and FBU (BBU) is added.
(4) Install the IOUB into the Base Unit.
   See Appendix F.3.1 "Installing IOUB".
(5) Turn on AC power of the Base Unit.
      → Wait until green indicator of the "System Power" turns off.
(6) Make sure that the Alarm indicator of the IOUB is not lit. (See "Figure 5.3.3".)

Figure 5.3.3
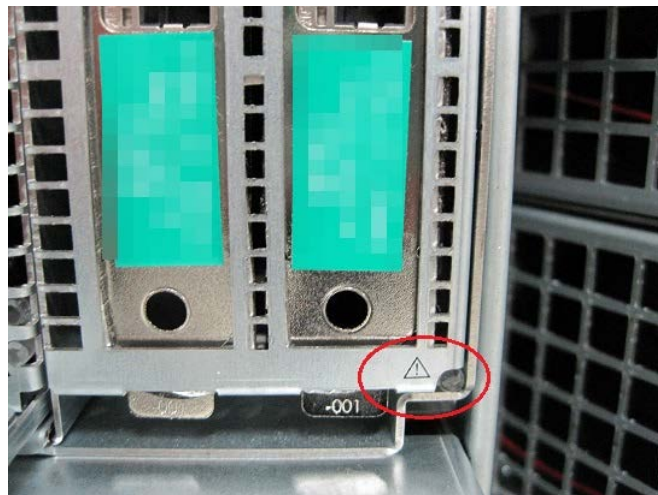
(7) Install SPF+module if you have one.
       See Appendix F.13 "Installing LAN card module".
(8) Proceed to "5.4 Verifying operation".

5.4 Verifying operation

Confirm the PCI card according to the following procedures.

(1) Connect the operation terminal.
    See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
    See Appendix E.2.1 "Login".
(3) Start Video Redirection.
    See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
    See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
    See Appendix E.5.1 "Power On".
    → Wait for a few minutes until "Figure 5.4-1" is displayed. (Max. 10 minutes)

Figure 5.4-1
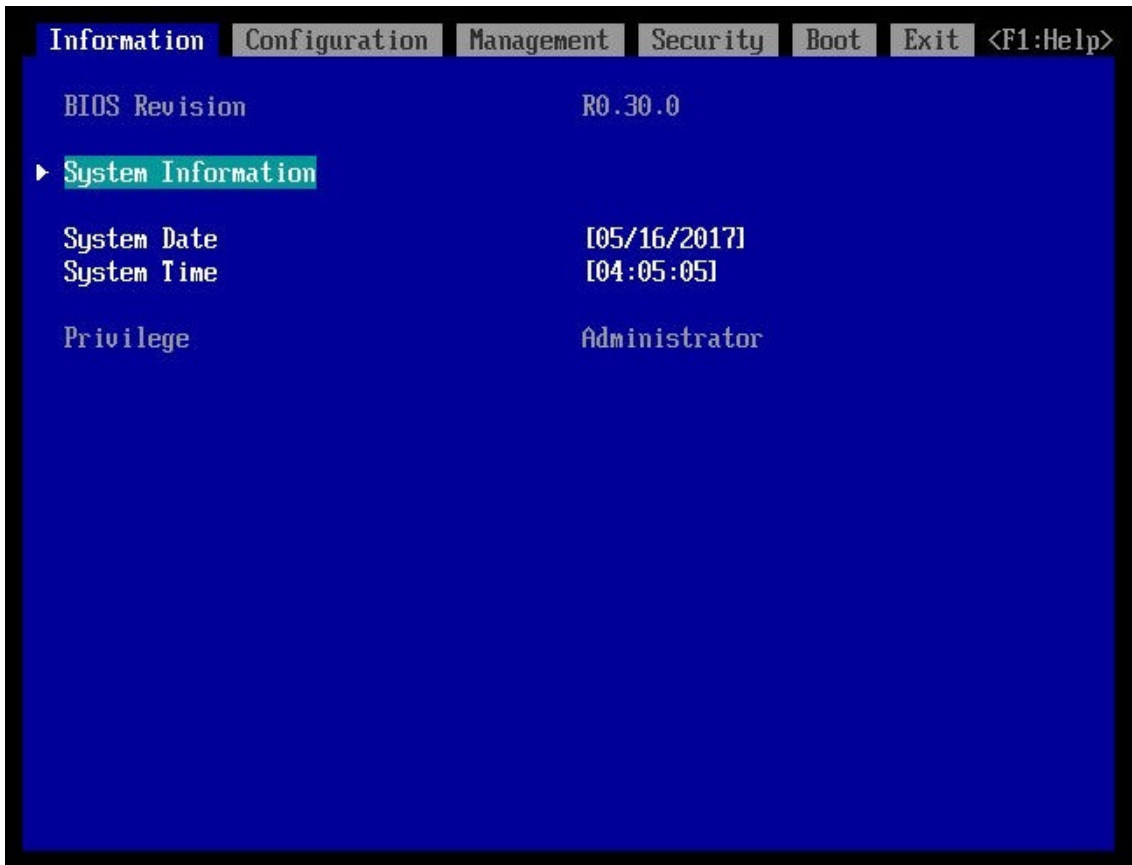
(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
    A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 5.4-2 Example

```
-------------------------------------------------------------------
IOU#0 (Install) : A3C40202227    : QM16477005
    -----------------------------------------------------------
IOU#0-SLOT#0 (Install), Bus/Dev=9/0x00 : ID=8086/1521/8086/00A1
IOU#0-SLOT#1 (      ) :
IOU#0-SLOT#2 (Install), Bus/Dev=41/0x00 : ID=1000/005D/1734/121A
IOU#0-SLOT#3 (      ) :
IOU#0-SLOT#4 (      ) :
IOU#0-SLOT#5 (Install), Bus/Dev=77/0x00 : ID=8086/1521/8086/00A1
IOU#0-SLOT#6 (Install), Bus/Dev=81/0x00 : ID=1000/0097/1734/1217
IOU#0-SLOT#7 (Install), Bus/Dev=105/0x00 : ID=1000/005D/1734/121A
-------------------------------------------------------------------
```

(9) Confirm that SLOT#x that installed PCI card are displayed "Install".   (See "Figure 5.4-2".)
(10) Confirm the PCI card same as the system administrator instructions.
   (See "Table 5.4".)
   < Meaning of value that follows ID = >
   ID = wwww/xxxx/yyyy/zzzz/
       wwww: Vender ID, xxxx: Device ID, yyyy: SubVender ID, zzzz: SubSystem ID

Table 5.4

Vender ID	Device ID	Subsystem ID	Product name
1000	005D	1212	SAS RAID controller card (EP420i)
1000	0014	1236	SAS RAID controller card (EP540i)
10B5	8732	11F7	PPCI_EP_x16_Switch
1000	005D	121A	PRAID EP420e LP
1000	0097	-	PSAS CP400e
10DF	E300	E311	PFC EP LPe31000 1x 16Gb Emulex LP
10DF	E300	E310	PFC EP LPe31002 2x 16Gb Emulex LP
10DF	E300	E301	PFC EP LPe32000 1x 32Gb Broadcom LP
10DF	E300	E300	PFC EP LPe32002 2x 32Gb Broadcom LP
1077	2261	029B	PFC EP QLE2690 1x 16Gb Qlogic LP
1077	2261	029C	PFC EP QLE2692 2x 16Gb Qlogic LP
1077	2261	0299	PFC EP QLE2740 1x 32Gb Cavium LP
1077	2261	029A	PFC EP QLE2742 2x 32Gb Cavium LP
8086	1521	00A2	PLAN CP 2x1Gbit Cu Intel I350-T2 LP
8086	1521	00A1	PLAN CP 4x1Gbit Cu Intel I350-T4 LP
10DF	0720	E802	PLAN EP OCe14102 2x 10Gb LP
10DF	0720	E863	PLAN EP OCe14102 2x 10Gb BASE-T LP
8086	1572	0008	PLAN EP X710-DA2 2x10Gb SFP+
8086	1572	0004	PLAN EP X710-DA4 4x10Gb SFP+ LP
8086	1563	001A	PLAN EP X550-T2 2x10GBASE-T LP
1077	1656	E4F7	PLAN EP QL45212 2x 25GbE LP
15B3	1015	0092	PLAN EP MCX4-LX 25Gb 2p SFP28 LP
15B3	1013	0086	PLAN EP MCX4-EN 40Gb 2p QSFP LP
10DF	0724 (FCoE)	11FB	PCNA EP OCe14102 2x 10Gb LP
15B3	1013	0030	IB HCA 100Gb 1 port EDR
15B3	1013	0032	IB HCA 100Gb 2 port EDR
15B3	1003	0022	IB HCA 56Gb 1 port FDR
15B3	1003	0020	IB HCA 56Gb 2 port FDR
8086	24F0	24F0	POP EP 100Gb 1 port Omni Path
8086	0A53	3704	PCIe-SSD 2TB P4600 (3DWPD)
8086	0A53	3704	PCIe-SSD 4TB P4600 (3DWPD)
8086	0A53	3704	PCIe-SSD 6.4TB P4600 (3DWPD)

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(11) When FBU (BBU) option is installed, confirmation of FBU (BBU) status is necessary.
See Appendix E.10 "FBU (BBU) status confirming".
(12) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
(See "Figure 5.4-3".)

Figure 5.4-3
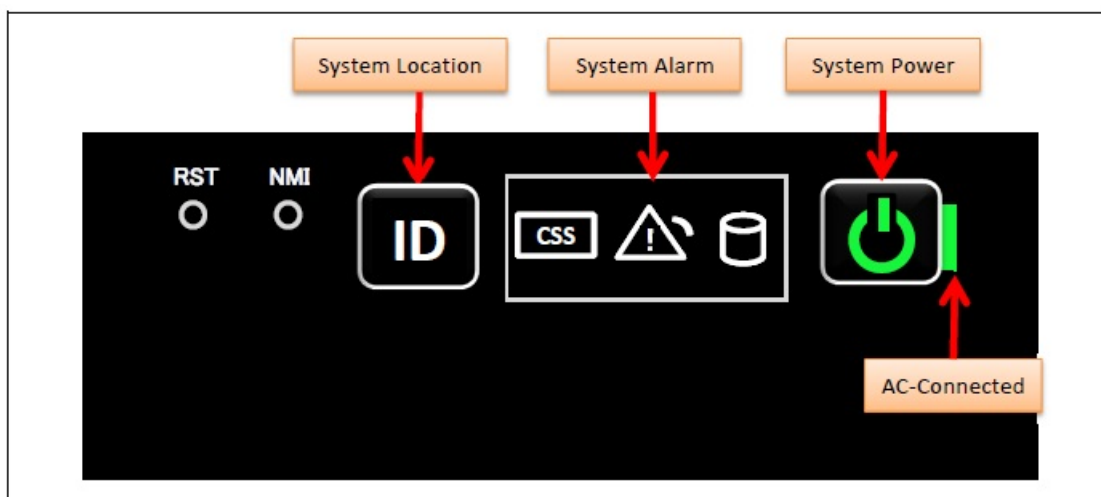
(13) Turn off the system power. See Appendix E.5.2 "Power Off".
(14) Proceed to "5.5 Preparation of handing over to the system administrator".

SET0505000

5.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "5.6 Handover to the system administrator".

SET0506000

5.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of iRMC or BIOS has been temporarily changed for work, the setting change is requested to the system administrator.
(3) The work is ended.

SET0600000

6 Installing Disk Unit for SAS (DU_SAS)

46

- This chapter describes the procedure for installing Disk Unit for SAS (DU_SAS).
- In this chapter, DU_SAS represents Disk Unit for SAS.
- In this chapter, HHD and SSD represent the internal hard disk drive and the internal solid state drive.
- In this chapter, FBU (BBU) represents FBU for DU_SAS.

SET0601000

6.1 Conditions for installing components

- When installing DU_SAS at location of DU#0, installing SB at location of SB#0 is necessary.
- When installing DU_SAS at location of DU#1, installing SB at location of SB#1 is necessary.

SET0601010

6.1.1 Firmware version

- No conditions.

SET0601020

6.1.2 Maximum installation amount

- 2 units.

SET0601030

6.1.3 Conditions concerning combined use of DU_SAS

- No conditions.

SET0601040

6.1.4 Base Unit state

- AC power to the Base Unit is off.

6.2 Work Items, Work Assignment, and Work Time

"Table 6.2" lists the work items, standard work time, and the person in charge of these types of work.

<div align="center">Table 6.2</div>

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	20
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

6.3 Procedure for installing a DU_SAS

6.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "6.3.2 Installing option".

6.3.2 Installing option

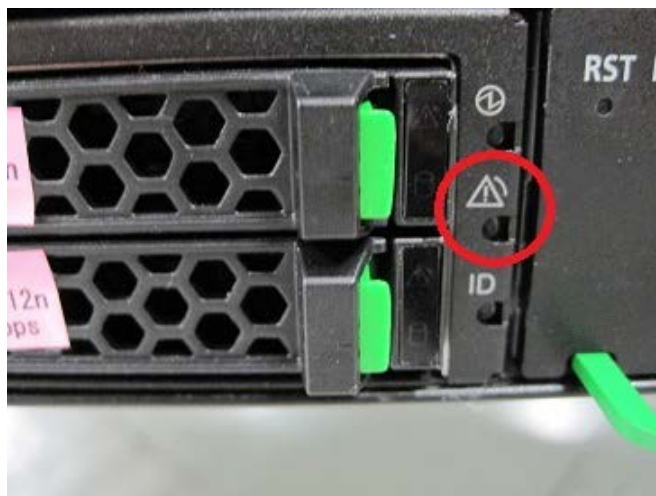Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.
    - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Prepare a DU_SAS.
(2) Installing a Flash Backup Unit. (Option)
    See Appendix F.10 "FBU for DU_SAS".
(3) Turn off AC power of the Base Unit.
(4) Remove the DU dummy.
(5) Install the DU_SAS.
(6) To install HDD/SSD at the same time, remove HDD dummy of DU_SAS and install HDD/SSD.
    See Appendix F.11 "HDD/SSD".
(7) Turn on AC power of the Base Unit.
    → Wait until green indicator of the "System Power" turns off.

(8) Make sure that the Alarm indicator of the DU_SAS is not lit. (See "Figure 6.3.2").

Figure 6.3.2


(9) Proceed to "6.4 Verifying operation".

SET0604000

6.4 Verifying operation

Confirm the DU_SAS according to the following procedures.

(1) Connect the operation terminal.
　　See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
　　See Appendix E.2.1 "Login".
(3) Start Video Redirection.
　　See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
　　See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
　　See Appendix E.5.1 "Power On".
　 → Wait for a few minutes until "Figure 6.4-1" is displayed. (Max. 10 minutes)

Figure 6.4-1
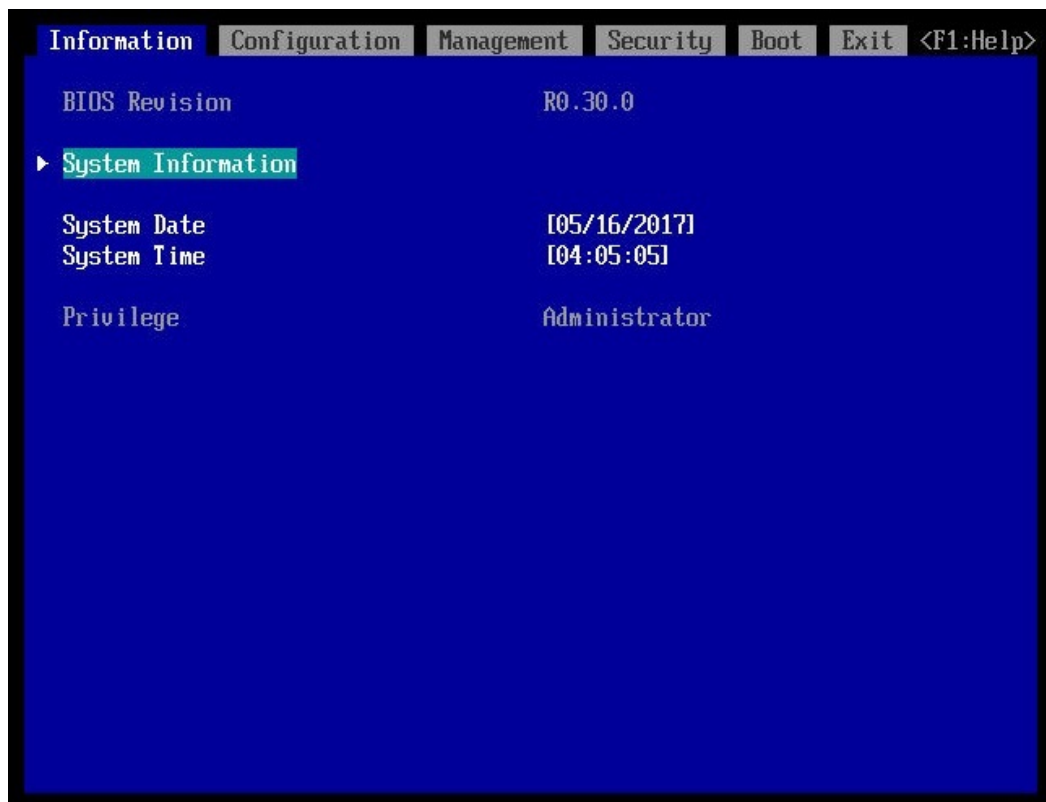
(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
   A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 6.4-2 Example


```
--------------------------------------------------------------------------------
DU#1 (DU_SAS) (Install) : A3C40202412    : QM17115046
       ------------------------------------------------------------------------
DU#1-SLOT (Install), Bus/Dev=113/0x00 : ID=1000/005D/1734/1212
       ------------------------------------------------------------------------
DU#1-HDDSlot#0 (Install), RAID Controller 0 slot 0 : Model=HUC101890CSS204
DU#1-HDDSlot#1 (Install), RAID Controller 0 slot 1 : Model=HUC101890CSS204
DU#1-HDDSlot#2 (Install), RAID Controller 0 slot 2 : Model=HUC101890CSS204
DU#1-HDDSlot#3 (Install), RAID Controller 0 slot 3 : Model=HUC101890CSS204
--------------------------------------------------------------------------------
```

(9) Confirm that installed DU_SAS is displayed as "Install".   (See "Figure 6.4-2".)
(10) Confirm RAID Controller and HDD/SSD is displayed as "Install".   (See "Figure 6.4-2".)
(11) Confirm the HDD or SSD same as the system administrator instructions.
(12) When FBU (BBU) option is installed, confirmation of FBU (BBU) status is necessary.
   See Appendix E.10 "FBU (BBU) status confirming".
(13) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
   (See "Figure 6.4-3".)

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Figure 6.4-3
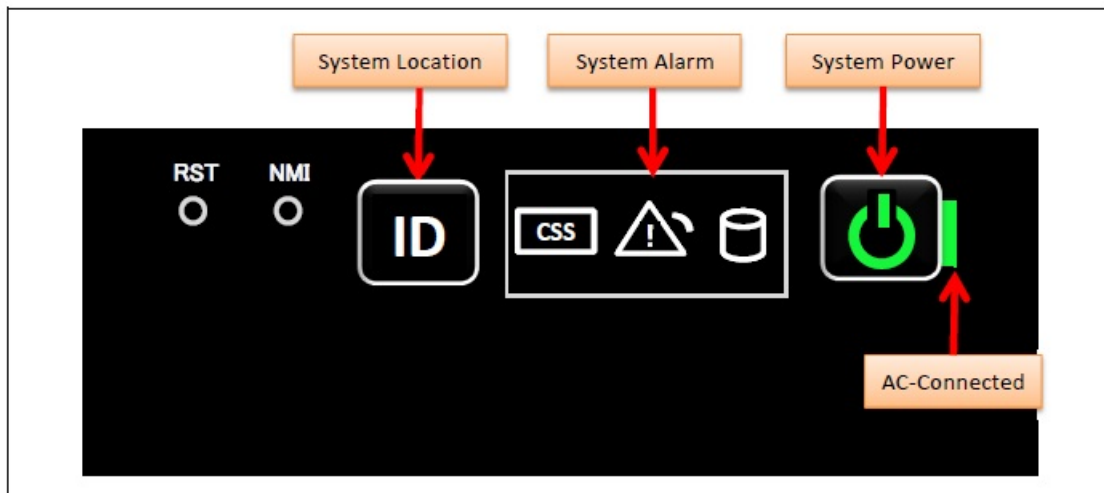
(14) Turn off the system power. See Appendix E.5.2 "Power Off".
(15) Proceed to "6.5 Preparation of handing over to the system administrator".

SET0605000

6.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "6.6 Handover to the system administrator".

SET0606000

6.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of iRMC or BIOS has been temporarily changed for work, the setting change is requested to the system administrator.
(3) The work is ended.

7 Installing Internal Hard Disk Drive (HDD) / Internal Solid State Drive (SSD)

31

This chapter describes the procedure for installing the internal hard disk drive (HDD) and the internal solid state drive (SSD) into the disk unit (DU_SAS).
In this chapter, HDD and SSD represent the internal hard disk drive and the internal solid state drive.

SET0701000

7.1 Conditions for installing components

SET0701010

7.1.1 Firmware version

- No conditions.

SET0701020

7.1.2 Maximum installation amount

- 4 devices per DU_SAS.

SET0701030

7.1.3 Conditions concerning combined use of HDD / SSD

- HDD and SSD cannot exist together in same DU_SAS.

SET0701040

7.1.4 Base Unit state

"Table 7.1.4" shows whether or not to work in each state of the Base Unit.
    *1: Confirm it to the system administrator to depend on OS.

Table 7.1.4

Base Unit state	Work possible?
AC Power Off	Yes
AC Power On, System Power Off	Yes
AC Power On, System Power On	Yes *1

7.2 Work Items, Work Assignment, and Work Time

"Table 7.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 7.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	5
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

7.3 Procedure for Installing HDD / SSD

7.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
   1. The types and quantities of delivered options match those written on the order sheet.
   2. The delivered items match those listed in the List of Accessories.
   3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
   4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to the next procedure according to the following procedures.
   → When the Base Unit state is "AC Power On, System Power On".
      Proceed to "7.3.2 Installing option (System Power On)".

   → When the Base Unit state is "AC Power Off" or "AC Power On, System Power Off".
      Proceed to "7.3.3 Installing option (System Power Off)".

7.3.2 Installing option (System Power On)

Install according to the following procedures.

ANNT)
   - The installation location and quantity have to indicate by the system administrator.

(1) Remove the dummy of HDD/SSD out of the DU_SAS.
(2) Install the HDD/SSD into the DU_SAS.
   See Appendix F.11 "HDD/SSD".
(3) Proceed to "7.6 Handover to the system administrator".

7.3.3 Installing option (System Power Off)

Install according to the following procedures.

ANNT)
- The installation location and quantity have to indicate by the system administrator.

(1) Remove the dummy of HDD/SSD out of the DU_SAS.
(2) Install the HDD/SSD into the DU_SAS.
(3) Turn on AC power of the Base Unit when the Base Unit state is "AC Power Off".
　　→ Wait until green indicator of the "System Power" turns off.
(4) Proceed to "7.4 Verifying operation".

7.4 Verifying operation

Confirm the HDD/SSD according to the following procedures.

(1) Connect the operation terminal.
　　See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
　　See Appendix E.2.1 "Login".
(3) Start Video Redirection.
　　See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
　　See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
　　See Appendix E.5.1 "Power On".
　→ Wait for a few minutes until "Figure 7.4-1" is displayed. (Max. 10 minutes)

Figure 7.4-1
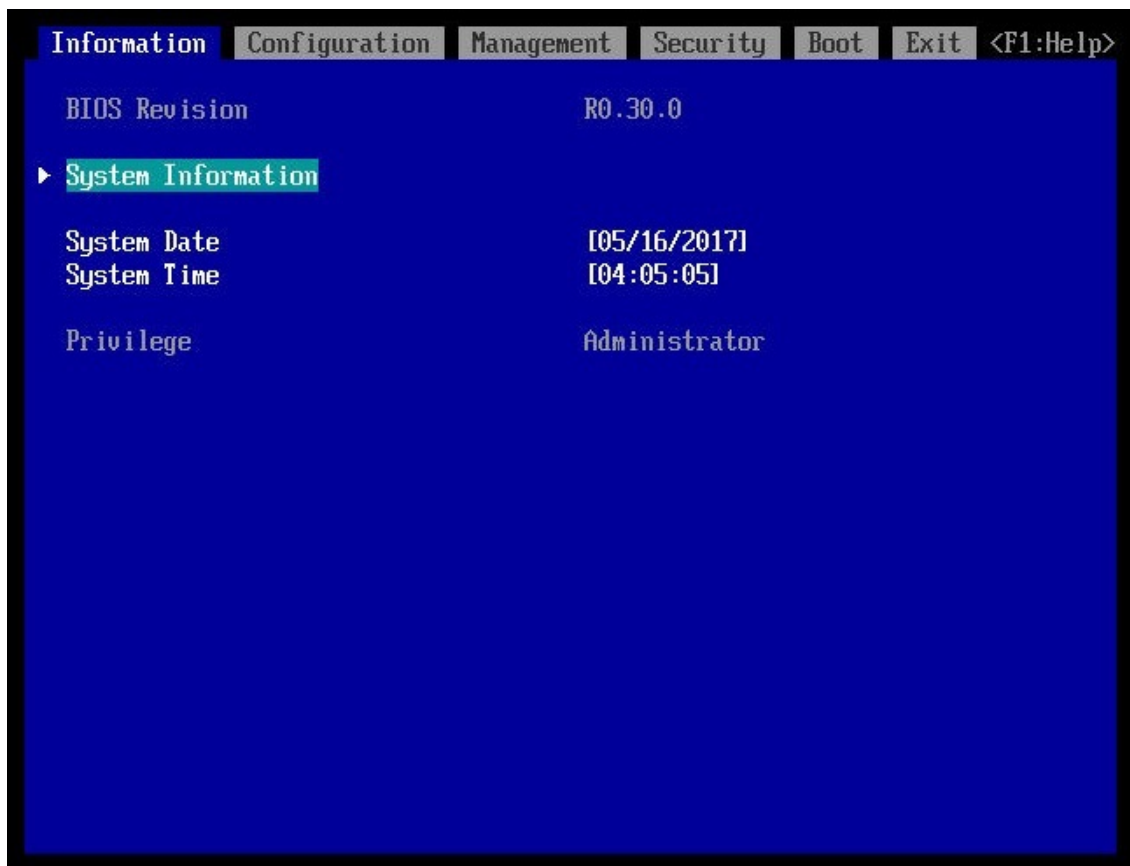
(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
 A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 7.4-2 Example


```
--------------------------------------------------------------------------------
DU#1 (DU_SAS) (Install) : A3C40202412     : QM17115046
     --------------------------------------------------------------------
DU#1-SLOT (Install), Bus/Dev=113/0x00 : ID=1000/005D/1734/1212
          ----------------------------------------------------------------
DU#1-HDDSlot#0 (Install), RAID Controller 0 slot 0 : Model=HUC101890CSS204
DU#1-HDDSlot#1 (Install), RAID Controller 0 slot 1 : Model=HUC101890CSS204
DU#1-HDDSlot#2 (Install), RAID Controller 0 slot 2 : Model=HUC101890CSS204
DU#1-HDDSlot#3 (Install), RAID Controller 0 slot 3 : Model=HUC101890CSS204
          ----------------------------------------------------------------
```

(9) Confirm that the DU_SAS installing HDD/SSD is displayed as "Install". (See "Figure 7.4-2".)
(10) Confirm that the HDD/SSD are displayed as "Install".   (See "Figure 7.4-2".)
(11) Confirm the amount of installed HDD or SSD same as the system administrator instructions.
(12) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
 (See "Figure 7.4-3".)

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Figure 7.4-3
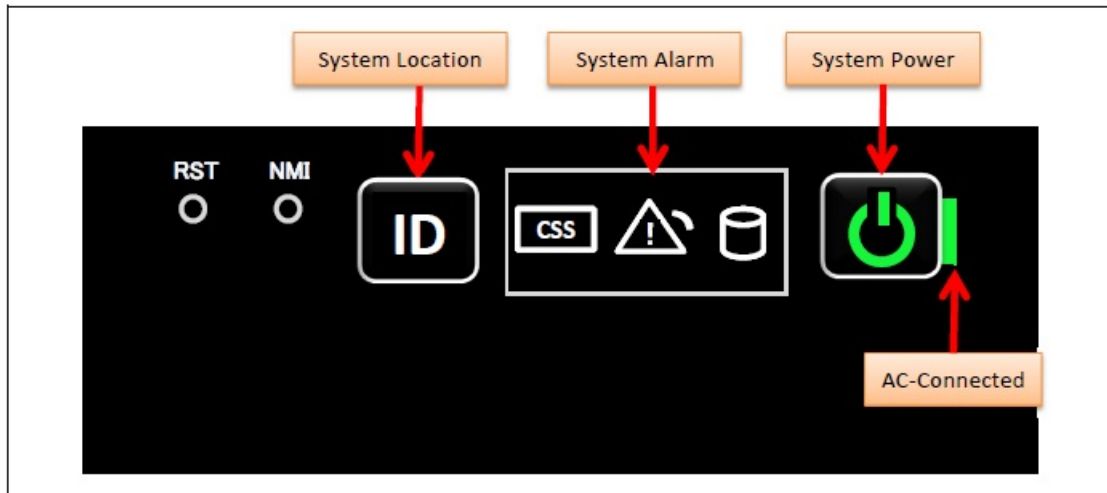
(13) Turn off the system power. See Appendix E.5.2 "Power Off".
(14) Proceed to "7.5 Preparation of handing over to the system administrator".

SET0705000

7.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "7.6 Handover to the system administrator".

SET0706000

7.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of iRMC or BIOS has been temporarily changed for work, the setting change is
     requested to the system administrator.
(3) The work is ended.

8 Installing Disk Unit for PCIe SFF (DU_PCIE)

46

- This chapter describes the procedure for installing Disk for PCIe SFF (DU_PCIE).
- In this chapter, DU_PCIE represents Disk Unit for PCIe SFF.
- In this chapter, SSD SFF represent the internal PCIe SSD SFF.

8.1 Conditions for installing components

- When installing DU_PCIE at DU#0 location, installing SB at location of SB#0 is necessary.
- When installing DU_PCIE at DU#1 location, installing SB at location of SB#1 is necessary.

8.1.1 Firmware version

- No conditions.

8.1.2 Maximum installation amount

- 2 units.

8.1.3 Conditions concerning combined use of DU_PCIE

- No conditions.

8.1.4 Base Unit state

- AC power to the Base Unit is off.

8.2 Work Items, Work Assignment, and Work Time

"Table 8.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 8.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	5
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

8.3 Procedure for installing DU_PCIE

8.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "8.3.2 Installing option".

8.3.2 Installing option

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.
    - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the DU dummy.
(3) Install the DU_PCIE.
   See Appendix F.5 "DU_PCIE".
(4) To install SSD SFF at the same time, remove the HDD dummy of the DU_PCIE and install SSD SFF. See Appendix F.12 "PCIe SSD SFF".
(5) Turn on AC power of the Base Unit.
   → Wait until green indicator of the "System Power" button turns off.
(6) Make sure that the Alarm indicator of the DU_PCIE is not lit.   (See "Figure 8.3.2".)

Figure 8.3.2
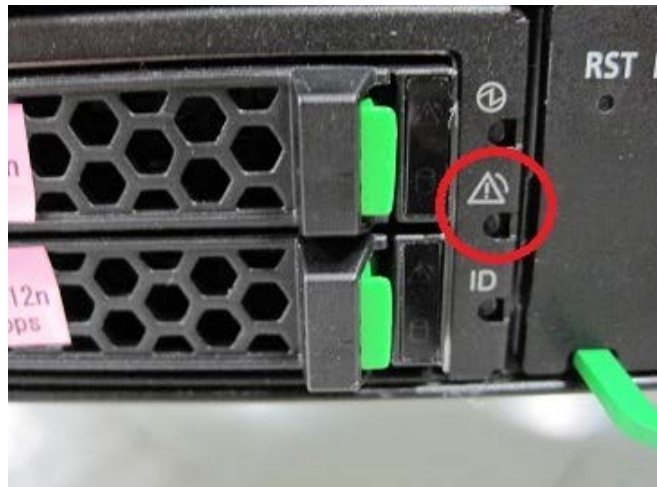
(7) Proceed to "8.4 Verifying operation".

8.4 Verifying operation

Confirm the DU_PCIE according to the following procedures.

(1) Connect the operation terminal.
　　See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
　　See Appendix E.2.1 "Login".
(3) Start Video Redirection.
　　See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
　　See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
　　See Appendix E.5.1 "Power On".
　→ Wait for a few minutes until "Figure 8.4-1" is displayed. (Max. 10 minutes)

Figure 8.4-1
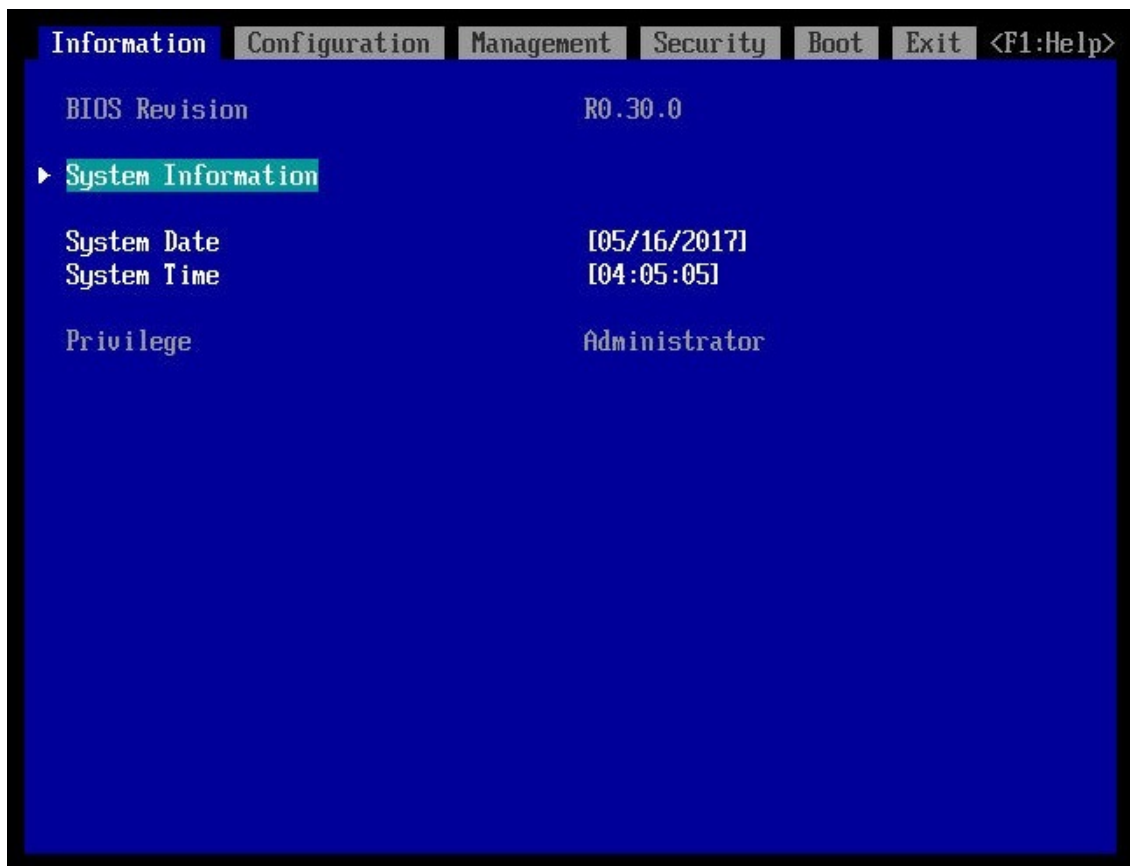
(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
    A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 8.4-2 Example


```
----------------------------------------------------------------------------
DU#0 (DU_PCIE) (Install) : A3C40202438      : QM17115056
             ----------------------------------------------------------------
DU#0-SLOT (Install), Bus/Dev=17/0x00 : ID=10B5/8732/10B5/8732
             ----------------------------------------------------------------
DU#0-SSD#0 (Install) : Model=INTEL SSDPE2MD020T4C
DU#0-SSD#1 (Install) : Model=INTEL SSDPE2MD020T4C
DU#0-SSD#2 (        ) :
DU#0-SSD#3 (        ) :
----------------------------------------------------------------------------
```
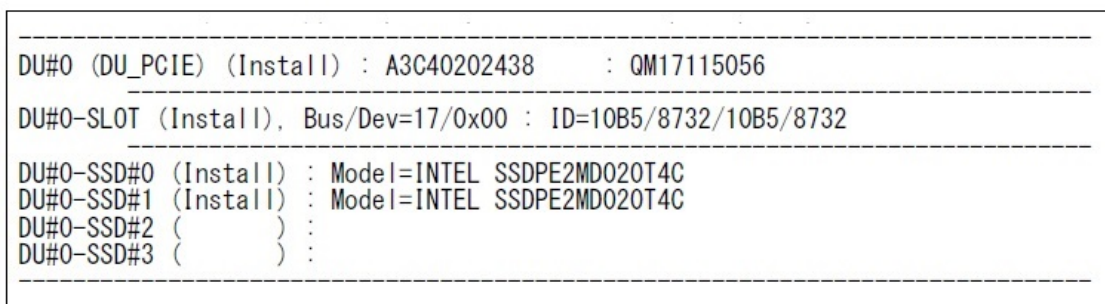
(9) Confirm that installed DU_PCIE is displayed as "Install".   (See "Figure 8.4-2").
(10) Confirm SSD SFF are displayed as "Install".   (See "Figure 8.4-2".)
(11) Confirm the amount of installed SSD SFF same as the system administrator instructions.
(12) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
    (See "Figure 8.4-3".)

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Figure 8.4-3
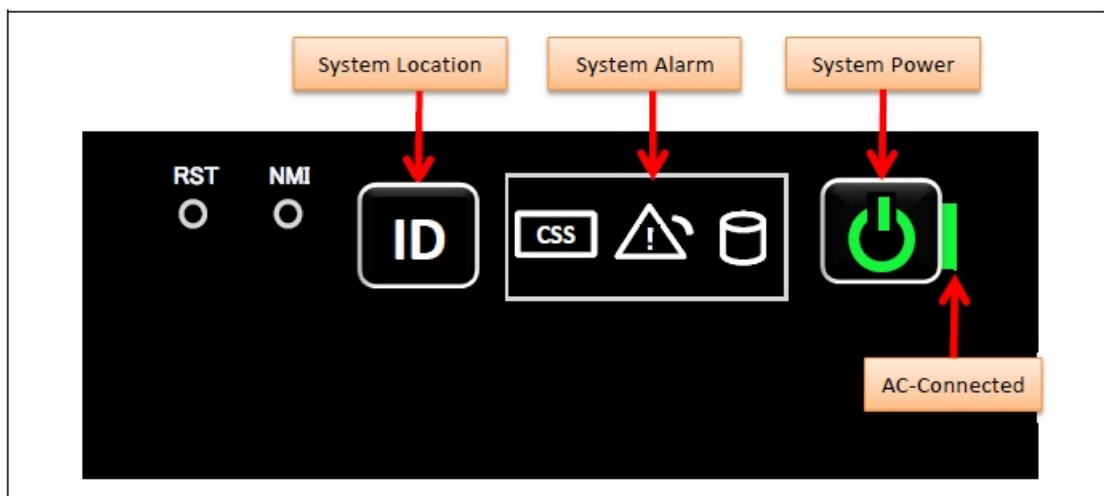
(13) Turn off the system power. See Appendix E.5.2 "Power Off".
(14) Proceed to "8.5 Preparation of handing over to the system administrator".

SET0805000

8.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.　See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "8.6 Handover to the system administrator".

SET0806000

8.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of iRMC or BIOS has been temporarily changed for work, the setting change is
　　requested to the system administrator.
(3) The work is ended.

9 Installing PCIe SSD SFF (SSD SFF)

31

This chapter describes the procedure for installing the PCIe SSD SFF into the Disk Unit for PCIe SFF. In this chapter, SSD SFF represent the PCIe SSD SFF.

9.1 Conditions for installing components

9.1.1 Firmware version

- No conditions.

9.1.2 Maximum installation amount

- 4 devices per a DU_PCIE.

9.1.3 Conditions concerning combined use of SSD SFF

- No conditions.

9.1.4 Base Unit state

"Table 9.1.4" shows whether or not to work in each state of the Base Unit.

Table 9.1.4

Base Unit state	Work possible?
AC Power Off	Yes
AC Power On, System Power Off	Yes
AC Power On, System Power On	No

9.2 Work Items, Work Assignment, and Work Time

"Table 9.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 9.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	5
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

9.3 Procedure for Installing SSD SFF

9.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "9.3.2 Installing option".

9.3.2 Installing option

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.

(1) Remove the dummy of SSD SFF out of the DU_PCIE.
(2) Install the SSD SFF into the DU_PCIE.
(3) Turn on AC power of the Base Unit when the Base Unit state is "AC Power Off".
    → Wait until green indicator of the "System Power" turns off.
(4) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
    (See "Figure 9.3.2".)

Figure 9.3.2
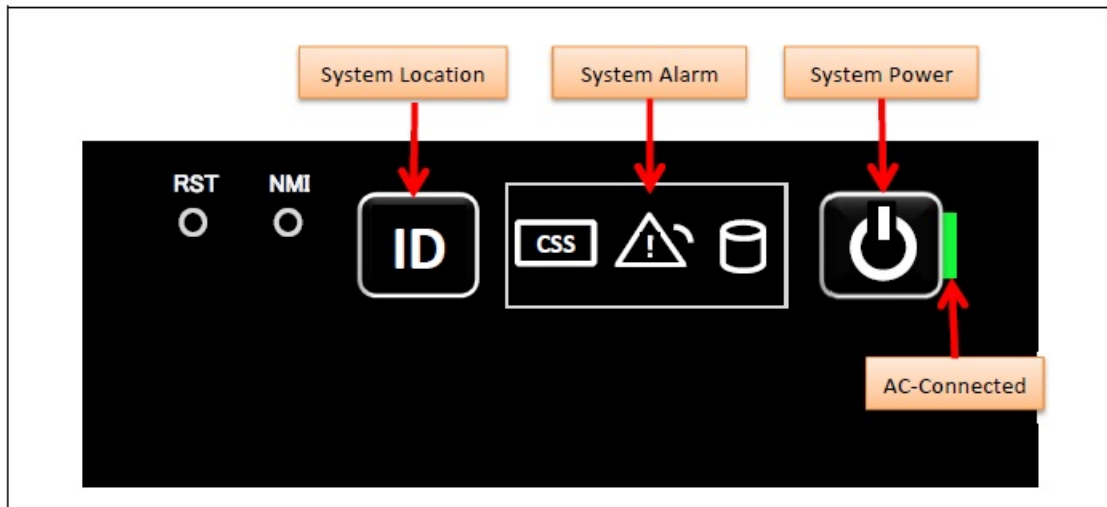
(5) Proceed to "9.4 Verifying operation".
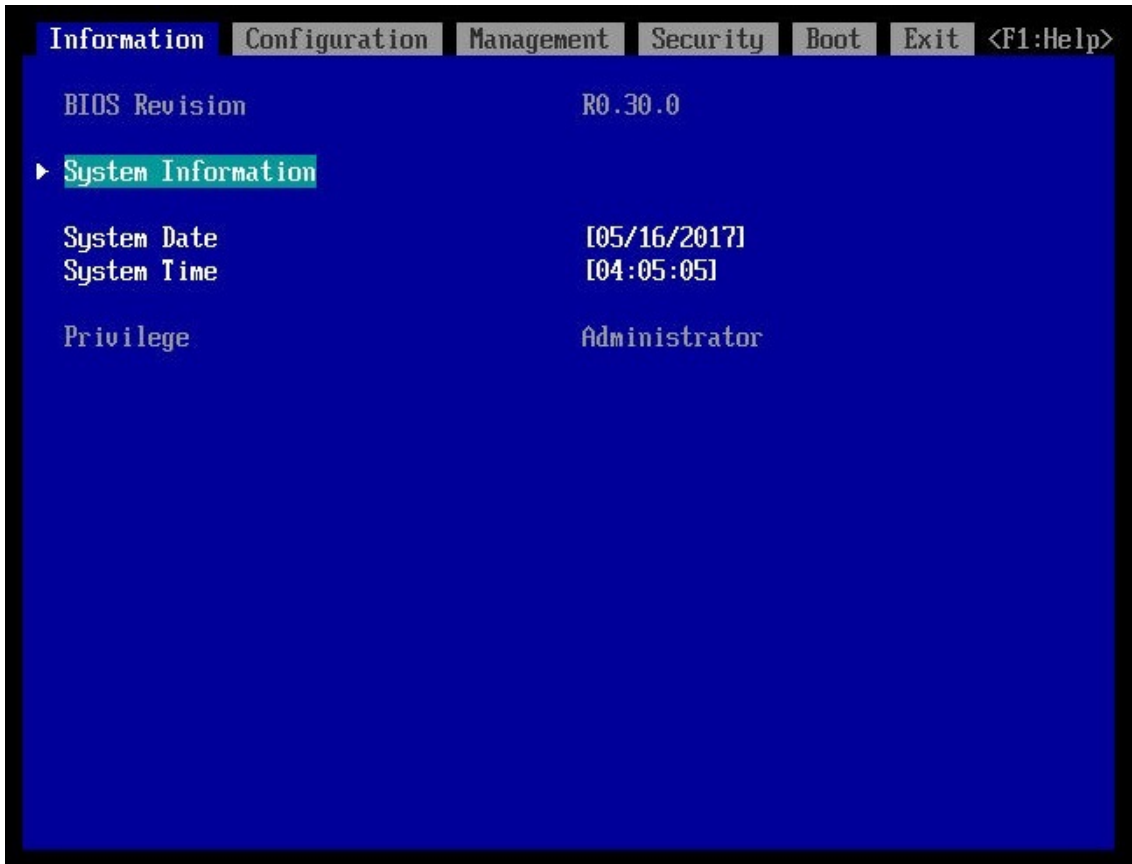
SET0904000

9.4 Verifying operation

Confirm the SSD SFF according to the following procedures.

(1) Connect the operation terminal.
  See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
  See Appendix E.2.1 "Login".
(3) Start Video Redirection.
  See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
  See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
  See Appendix E.5.1 "Power On".
  → Wait for a few minutes until "Figure 9.4-1" is displayed. (Max. 10 minutes)

Figure 9.4-1

(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
   A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 9.4-2 Example
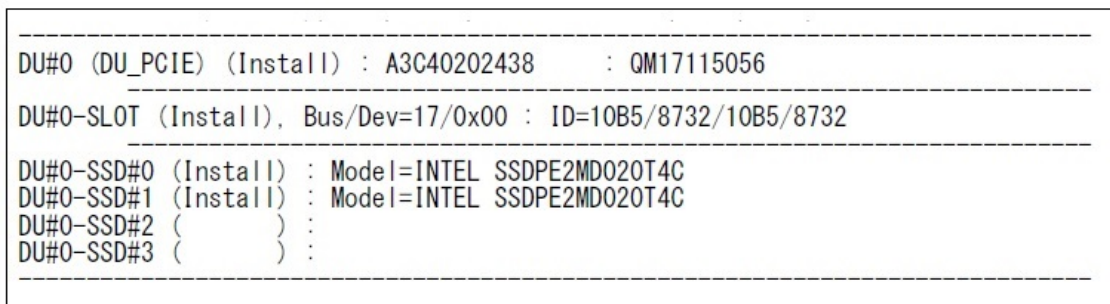
(9) Confirm that the DU_PCIE installing SSD SFF is displayed as "Install".　(See "Figure 9.4-2".)
(10) Confirm the SSD SFF are displayed as "Install".　(See "Figure 9.4-2".)
(11) Confirm the amount of installed SSD SFF same as the system administrator instructions.
(12) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
   (See "Figure 9.4-3".)

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Figure 9.4-3
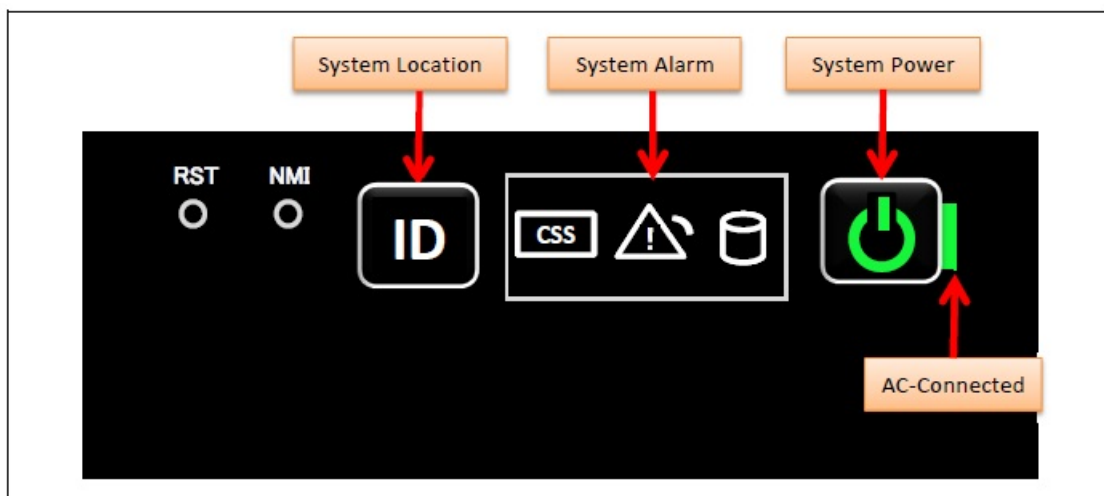
(13) Turn off the system power. See Appendix E.5.2 "Power Off".
(14) Proceed to "9.5 Preparation of handing over to the system administrator".

SET0905000

9.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "9.6 Handover to the system administrator".

SET0906000

9.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of IRMC or BIOS has been temporarily changed for work, the setting change is
     requested to the system administrator.
(3) The work is ended.

10 Installing I/O Unit B (IOUB)

36

- This chapter describes the procedure for installing I/O Unit B.
- In this chapter, IOUB represents I/O Unit B.
- In this chapter, IOU#0 and IOU#1 represents IOUB installation location.

10.1 Conditions for installing components

- When installing IOUB at IOU#0 location, installing SB at installation of SB#0 and SB#1 is necessary for using all PCI slots of IOUB. (See "Table 10.1".)
- When installing IOUB at IOU#1 location, installing SB at installation of SB#2 and SB#3 is necessary for using all PCI slots of IOUB. (See "Table 10.1".)

Table 10.1 Connection from SB to each IOUB

System board installation location	IOUB installation location	
	IOU#0	IOU#1
SB#0	Slot#0,#1,#2,#3	-
SB#1	Slot#4,#5,#6,#7	-
SB#2	-	Slot#0,#1,#2,#3
SB#3	-	Slot#4,#5,#6,#7

10.1.1 Firmware version

- No conditions.

10.1.2 Maximum installation amount

- 2 units.

10.1.3 Conditions concerning combined use of IOUB

- No conditions.

10.1.4 Base Unit state

- AC power to the Base Unit is off.

10.2 Work Items, Work Assignment, and Work Time

"Table 10.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 10.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	10
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

10.3 Procedure for installing IOUB

10.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "10.3.2 Installing option".

10.3.2 Installing option

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.
    - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the IOU dummy.
(3) To install PCI card at the same time, remove PCI card dummy of IOUB install PCI card.
    See chapter 5 "Installing PCI Card".
(4) Install the IOUB.
    See Appendix F.3.1 "Installing IOUB".
(5) Turn on AC power of the Base Unit.
    → Wait until green indicator of the "System Power" turns off.
(6) Make sure that the Alarm indicator of the IOUB is not lit.　(See "Figure 10.3.2".)

Figure10.3.2
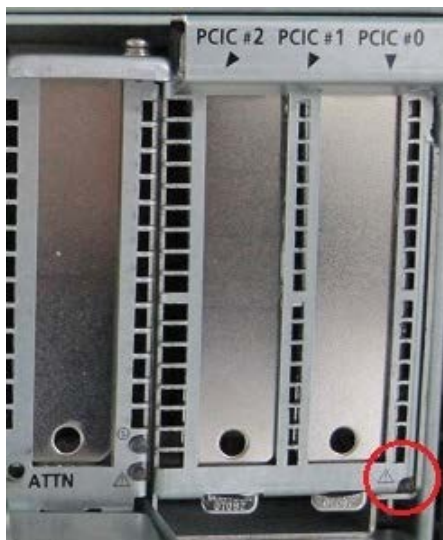
(7) Proceed to "10.4 Verifying operation".

SET1004000

10.4 Verifying operation

Confirm the IOUB according to the following procedures.

(1) Connect the operation terminal.
    See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
    See Appendix E.2.1 "Login".
(3) Start Video Redirection.
    See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
    See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
    See Appendix E.5.1 "Power On".
  → Wait for a few minutes until "Figure 10.4-1" is displayed. (Max. 10 minutes)

Figure 10.4-1
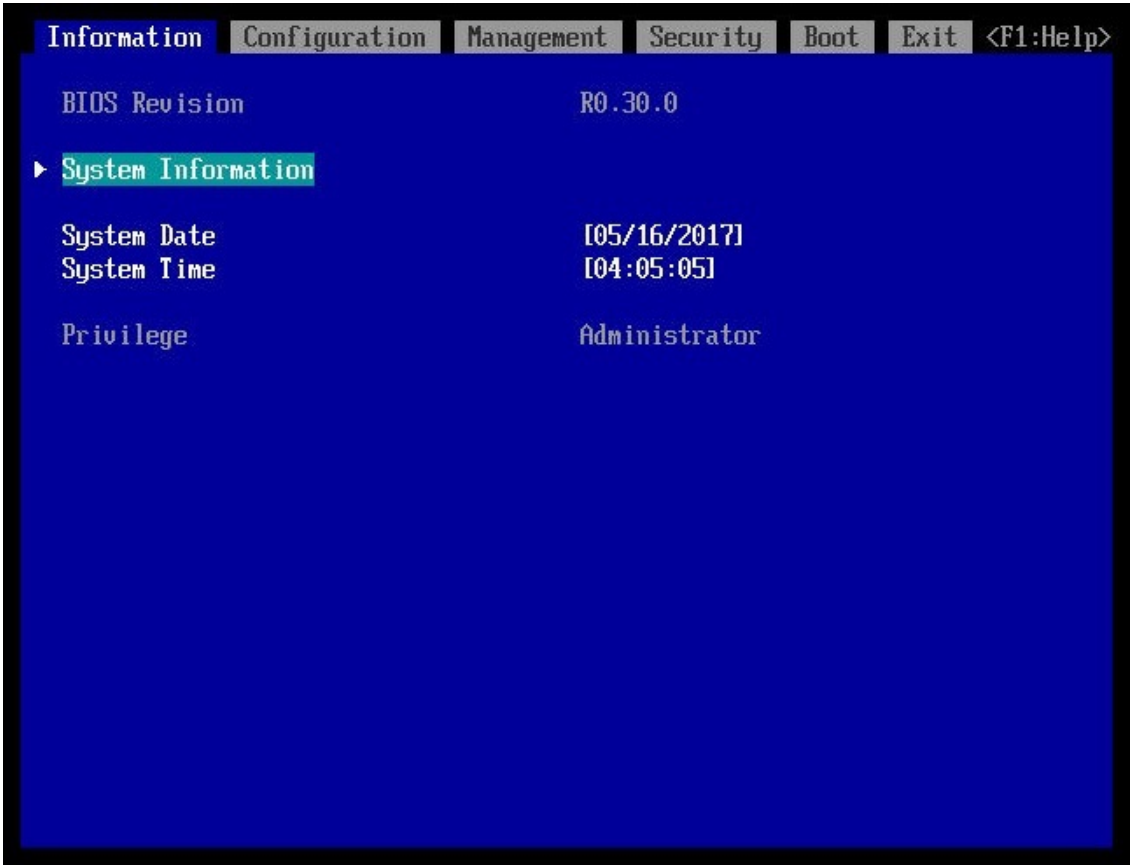
(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
    A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 10.4-2 Example


```
--------------------------------------------------------------------------
IOU#0 (Install) : A3C40202227    : QM16477005
    --------------------------------------------------------------------------
IOU#0-SLOT#0 (Install), Bus/Dev=9/0x00 : ID=8086/1521/8086/00A1
IOU#0-SLOT#1 (        ) :
IOU#0-SLOT#2 (Install), Bus/Dev=41/0x00 : ID=1000/005D/1734/121A
IOU#0-SLOT#3 (        ) :
IOU#0-SLOT#4 (        ) :
IOU#0-SLOT#5 (Install), Bus/Dev=77/0x00 : ID=8086/1521/8086/00A1
IOU#0-SLOT#6 (Install), Bus/Dev=81/0x00 : ID=1000/0097/1734/1217
IOU#0-SLOT#7 (Install), Bus/Dev=105/0x00 : ID=1000/005D/1734/121A
--------------------------------------------------------------------------
```

(9) Confirm that installed IOUB is displayed as "Install".   (See "Figure 10.4-2".)
(10) Confirm that installed all PCI card are displayed as "Install". (See "Figure 10.4-2".)
(11) Confirm the amount of installed PCI card same as the system administrator instructions.
(12) Confirm that the type of PCI card installed matches the PCI card directed by the system
     administrator. (See "Table 10.4".)

< Meaning of value that follows ID = >

   ID = wwww/xxxx/yyyy/zzzz/
     wwww: Vender ID, xxxx: Device ID, yyyy: SubVender ID, zzzz: SubSystem ID

Table 10.4

Vender ID	Device ID	Subsystem ID	Product name
1000	005D	1212	SAS RAID controller card (EP420i)
1000	0014	1236	SAS RAID controller card (EP540i)
10B5	8732	11F7	PPCI_EP_x16_Switch
1000	005D	121A	PRAID EP420e LP
1000	0097	-	PSAS CP400e
10DF	E300	E311	PFC EP LPe31000 1x 16Gb Emulex LP
10DF	E300	E310	PFC EP LPe31002 2x 16Gb Emulex LP
10DF	E300	E301	PFC EP LPe32000 1x 32Gb Broadcom LP
10DF	E300	E300	PFC EP LPe32002 2x 32Gb Broadcom LP
1077	2261	029B	PFC EP QLE2690 1x 16Gb Qlogic LP
1077	2261	029C	PFC EP QLE2692 2x 16Gb Qlogic LP
1077	2261	0299	PFC EP QLE2740 1x 32Gb Cavium LP
1077	2261	029A	PFC EP QLE2742 2x 32Gb Cavium LP
8086	1521	00A2	PLAN CP 2x1Gbit Cu Intel I350-T2 LP
8086	1521	00A1	PLAN CP 4x1Gbit Cu Intel I350-T4 LP
10DF	0720	E802	PLAN EP OCe14102 2x 10Gb LP
10DF	0720	E863	PLAN EP OCe14102 2x 10Gb BASE-T LP
8086	1572	0008	PLAN EP X710-DA2 2x10Gb SFP+
8086	1572	0004	PLAN EP X710-DA4 4x10Gb SFP+ LP
8086	1563	001A	PLAN EP X550-T2 2x10GBASE-T LP
1077	1656	E4F7	PLAN EP QL45212 2x 25GbE LP
15B3	1015	0092	PLAN EP MCX4-LX 25Gb 2p SFP28 LP
15B3	1013	0086	PLAN EP MCX4-EN 40Gb 2p QSFP LP
10DF	0724 (FCoE)	11FB	PCNA EP OCe14102 2x 10Gb LP
15B3	1013	0030	IB HCA 100Gb 1 port EDR
15B3	1013	0032	IB HCA 100Gb 2 port EDR
15B3	1003	0022	IB HCA 56Gb 1 port FDR
15B3	1003	0020	IB HCA 56Gb 2 port FDR
8086	24F0	24F0	POP EP 100Gb 1 port Omni Path
8086	0A53	3704	PCIe-SSD 2TB P4600 (3DWPD)
8086	0A53	3704	PCIe-SSD 4TB P4600 (3DWPD)
8086	0A53	3704	PCIe-SSD 6.4TB P4600 (3DWPD)

(13) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
   (See "Figure 10.4-3".)

Figure 10.4-3
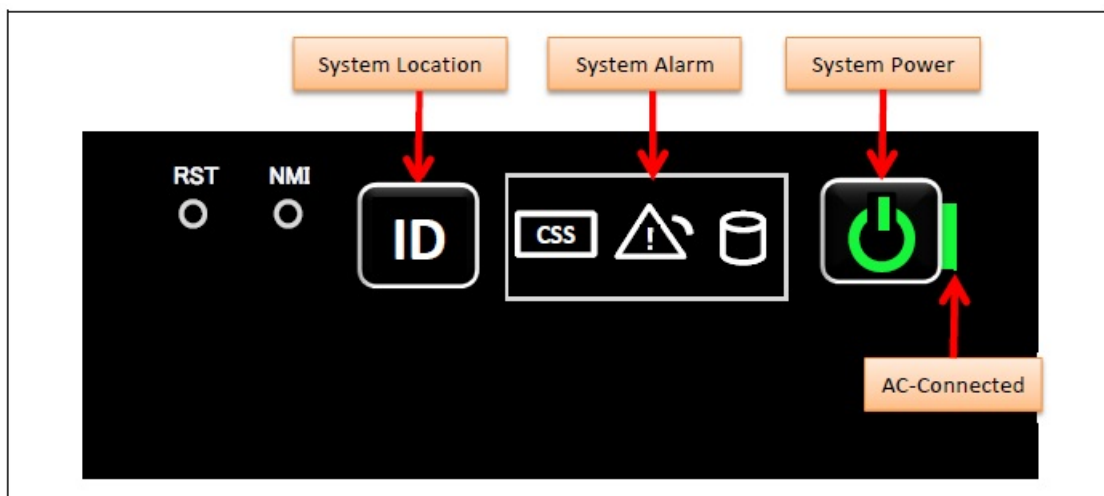
(14) Turn off the system power.   See Appendix E.5.2 "Power Off".
(15) Proceed to "10.5 Preparation of handing over to the system administrator".

SET1005000

10.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "10.6 Handover to the system administrator".

SET1006000

10.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of IRMC or BIOS has been temporarily changed for work, the setting change is requested to the system administrator.
(3) The work is ended.

SET1100000

11 Installing Power Supply Unit (PSU)

27

- This chapter describes the procedure for installing the Power Supply Unit.
- Need to prepare power supply cables which match input AC power cables.

SET1101000

11.1 Conditions for installing components

SET1101010

11.1.1 Firmware version

- No conditions.

SET1101020

11.1.2 Maximum installation amount

- 4 units. (Minimum amount is 2 PSUs.)

SET1101030

11.1.3 Conditions concerning mixing different types of PSU

- No conditions.

SET1101040

11.1.4 Base Unit state

"Table 11.1.4" shows whether or not to work in each state of the Base Unit.

Table 11.1.4

Base Unit state	Work possible?
AC Power Off	Yes
AC Power On, System Power Off	Yes
AC Power On, System Power On	Yes

11.2 Work Items, Work Assignment, and Work Time

"Table11.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 11.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	5
Verifying operation	Service engineer	11
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

11.3 Procedure for installing PSU

11.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
   1. The types and quantities of delivered options match those written on the order sheet.
   2. The delivered items match those listed in the List of Accessories.
   3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
   4. The target functions can be used with the specifications and version level of units delivered separately due to delivery considerations.

(2) Proceed to "11.3.2 Installing PSU".

11.3.2 Installing PSU

Install according to the following procedures.

(1) Remove the PSU dummy.
(2) Install the PSU, and wait for 10 seconds or more.
   See Appendix F.6.1 "Installing PSU".
(3) Connect the power cable to the installed PSU. (See "Table 11.3.2".)

Table 11.3.2

Amount of PSU	See "Input Power Systems"
3	See Appendix D.2 "3 PSUs"
4	See Appendix D.3 "4 PSUs"

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(4) Proceed to the next procedure according to the following condition.
　　→ When Base Unit state is "AC Power Off".
　　　　Turn on AC power to all PSU, and wait until green indicator of the "System Power" turns off.
　　　　And, proceed to "11.5.2 Verifying operation (System Power Off)".

　　→ When Base Unit state is "AC Power On, System Power Off".
　　　　Turn on AC power to the installed PSU then wait for about 5 minutes.
　　　　And, proceed to "11.5.2 Verifying operation (System Power Off)"

　　→ When Base Unit state is "AC Power On, System Power On".
　　　　Turn on AC power to the installed PSU then wait for about 5 minutes.
　　　　And, proceed to "11.5.1 Verifying operation (System Power On)"

SET1104000

11.4 Setup

No work.

11.5 Verifying operation

11.5.1 Verifying operation (System Power On)

Confirm the PSU according to the following procedures.

(1) Click on "System" tab, and click on "Power", and click on "Power Supplies".
   → The window shown in "Figure 11.5.1" appears.

Figure 11.5.1

(2) Confirm that installed PSU is no problem.   (See "Figure 11.5.1".)
(3) Download the SEL to the operation terminal. (See Appendix E.8 "SEL downloading".)
(4) Proceed to "11.6 Preparation of handing over to the system administrator".

11.5.2 Verifying operation (System Power Off)

Confirm the PSU according to the following procedures.

(1) Start Video Redirection.
   See Appendix E.3.1 "Video Redirection start".
(2) Set "BIOS Setup" at "Boot Device Selector".
   See Appendix E.4 "Boot Device Selector setting".
(3) Turn on the system power.
   See Appendix E.5.1 "Power On".
   → Wait for a few minutes until "Figure 11.5-1" is displayed. (Max. 10 minutes)

Figure 11.5.2-1

| Information | Configuration | Management | Security | Boot | Exit | <F1:Help> |

```
BIOS Revision                    R0.30.0

▶ System Information

  System Date                    [05/16/2017]
  System Time                    [04:05:05]

  Privilege                      Administrator
```
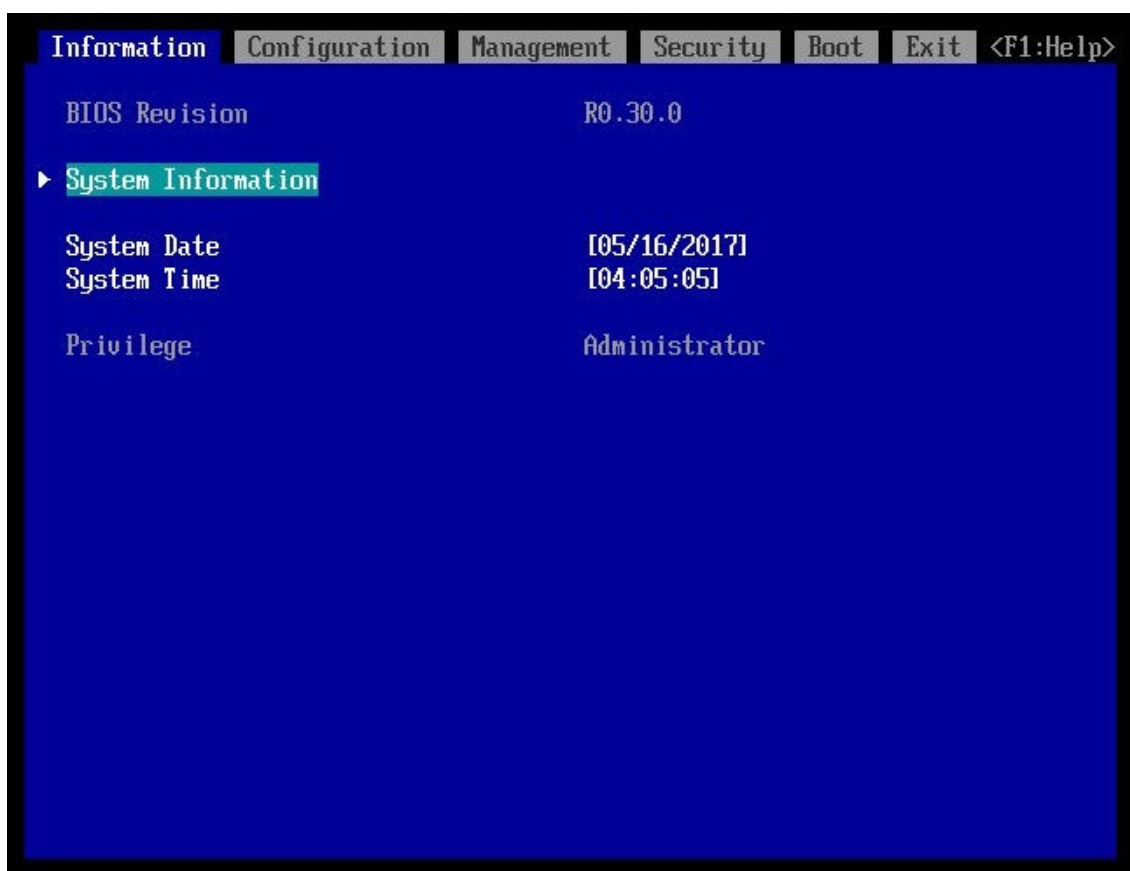
(4) Click on "System" tab, and click on "Power", and click on "Power Supplies".
    → The window shown in "Figure 11.5.2-2" appears.

Figure 11.5.2-2
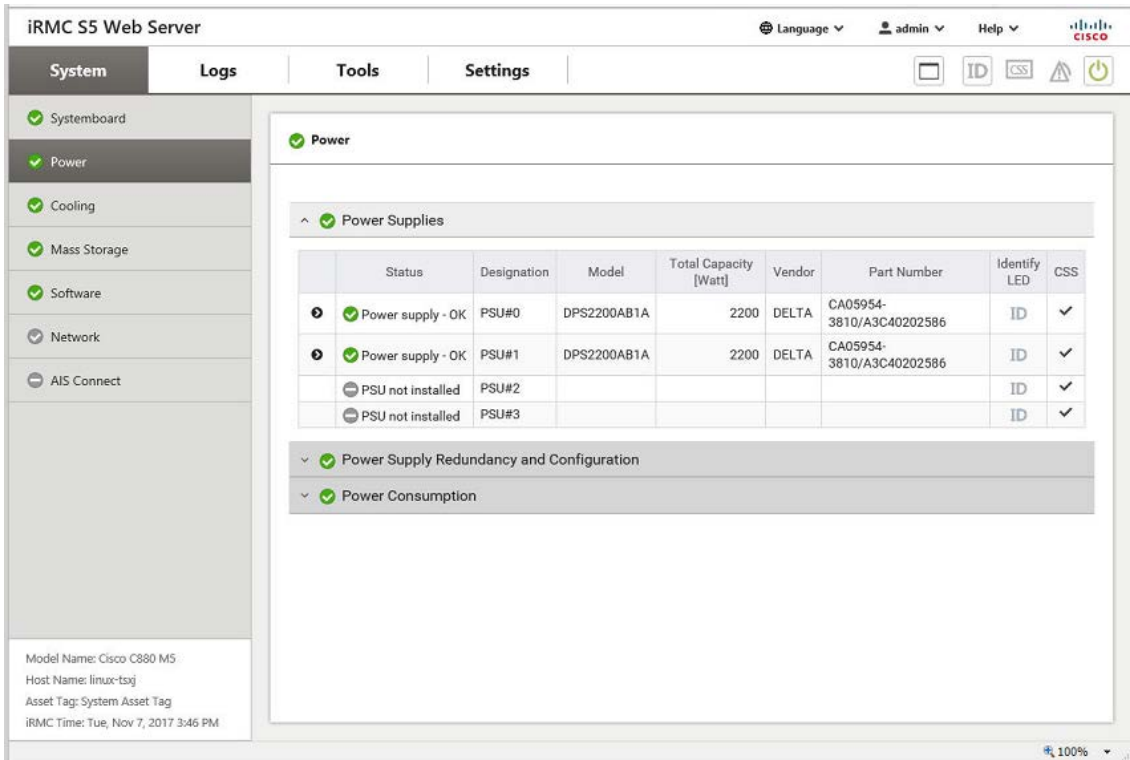
(5) Confirm that installed PSU is no problem.　(See "Figure 11.5.2-2".)
(6) Make sure orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
    (See "Figure 11.5.2-3".)

Figure 11.5.2-3
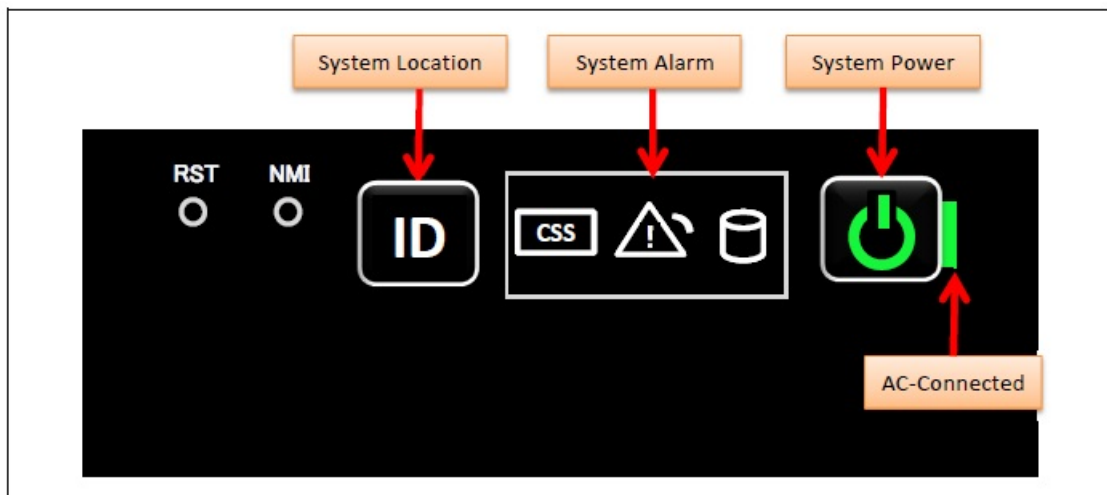
(7) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(8) Turn off the system power.

See Appendix E.5.2 "Power Off".
(9) End the video Redirection.   See Appendix E.3.2 "Video Redirection end".
(10) Proceed to "11.6 Preparation of handing over to the system administrator".

SET1106000

11.6 Preparation of handing over to the system administrator

(1) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(2) Remove the LAN cable connected for work.
(3) Reinstall all the covers and doors that were removed during the work.
(4) Clean them with a cleaning agent and waste cloth.
(5) Proceed to "11.7 Handover to the system administrator".

SET1107000

11.7 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of IRMC or BIOS has been temporarily changed for work, the setting change is
    requested to the system administrator.
(3) The work is ended.

SET1200000

12 Installing M.2 Flash Device

36

- This chapter describes the procedure for installing M.2 Flash Device.

SET1201000

12.1 Conditions for installing components

- Can be installed on BMM Board installed in SB#0.
- The order of installation is from M.2#0

SET1201010

12.1.1 Firmware version

- No conditions.

SET1201020

12.1.2 Maximum installation amount

- 2 units.

SET1201030

12.1.3 Conditions concerning combined use of M2.Flash Device

- No conditions.

SET1201040

12.1.4 Base Unit state

- AC power to the Base Unit is off.

12.2 Work Items, Work Assignment, and Work Time

"Table 12.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 12.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	10
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

12.3 Procedure for Installing M.2 Flash Device

12.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
   1. The types and quantities of delivered options match those written on the order sheet.
   2. The delivered items match those listed in the List of Accessories.
   3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
   4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "12.3.2 Installing option".

12.3.2 Installing option

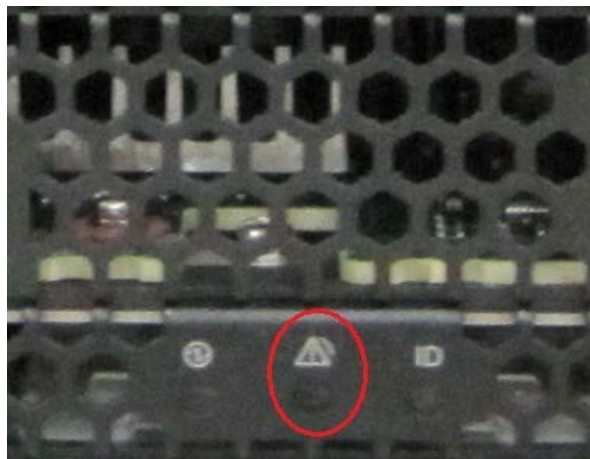Install according to the following procedures.

ANNT)
   - The installation location and quantity have to indicate by the system administrator.
   - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the SB#0.
   See Appendix F.2.2 "Removing SB".
(3) Install the M.2 Flash device onto BMM UNIT of the SB#0.
   See Appendix F.14 "Installing M.2 Flash Device".
(4) Install the SB#0.
   See Appendix F.2.1 "Installing SB".
(5) Turn on AC power of the Base Unit.
   → Wait until green indicator of the "System Power" turns off.
(6) Make sure that the Alarm indicator of SB#0 is not lit.   (See "Figure 12.3.2".)

Figure 12.3.2


(7) Proceed to "12.4 Verifying operation".

SET1204000

12.4 Verifying operation

Confirm the M.2 Flash Device according to the following procedures.

(1) Connect the operation terminal.
See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
See Appendix E.2.1 "Login".
(3) Start Video Redirection.
See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
See Appendix E.5.1 "Power On".
→ Wait for a few minutes until "Figure 12.4-1" is displayed. (Max. 10 minutes)

Figure 12.4-1
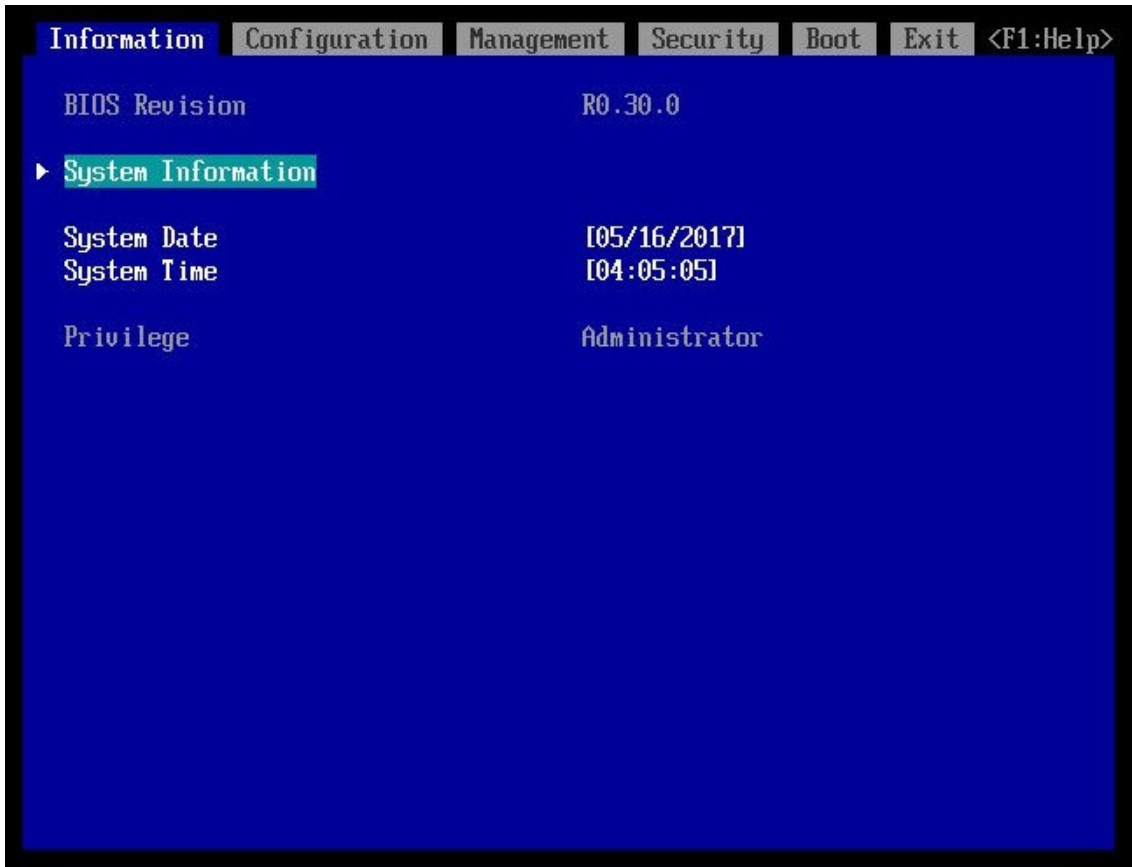

```
Information   Configuration   Management   Security   Boot   Exit   <F1:Help>

   BIOS Revision                        R0.30.0

 ▶ System Information

   System Date                          [05/16/2017]
   System Time                          [04:05:05]

   Privilege                            Administrator
```

(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
    A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 12.4-2 Example


```
-----------------------------------------------------------------------------
BMM (Install) : A3C40202225    : QM16477010
            -----------------------------------------------------------------
TPM (Install)
M.2-SSD#0 (Install)
M.2-SSD#1 (Install)
MicroSD (Install)
-----------------------------------------------------------------------------
```
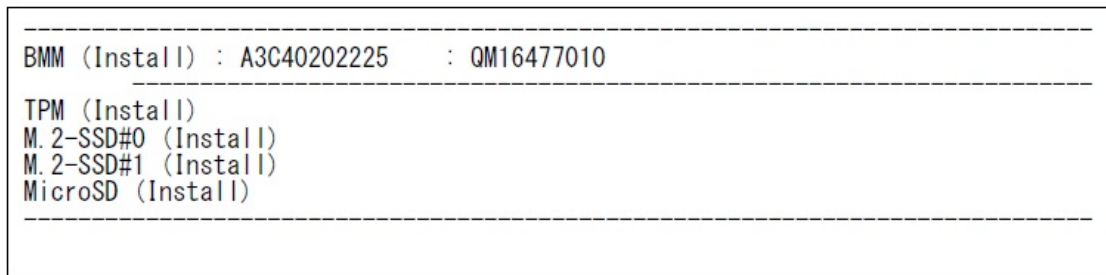
(9) Confirm that the BMM is displayed as "Install". (See "Figure12.4-2".)
(10) Confirm that the M.2 Flash Device is displayed as "Install". (See "Figure12.4-2".)
(11) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
   (See "Figure 12.4-3".)

Figure 12.4-3
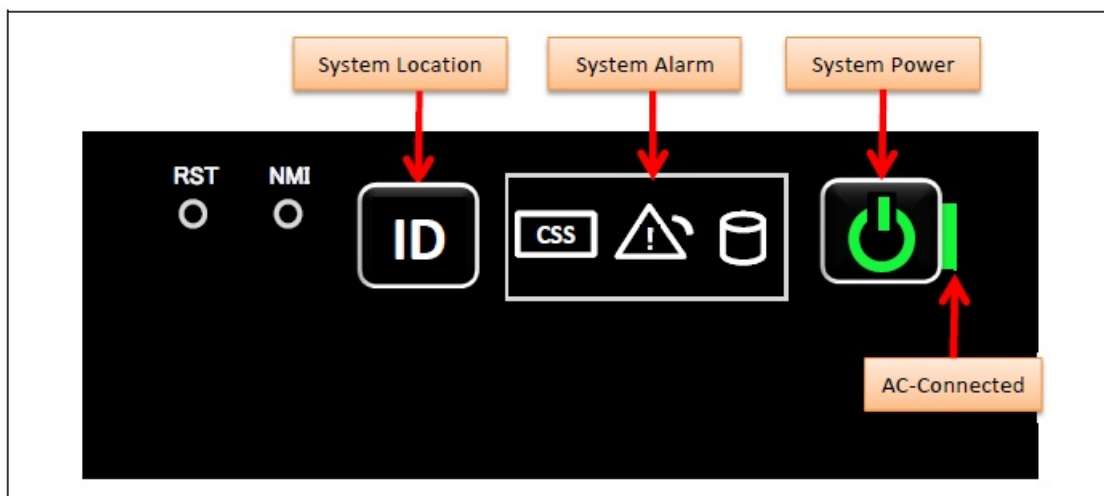
(12) Turn off the system power. See Appendix E.5.2 "Power Off".
(13) Proceed to "12.5 Preparation of handing over to the system administrator".

SET1205000

12.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.　See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "12.6 Handover to the system administrator".

SET1206000

12.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of IRMC or BIOS has been temporarily changed for work, the setting change is requested to the system administrator.
(3) The work is ended.

SET1300000

13 Installing eLCM Activation License

36

The installation of Micro SD which is a component of eLCM Activation License will be explained.
Installation of license key is a responsible task of the system administrator.
This is not the scope of the expansion work.
This chapter shows the installation procedure of Micro SD.

SET1301000

13.1 Conditions for installing components

- Can be installed on BMM Board installed in SB#0.

SET1301010

13.1.1 Firmware version

- No conditions.

SET1301020

13.1.2 Maximum installation amount

- 1 unit.

SET1301030

13.1.3 Conditions concerning combined use of Micro SD

- No conditions.

SET1301040

13.1.4 Base Unit state

- AC power to the Base Unit is off.

13.2 Work Items, Work Assignment, and Work Time

"Table 13.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 13.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	10
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

13.3 Procedure for Installing a Micro SD

13.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
    1. The types and quantities of delivered options match those written on the order sheet.
    2. The delivered items match those listed in the List of Accessories.
    3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
    4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "13.3.2 Installing option".

13.3.2 Installing option

Install according to the following procedures.

ANNT)
    - The installation location and quantity have to indicate by the system administrator.
    - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the SB#0.
    See Appendix F.2.2 "Removing SB".
(3) Install the Micro SD onto BMM Board of the SB#0.
    See Appendix F.15 "Installing eLCM Activation License".
(4) Install the SB#0.
    See Appendix F.2.1 "Installing SB".
(5) Turn on AC power of the Base Unit.
    → Wait until green indicator of the "System Power" turns off.

(6) Make sure that the Alarm indicator of SB#0 is not lit. (See "Figure 13.3.2".)

Figure 13.3.2

(7) Proceed to "13.4 Verifying operation".

SET1304000

13.4 Verifying operation

Confirm the Micro SD according to the following procedures.

(1) Connect the operation terminal.
    See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
    See Appendix E.2.1 "Login".
(3) Start Video Redirection.
    See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
    See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
    See Appendix E.5.1 "Power On".
  → Wait for a few minutes until "Figure 13.4-1" is displayed. (Max. 10 minutes)

Figure 13.4-1
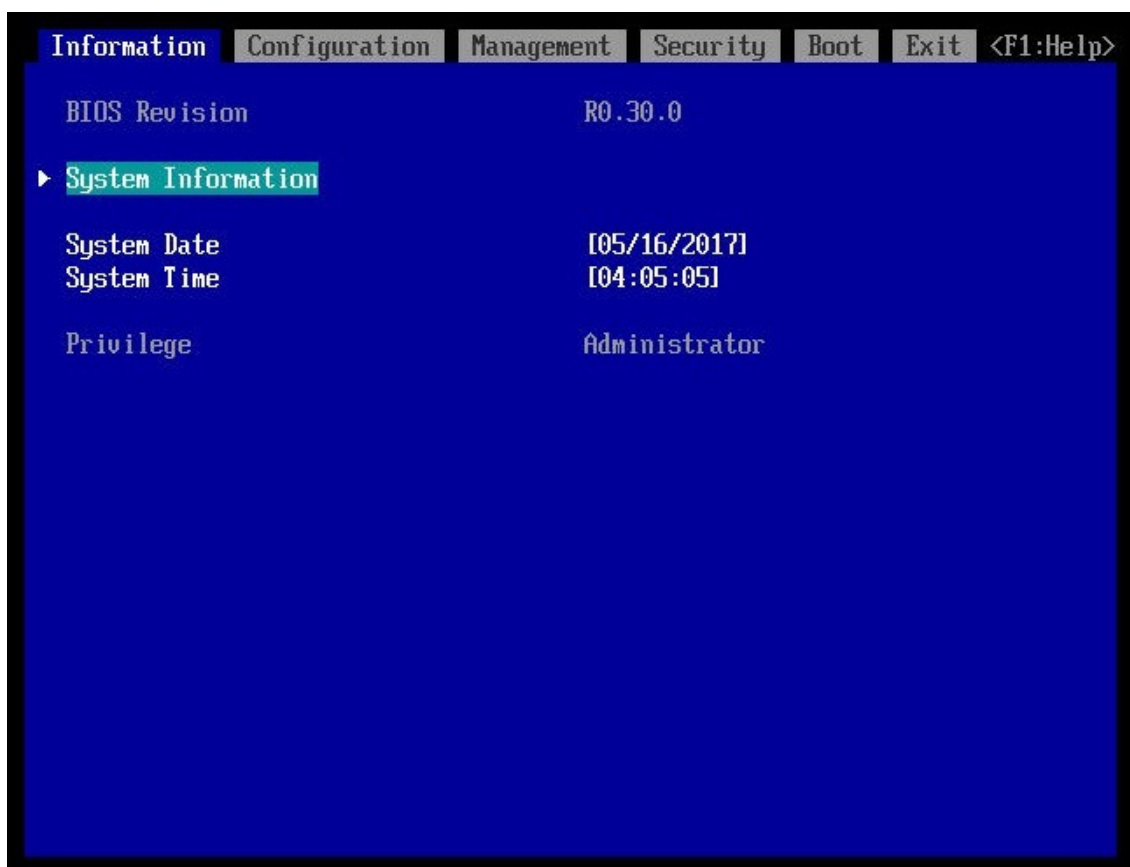
(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(8) Open the "config.txt" with text editor.
   A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 13.4-2 Example


```
------------------------------------------------------------------------
BMM (Install) : A3C40202225    : QM16477010
     ------------------------------------------------------------------
TPM (Install)
M.2-SSD#0 (Install)
M.2-SSD#1 (Install)
MicroSD (Install)
------------------------------------------------------------------------
```
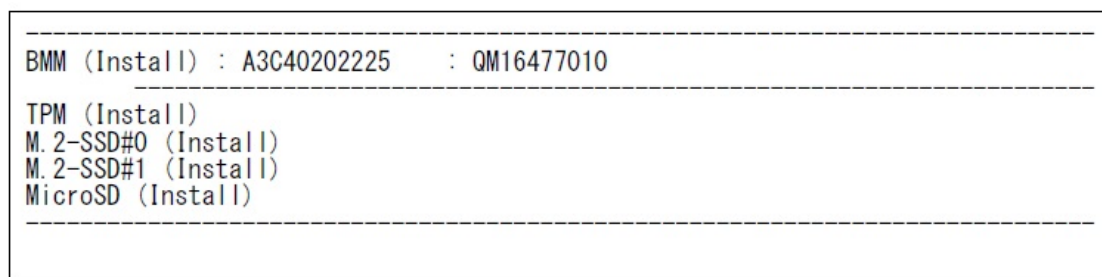
(9) Confirm that the BMM is displayed as "Install". (See "Figure 13.4-2".)
(10) Confirm the Micro SD is displayed as "Install". (See "Figure 13.4-2".)
(11) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking.
   (See "Figure 13.4-3".)

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Figure 13.4-3
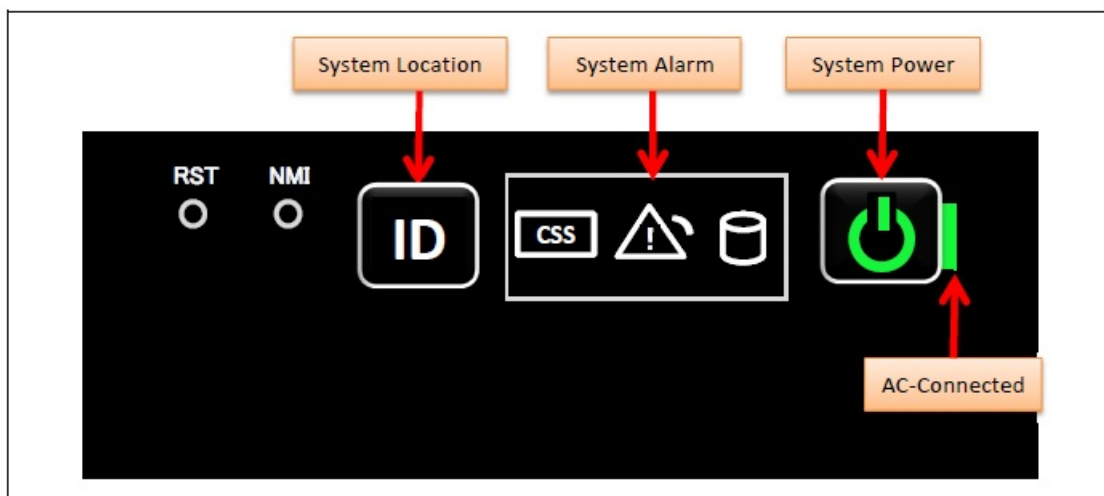
(12) Turn off the system power. See Appendix E.5.2 "Power Off".
(13) Proceed to "13.5 Preparation of handing over to the system administrator".

SET1305000

13.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.　See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "13.6 Handover to the system administrator".

SET1306000

13.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of IRMC or BIOS has been temporarily changed for work, the setting change is requested to the system administrator.
(3) The work is ended.

14 Installing TPM

36

- This chapter describes the procedure for installing TPM.

14.1 Conditions for installing components

- Can be installed on BMM Board installed in SB#0.

14.1.1 Firmware version

- No conditions.

14.1.2 Maximum installation amount

- 1 unit.

14.1.3 Conditions concerning combined use of TPM

- No conditions.

14.1.4 Base Unit state

- AC power to the Base Unit is off.

14.2 Work Items, Work Assignment, and Work Time

"Table 14.2" lists the work items, standard work time, and the person in charge of these types of work.

Table 14.2

Work item	Person in charge	Work time (minute)
Checking the delivered items	Service engineer	5
Installing option	Service engineer	10
Verifying operation	Service engineer	15
Preparation of handing over to the System Administrator	Service engineer	1
Handover to the system administrator	System administrator and Service engineer	5

SET1403000

14.3 Procedure for Installing TPM

SET1403010

14.3.1 Checking the delivered items

(1) Check the delivered items by confirming the following.
   1. The types and quantities of delivered options match those written on the order sheet.
   2. The delivered items match those listed in the List of Accessories.
   3. All cabinets are free of any abnormalities such as scratches, dents, or dirt.
   4. The specifications and version level of units delivered separately due to delivery considerations are available for the target functions.

(2) Proceed to "14.3.2 Installing option".

SET1403020

14.3.2 Installing option

Install according to the following procedures.

ANNT)
   - The installation location and quantity have to indicate by the system administrator.
   - Confirm connecting position of power cable of the Base Unit beforehand.

(1) Turn off AC power of the Base Unit.
(2) Remove the SB#0.
      See Appendix F.2.2 "Removing SB".
(3) Install the TPM onto BMM Board of the SB#0.
      See Appendix F.17 "Installing TPM".
(4) Install the SB#0.
      See Appendix F.2.1 "Installing SB".
(5) Turn on AC power of the Base Unit.
      → Wait until green indicator of the "System Power" turns off.

(6) Make sure that the Alarm indicator of SB#0 is not lit. (See "Figure 14.3.2".)

Figure 14.3.2
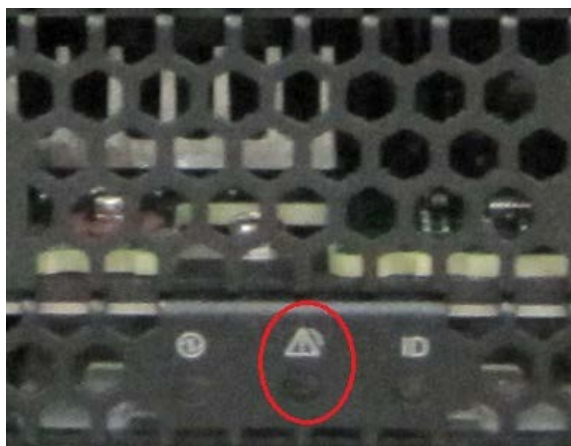
(7) Proceed to "14.4 Verifying operation".

SET1404000

14.4 Verifying operation

Confirm the TPM according to the following procedures.

(1) Connect the operation terminal.
   See Appendix E.1 "Operation terminal connection".
(2) Log in to the iRMC S5 Web from the operation terminal.
   See Appendix E.2.1 "Login".
(3) Start Video Redirection.
   See Appendix E.3.1 "Video Redirection start".
(4) Set "BIOS Setup" at "Boot Device Selector".
   See Appendix E.4 "Boot Device Selector setting".
(5) Turn on the system power.
   See Appendix E.5.1 "Power On".
  → Wait for a few minutes until "Figure 14.4-1" is displayed.　(Max. 10 minutes)

Figure 14.4-1
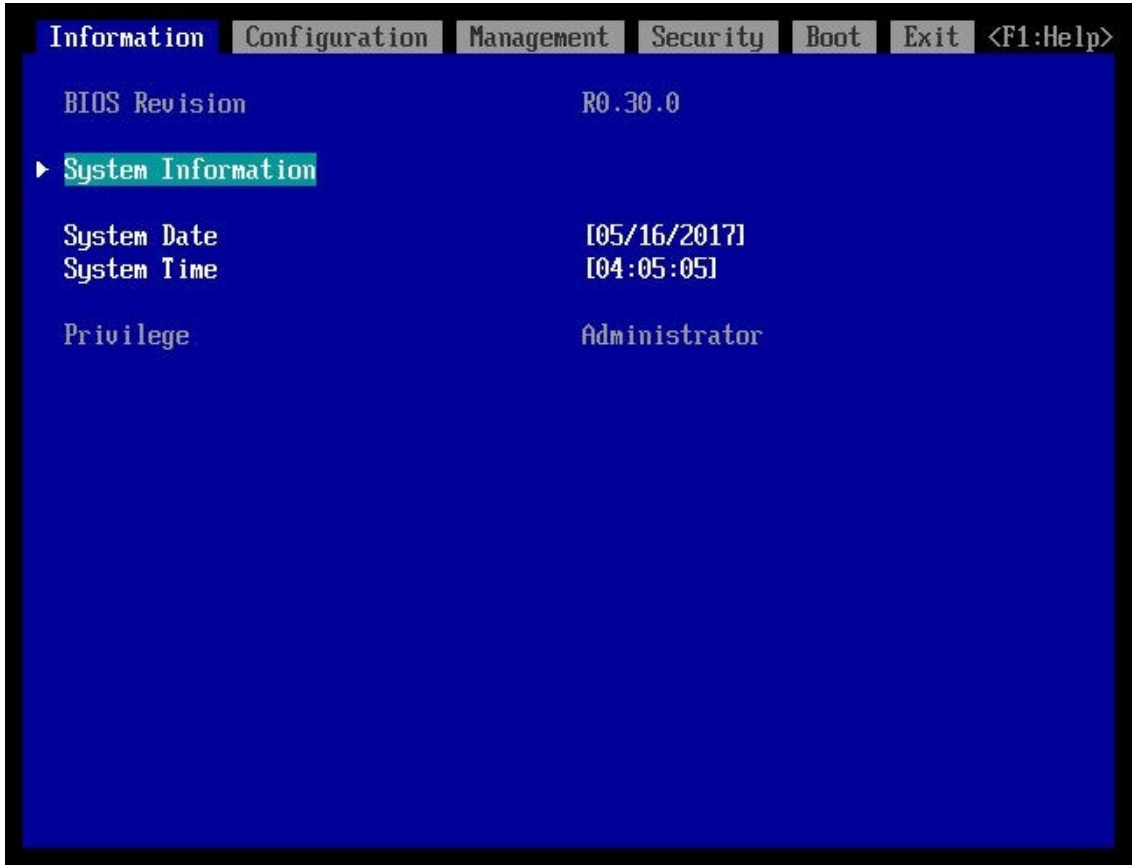

```
 Information   Configuration   Management   Security   Boot   Exit  <F1:Help>

    BIOS Revision                    R0.30.0

 ▶  System Information

    System Date                      [05/16/2017]
    System Time                      [04:05:05]

    Privilege                        Administrator
```

(6) Download the SEL to the operation terminal. See Appendix E.8 "SEL downloading".
(7) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of operation terminal.
(8) Open the "config.txt" with text editor.
   A slot with (Install) indicates that the slot is populated, and (   ) not populated.

Figure 14.4-2 Example


```
--------------------------------------------------------------------------------
BMM (Install) : A3C40202225    : QM16477010
              ------------------------------------------------------------------
TPM (Install)
M.2-SSD#0 (Install)
M.2-SSD#1 (Install)
MicroSD (Install)
--------------------------------------------------------------------------------
```
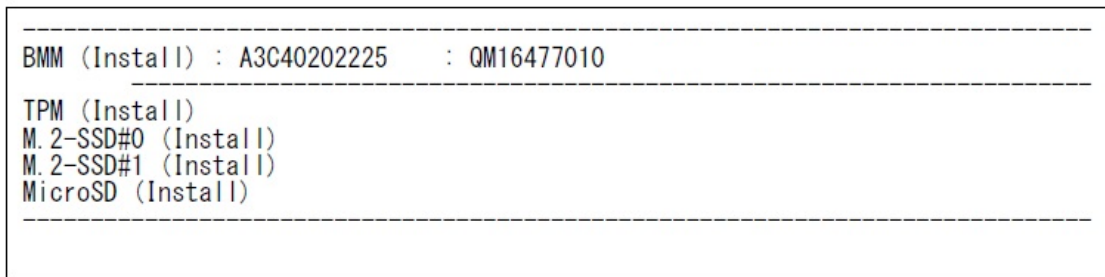
(9) Confirm that the BMM is displayed as "Install". (See "Figure 14.4-2".)
(10) Confirm the TPM is displayed as "Install".   (See "Figure 14.4-2".)
(11) Make sure that orange indicator of the "System Alarm" and "CSS" are not lit or blinking. (See "Figure 14.4-3".)

Figure 14.4-3
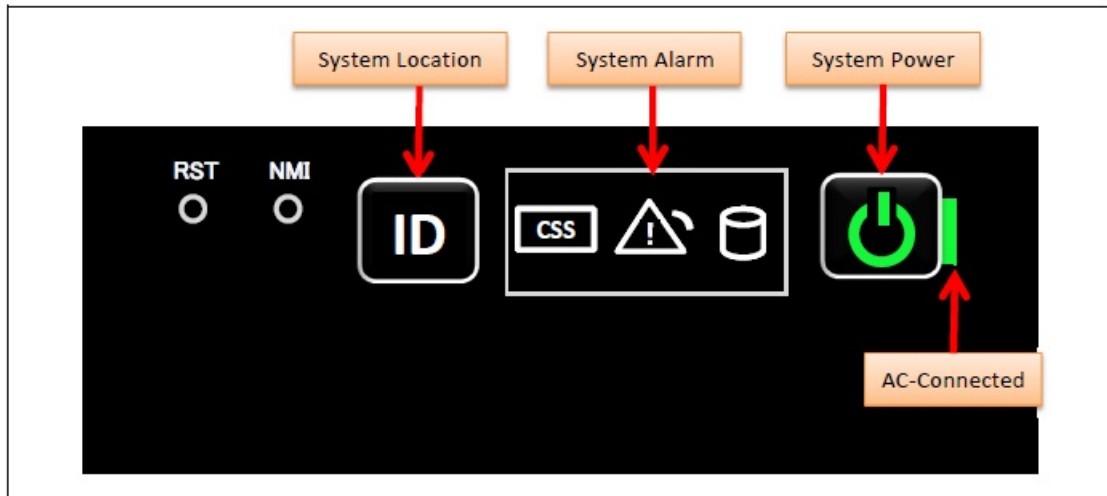
(12) Turn off the system power. See Appendix E.5.2 "Power Off".
(13) Proceed to "14.5 Preparation of handing over to the system administrator".

SET1405000

14.5 Preparation of handing over to the system administrator

(1) End the Video Redirection.   See Appendix E.3.2 "Video Redirection end".
(2) Logout of iRMC S5 Web. See Appendix E.2.2 "Logout".
(3) Remove the LAN cable connected for work.
(4) Reinstall all the covers and doors that were removed during the work.
(5) Clean them with a cleaning agent and waste cloth.
(6) Proceed to "14.6 Handover to the system administrator".

SET1406000

14.6 Handover to the system administrator

(1) Close the doors of the rack and hand over the door key to the system administrator.
(2) When the setting of IRMC or BIOS has been temporarily changed for work, the setting change is requested to the system administrator.
(3) The work is ended.

Appendix

Appendix A Installation Instructions Sheet

Use the sheet shown in the following figure to provide the installation worker with instructions on the required settings for on-site installation.

Figure A-1 Installation instructions sheet (example)

Appendix B Customer's Distribution Panel Breaker Requirements

To protect the device when it is connected to the customer's distribution panel, the corresponding breaker in the customer's power distribution panel must meet the following characteristic requirements so that the breaker of the device trips before the corresponding breaker in the customer's distribution panel. Use a breaker that meets these requirements in the customer's distribution panel.

Table B.1 Distribution panel breaker capacity

Power input	Device name	Capacity of breaker in customer's distribution panel (for use in countries other than European countries)	Capacity of breaker in customer's distribution panel (for use in Europe)
200 to 240 VAC	Power distribution box	30A	32A
200 to 240 VAC	Main Device	20A	16A

Use a long-time-delay type breaker whose characteristics correspond to phase D shown in "Figure B.1" Breaker characteristics (IEC898 or DIN0641 Part II). Alternatively, use a slower breaker.

Figure B.1 Distribution panel breaker characteristics

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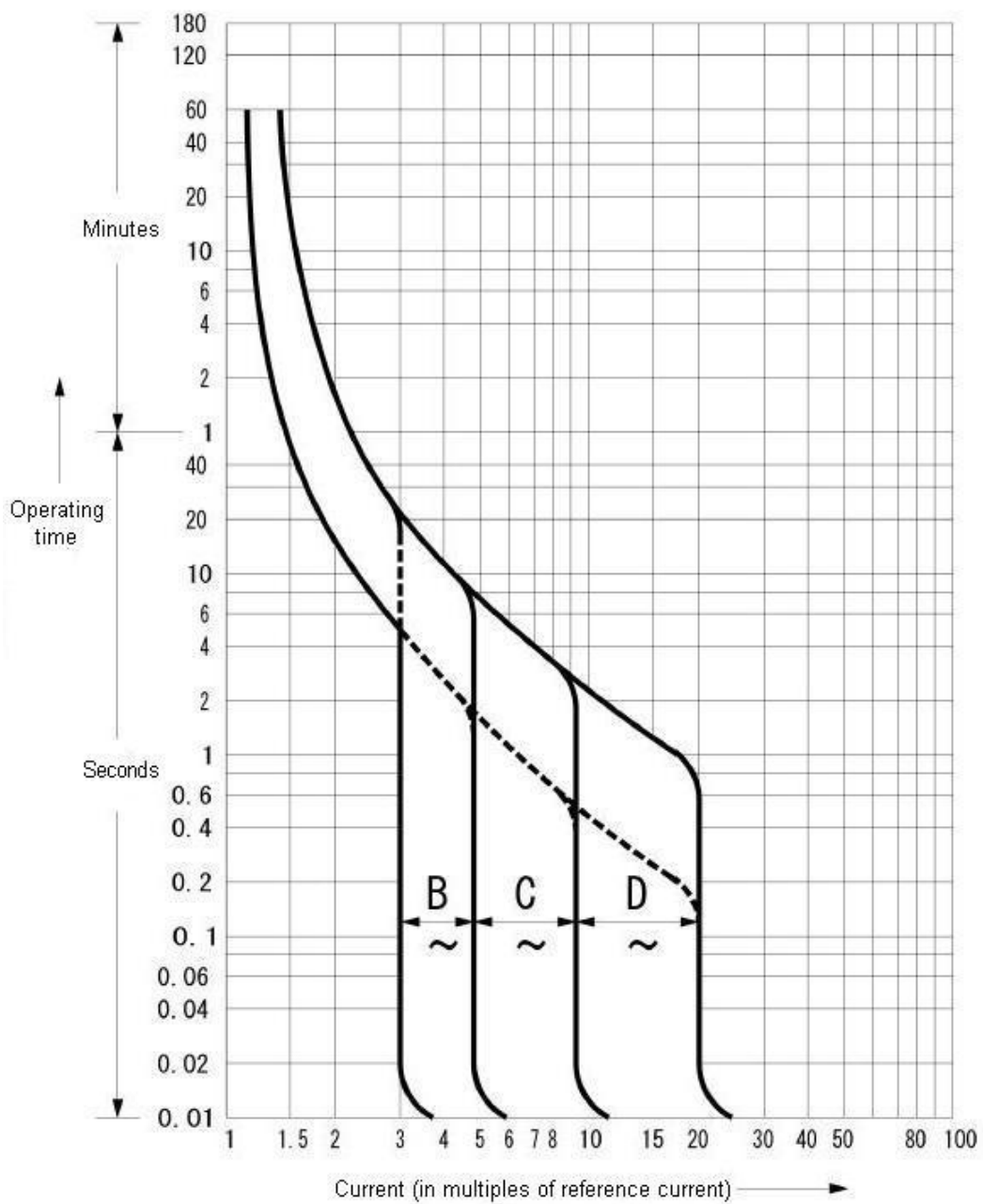
Appendix C Plug Types

This appendix describes the specifications of the power cables and the types of the plugs of the Base Unit.

C.1 Base Unit Plug Types (Global standard)

Connect the device with the power cable supplied with the device or cable supplied with the optional component. Do not use the power cable supplied with the device to connect a different product.

Figure C.1 Base Unit plug type

Location	Plug type	Memo	
For worldwide 200V	IEC60320-C20 type	Connect to power distribution box.	
		socket type	IEC60320-C19 type

C.2 Power Distribution Box Plug Types

ANNT)

  To connect to the Outlet distribution box, use the power cables which were packaged with the device or with options parts. Those cables should not be used for other products.

Figure C.2 Power Distribution Box plug type

Location	Plug type	Memo	
For worldwide 200V	NEMA L6-30P	Connect to power distribution box.	
		socket type	NEMA L6-30R(30A-220V)

Appendix D Input Power Systems

It explains the input power source system of the Base Unit.
In this chapter, PSU represents a power supply unit.

D.1 2 PSUs

Connect power cables according to the "Figure D.1-1" or "Figure D.1-2".
See Appendix B "Customer's Distribution Panel Breaker Requirements".

Figure D.1-1
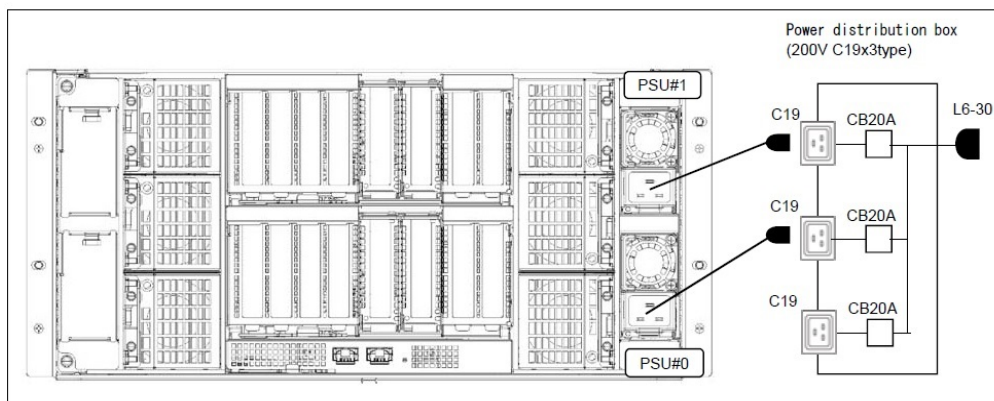
Figure D.1-2
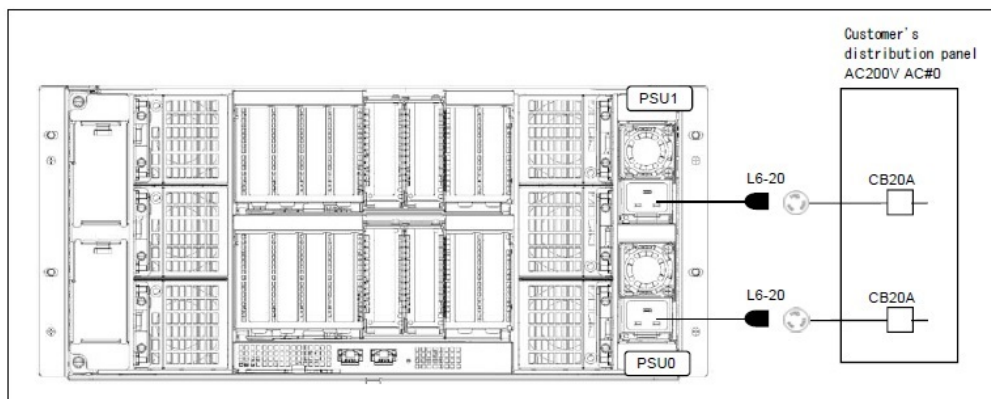
D.2 3 PSUs

Connect power cables according to the "Figure D.2-1" or "Figure D.2-2".
See Appendix B "Customer's Distribution Panel Breaker Requirements".

Figure D.2-1
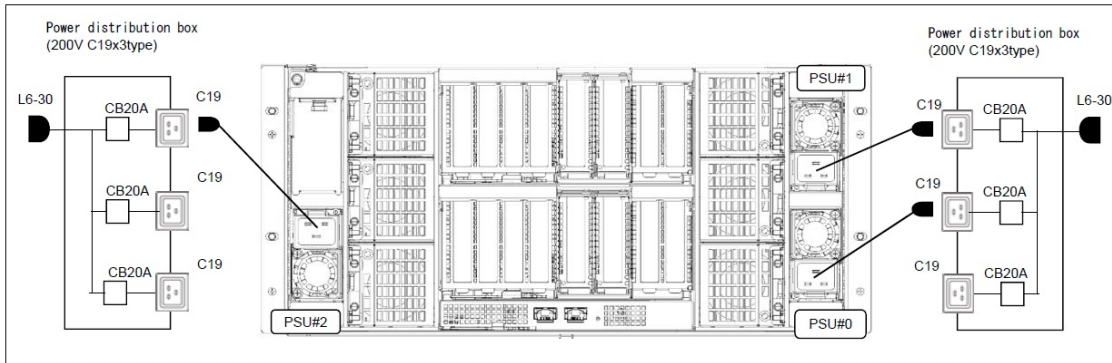
Figure D.2-2
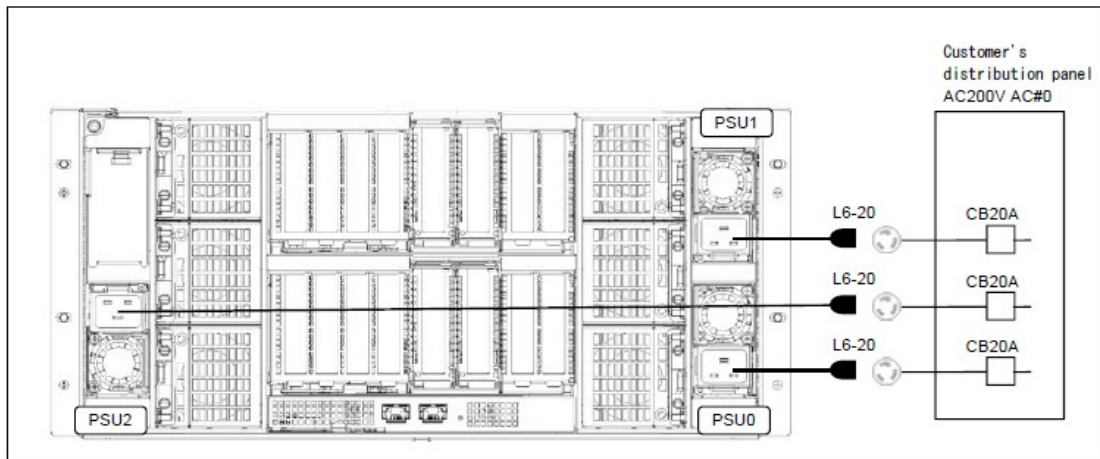
D.3 4 PSUs

When 2 AC Sources, connect power cables according to the "Figure D.3-1" or "Figure D.3-2".
When 1 AC Source, connect power cables according to the "Figure D.3-3" or "Figure D.3-4".

See Appendix B "Customer's Distribution Panel Breaker Requirements".

Figure D.3-1 When 2 AC Sources
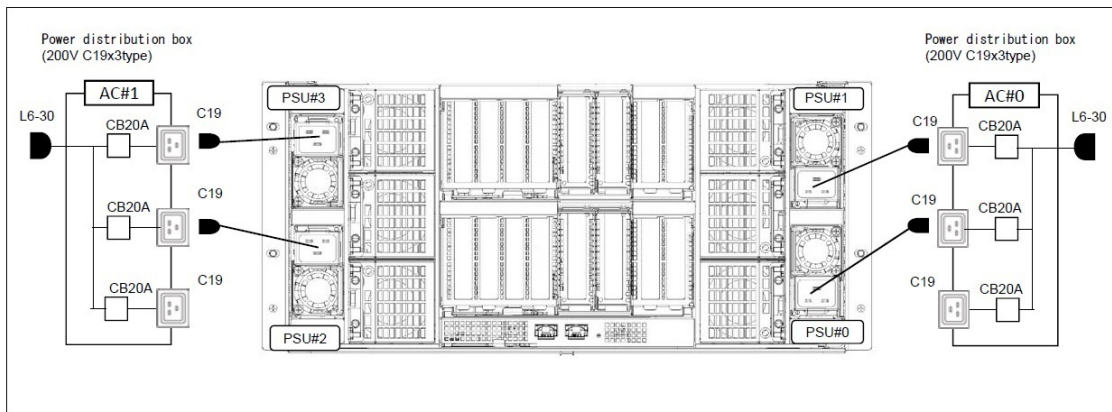
Figure D.3-2 When 2 AC Sources
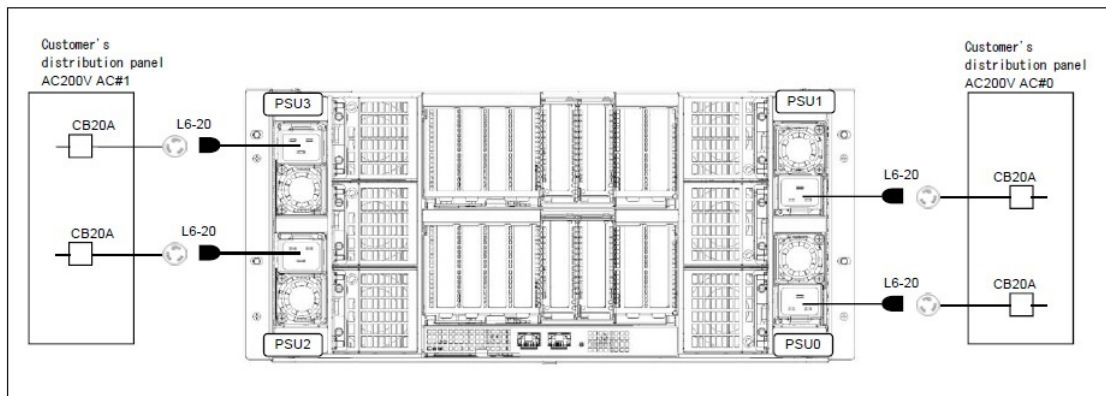
Figure D.3-3 When 1 AC Source
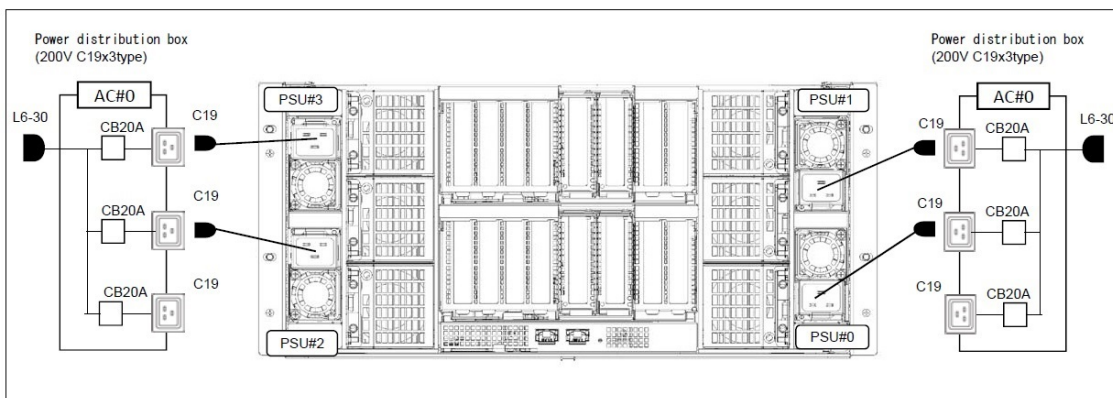
Figure D.3-4 When 1 AC Source
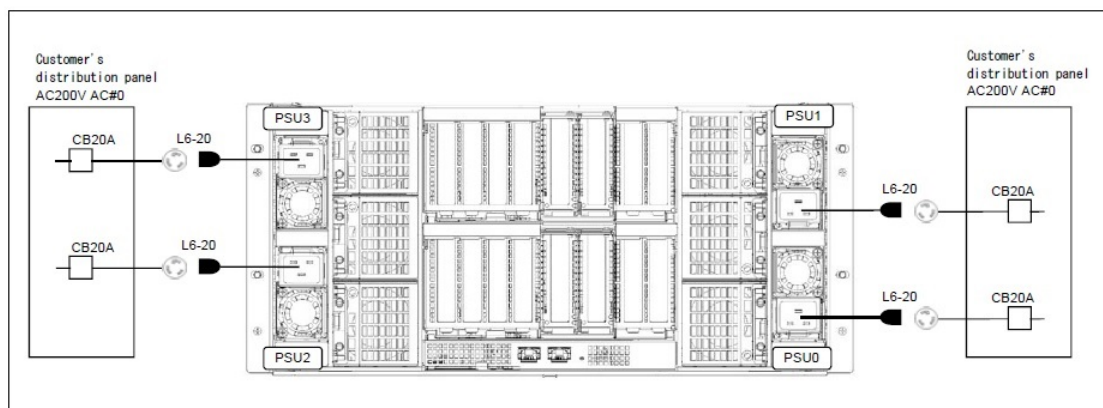
APP0500000

Appendix E Various Operations

APP0501000

E.1 Operation terminal connection

This section describes the operation terminal for work, setting and confirming of the Base Unit.
This server has no "Service engineer" dedicated port.
Thus operation of iRMC S5 on existing server must be done with specified terminal by consulting the system administrator.
Select the operation terminal for work according to the system administrator.
In this document, FST and PC of customer equipment are not distinguished, they are denoted as the operation terminal.

APP0501010

E.1.1 When connect the FST directly to the Base Unit by LAN cable

(1) Set IP Address, Subnet Mask and Gateway Address for the maintenance terminal exclusive use to the FST.
(2) Connect form the FST LAN port to the management LAN port of the Base Unit by LAN cable.

APP0501020

E.1.2 When connect the FST to network switch by LAN cable (DHCP disabled)

(1) Permission to connect FST with the switch on network is obtained.
(2) Set IP Address, Subnet Mask and Gateway Address for the maintenance terminal exclusive use to the FST.
(3) Connect form the FST LAN port to the network switch port by LAN cable.

APP0501030

E.1.3 When connect the FST to network switch by LAN cable (DHCP enabled)

(1) Permission to connect FST with the switch on network is obtained.
(2) Set DHCP enable to the FST.
(3) Connect form the FST LAN port to the network switch port by LAN cable.

E.1.4 When use the operation terminal of customer equipment connected to the network

(1) Permission using PC of customer equipment is obtained.
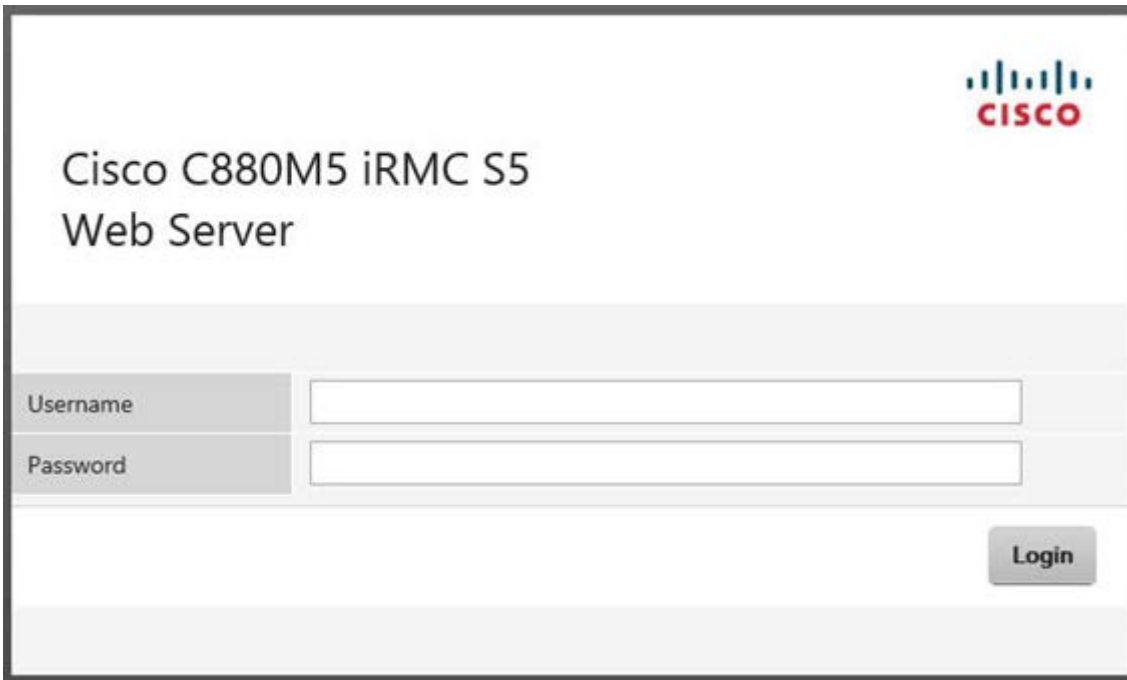
E.2 iRMC Web

E.2.1 Login

(1) Enter the URL at the web browser.
(2) Press the ENTER key.
  → The window shown in "Figure E.2.1-1" appears.

Figure E.2.1-1

(6) Enter service engineer account.
(7) Click on "Login" button.
  →The window shown in "Figure E.2.1-2" appears.

Figure E.2.1-2
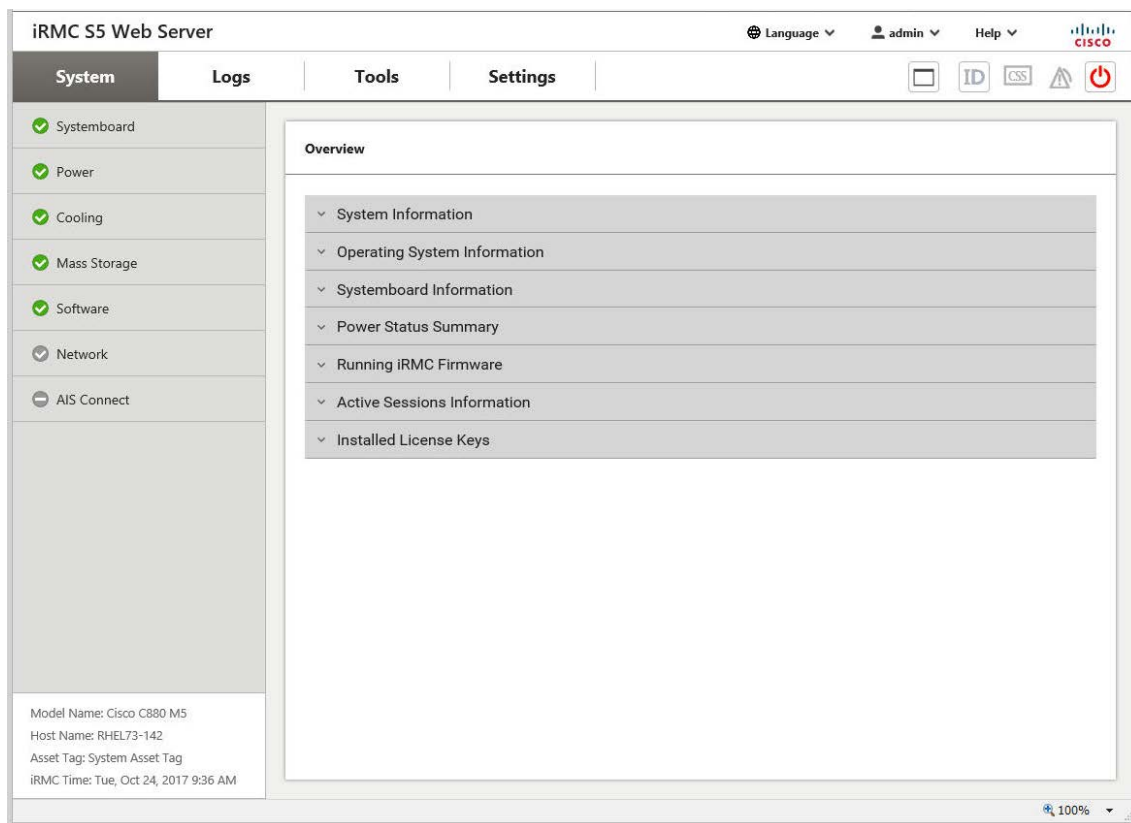
E.2.2 Logout

(1) Click on pull-down menu of login user name, and click on "Logout".　(See "Figure E.2.2".)

Figure E.2.2
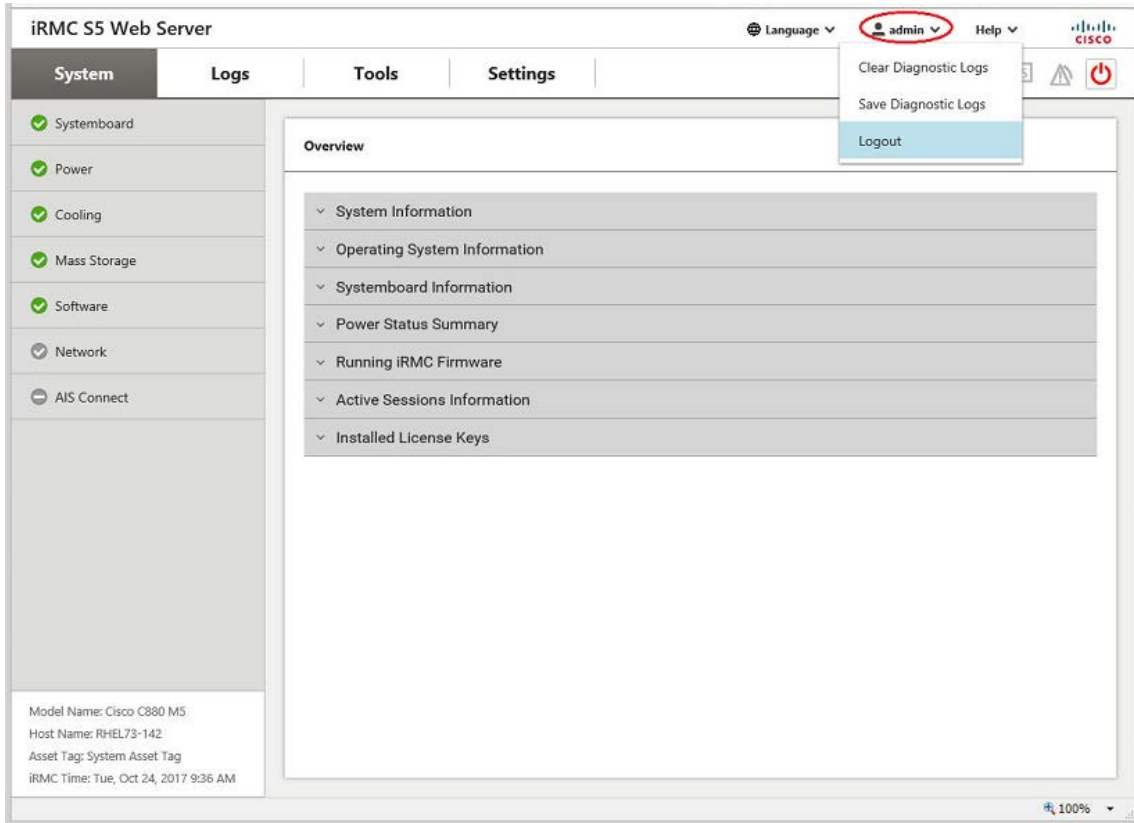
E.3 Video Redirection

E.3.1 Video Redirection start

(1) Click on "Settings" tab, click on "Service", and click on "Advanced Video Redirection (AVR)".
　　→The window shown in "Figure E.3.1-1" appears.

Figure E.3.1-1
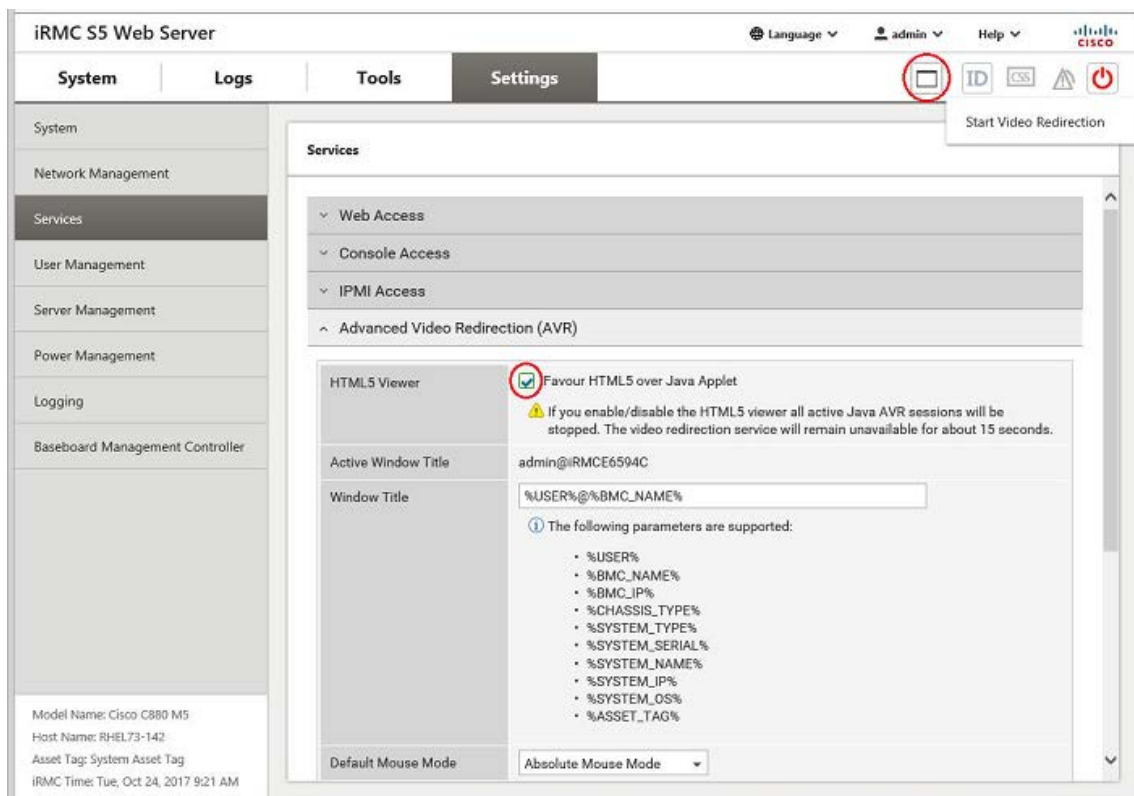
(2) Click on "HTML5 Viewer" check box, and enable it. 　(See "Figure E.3.1-1".)
(3) Click on the "Apply" button.
(4) Click on "Video Redirection" icon on the upper right of the view, and click on "Start Video Redirection". (See "Figure E.3.1-1".)
　　→The window shown in "Figure E.3.1-2" appears.

Figure E.3.1-2
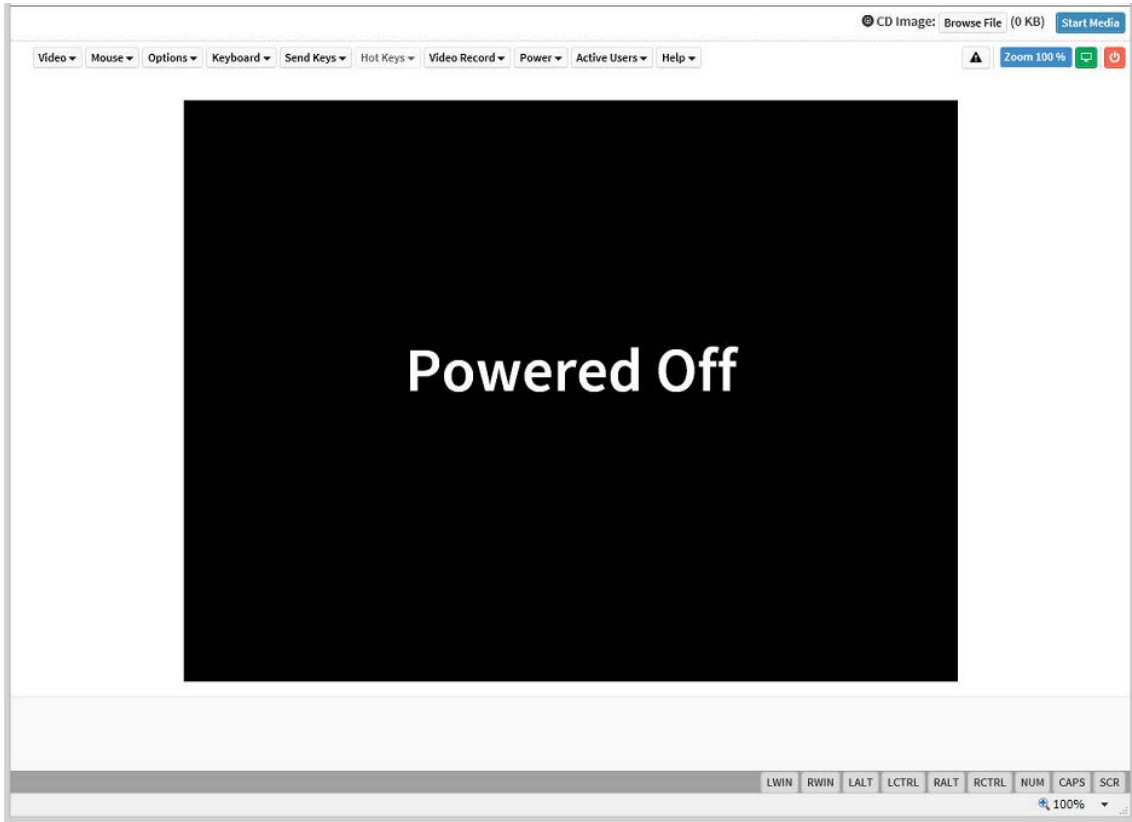
E.3.2 Video Redirection end

(1) Click on "Settings" tab, click on "Service", and click on "Advanced Video Redirection (AVR)".
　　→The window shown in "Figure E.3.2-1" appears.

Figure E.3.2-1
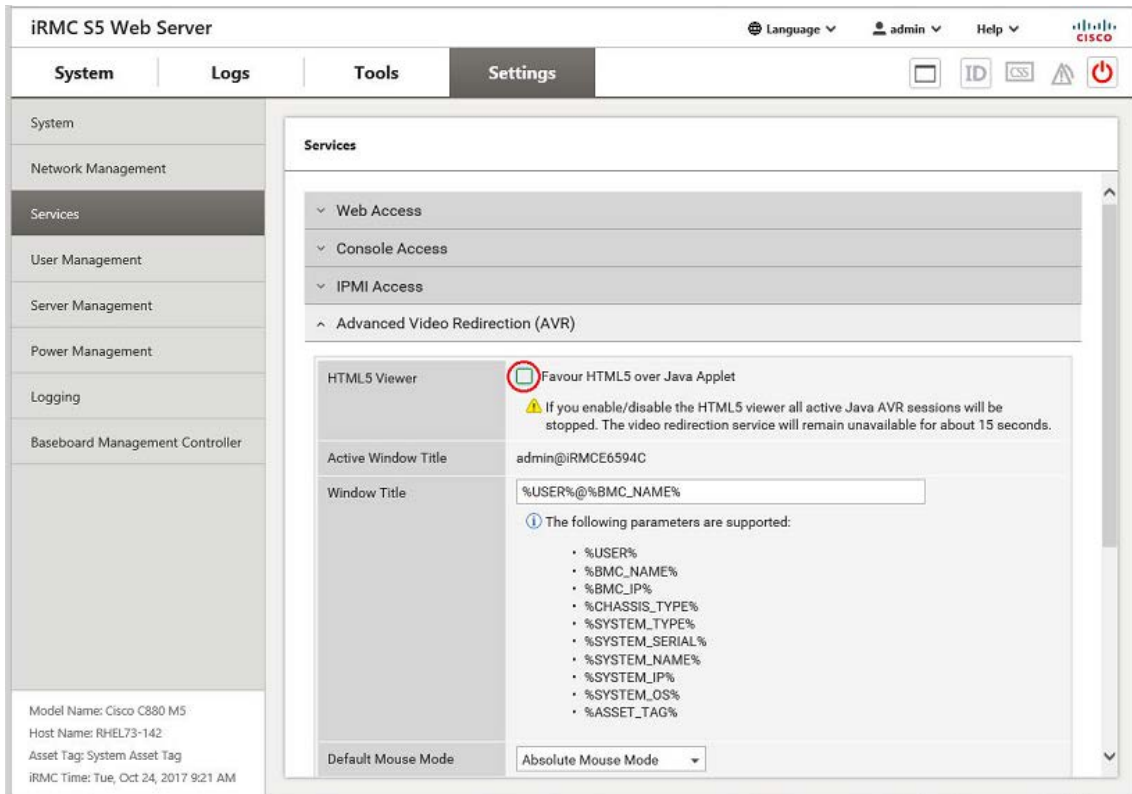
(2) Click on "HTML5 Viewer" check box, and disable it.
(3) Click on the "Apply" button.
　　→ The Video Redirection connection (HTML5) will end.

E.4 Boot Device Selector setting

(1) Click on "Settings" tab, click on "System", and click on "Boot Options".
　　→The window shown in "Figure E.4" appears.

Figure E.4
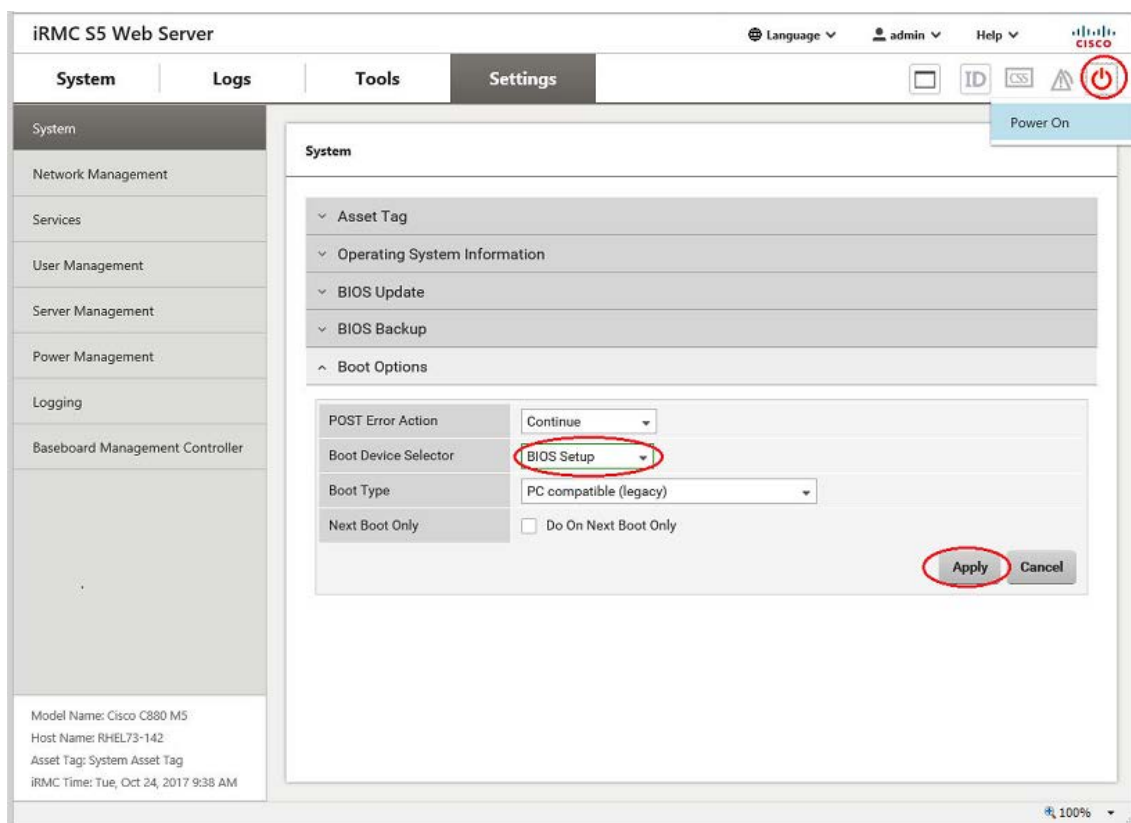
(2) Select "BIOS Setup" at "Boot Device selector" pull-down menu. (See "Figure E.4".)
(3) Click on the "Apply" button.
(4) Confirm that "BIOS Setup" was set.

E.5 Power On/Off

E.5.1 Power On

(1) Click on "Settings" tab, click on "System", and click on "Boot Options".
  →The window shown in "Figure E.5.1-1" appears.

Figure E.5.1-1
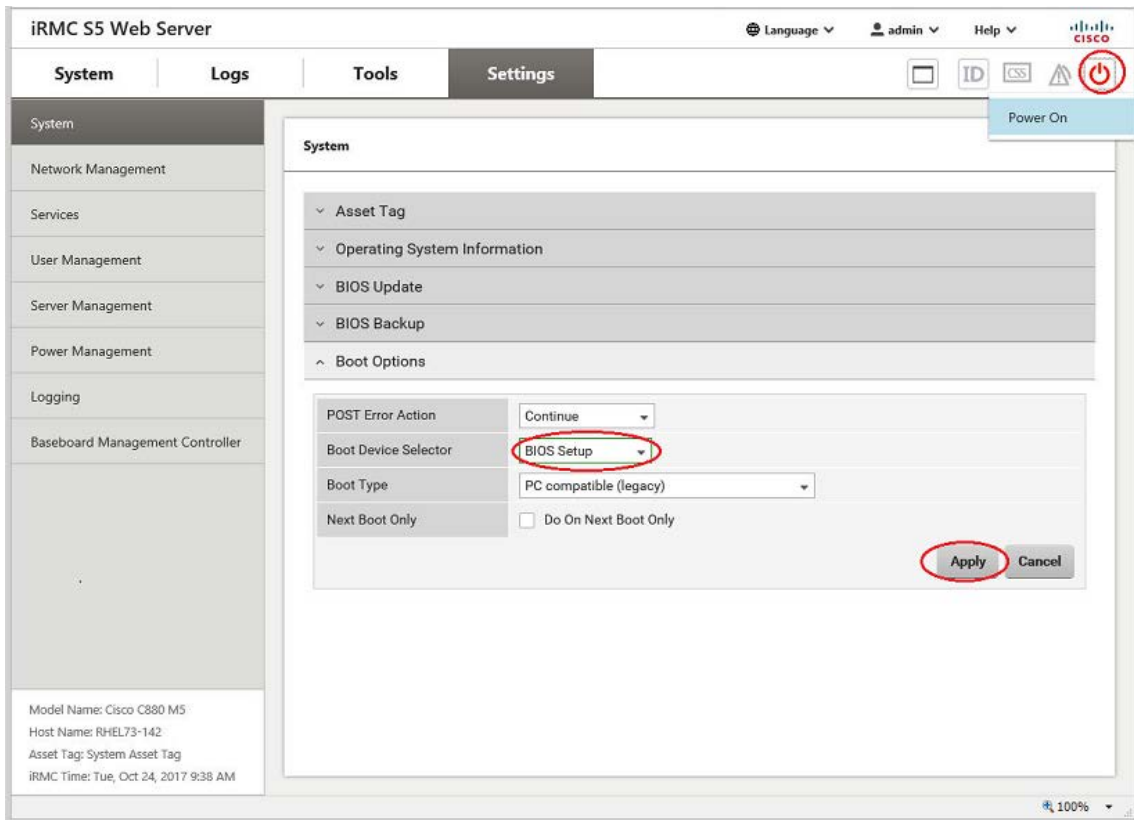
(2) Confirm that "BIOS Setup" was set.　(See "Figure E.5.1-1".)
(3) Click on "Power" icon on the upper right of the view, and click on "Power On".
  (See Figure "E.5.1-1".)
    →Wait for a few minutes until "Figure E.5.1-2" is displayed on the Video Redirection screen. (Max. 10 minutes)

Figure E.5.1-2

| Information | Configuration | Management | Security | Boot | Exit | <F1:Help> |

BIOS Revision   R0.30.0

▶ System Information

System Date   [05/16/2017]
System Time   [04:05:05]

Privilege   Administrator

E.5.2 Power Off

(1) Click on "System" tab, and click on "Power Status Summary".
　　　→The window shown in "Figure E.5.2" appears.

Figure E.5.2
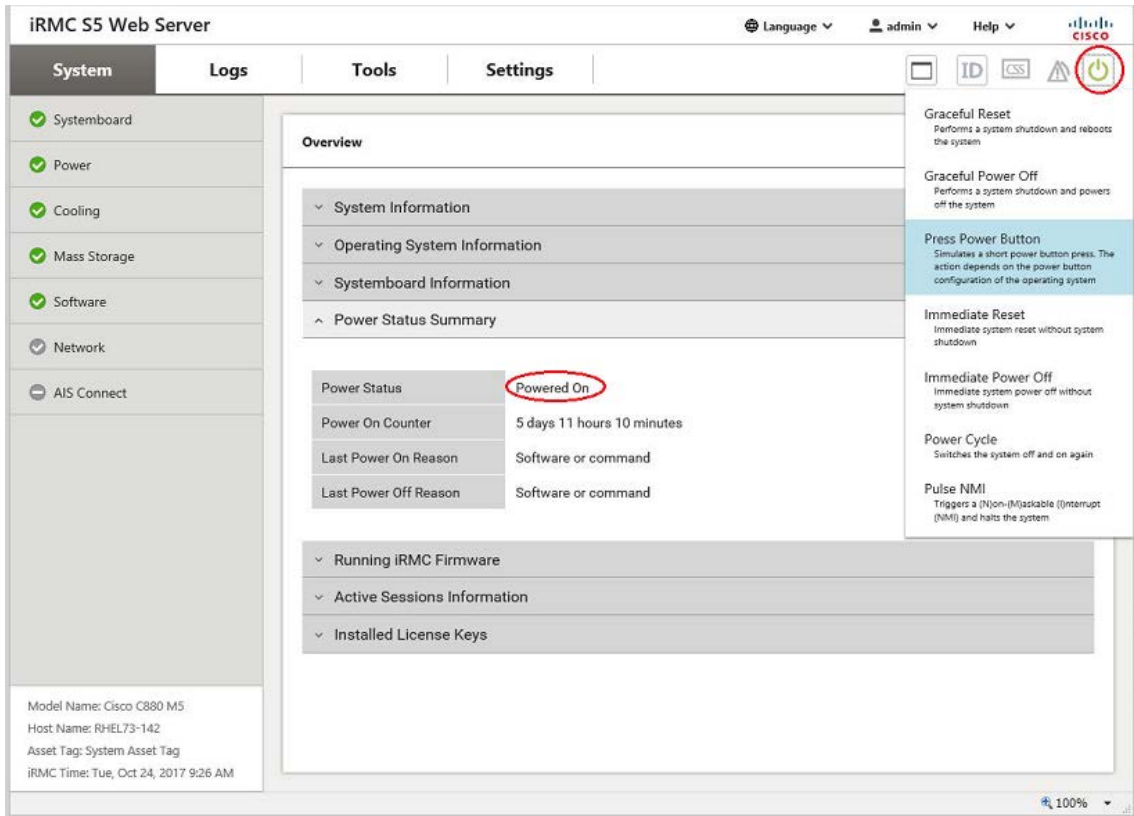
(2) Click on "Power" icon on the upper right of the view, and click on "Press Power Button".
　　(See "Figure E.5.2".)
　　　Wait about 30 seconds after, click on "Tools" tab then click on "System" tab again.
(3) Confirm that the "Power Status" display became Power Off.

E.6 Memory Operation Mode setting

(1) Click on "Settings" tab, click on "Server Management", and click on "Memory Operation Mode".
   →The window shown in "Figure E.6" appears.

Figure E.6
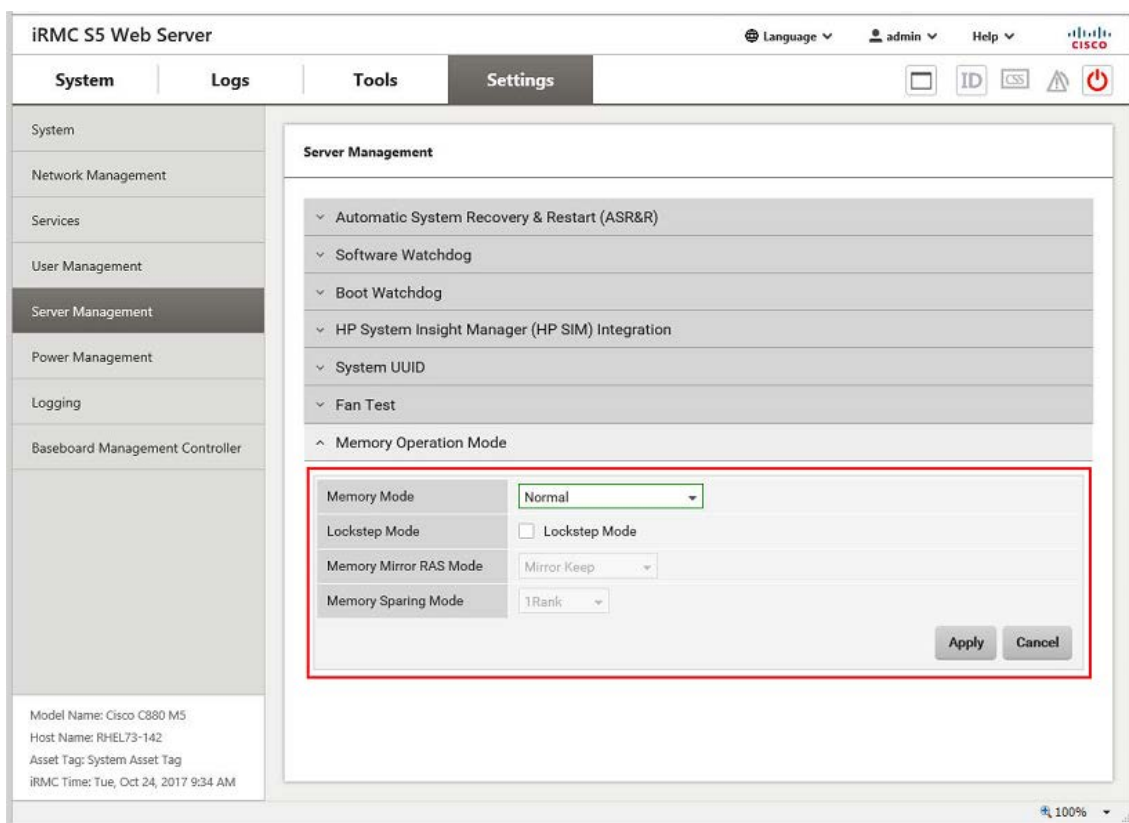
(2) Set "Memory Operation Mode" according to instructions of the system administrator.
(3) Click on the "Apply" button.
(4) Confirm that instructions value was set.

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E.7 Checking memory type

(1) Download SEL. (See Appendix E.8 "SEL downloading
(2) Unzip the "SystemEventLog.zip" then copy "config.txt" file onto desktop of the operation terminal.
(3) Open the "config.txt" with text editor. (See "Figure E.7".)
    See "Table E.7", for DIMM type.

Figure E.7 Example

```
================================================================================
SB#0 (Install) : A3C40202223          : QM1710807E        :
--------------------------------------------------------------------------------
SB#0-CPU#0 (Install) : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
SB#0-CPU#1 (Install) : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
--------------------------------------------------------------------------------
SB#0-DIMM#0A0 (Install) : DPRD-0016014
SB#0-DIMM#0A1 (Install) : DPRD-0016014
SB#0-DIMM#0B0 (Install) : DPRD-0016014
SB#0-DIMM#0B1 (Install) : DPRD-0016014
SB#0-DIMM#0C0 (Install) : DPRD-0016014
SB#0-DIMM#0C1 (Install) : DPRD-0016014
SB#0-DIMM#0D0 (Install) : DPRD-0016014
SB#0-DIMM#0D1 (Install) : DPRD-0016014
SB#0-DIMM#0E0 (Install) : DPRD-0016014
SB#0-DIMM#0E1 (Install) : DPRD-0016014
SB#0-DIMM#0F0 (Install) : DPRD-0016014
SB#0-DIMM#0F1 (Install) : DPRD-0016014
SB#0-DIMM#1A0 (Install) : DPRD-0016014
SB#0-DIMM#1A1 (Install) : DPRD-0016014
SB#0-DIMM#1B0 (Install) : DPRD-0016014
SB#0-DIMM#1B1 (Install) : DPRD-0016014
SB#0-DIMM#1C0 (Install) : DPRD-0016014
SB#0-DIMM#1C1 (Install) : DPRD-0016014
SB#0-DIMM#1D0 (Install) : DPRD-0016014
SB#0-DIMM#1D1 (Install) : DPRD-0016014
SB#0-DIMM#1E0 (Install) : DPRD-0016014
SB#0-DIMM#1E1 (Install) : DPRD-0016014
SB#0-DIMM#1F0 (Install) : DPRD-0016014
SB#0-DIMM#1F1 (Install) : DPRD-0016014
--------------------------------------------------------------------------------
```

Table E.7

Display of Installed DIMM	DIMM Type	DIMM capacity (GB)	RANK
DPRD-0008014	RDIMM	8	1
DPRD-0016014	RDIMM	16	1
DPRD-0016024	RDIMM	16	2
DPRD-0032024	RDIMM	32	2
DSRD-0064044	RDIMM	64	4
DPLR-0064044	LRDIMM	64	4
DSRD-0128084	RDIMM	128	8

(4) Check installed DIMM information on all SBs.

E.8 SEL downloading

(1) Click on "Tools" tab, click on "Reports", and click on "System Event Log".
　　→ The window shown in "Figure E.8-1" appears.

Figure E.8-1
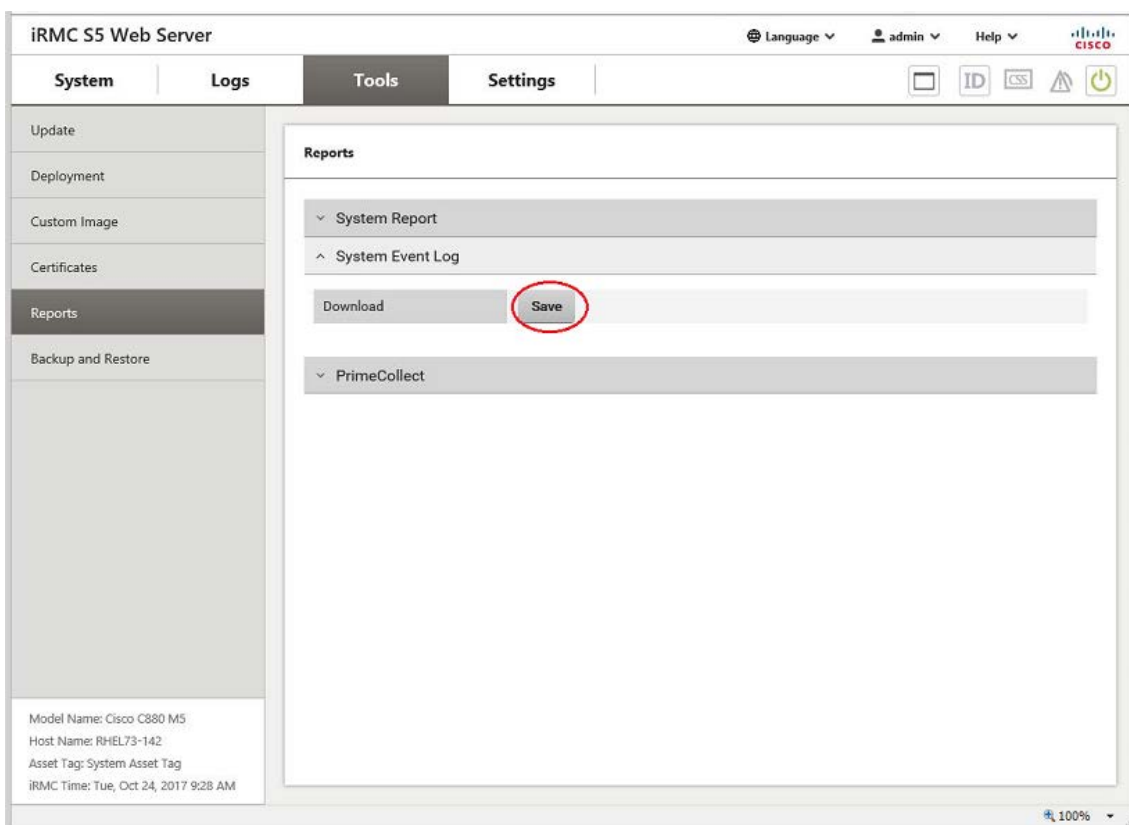
(2) Click on "Save" button, and save "SystemEventLog" file to the operation terminal.
　　(See "Figure E.8-1".)
(3) Rename "SystemEventLog" to "SystemEventLog.zip".

APP0509000

E.9 Power Restore Policy setting

(1) Click on "Settings" tab, click on "Power Management", and click on "Power Restore Policy".
　　→ The window shown in "Figure E.9" appears.

Figure E.9
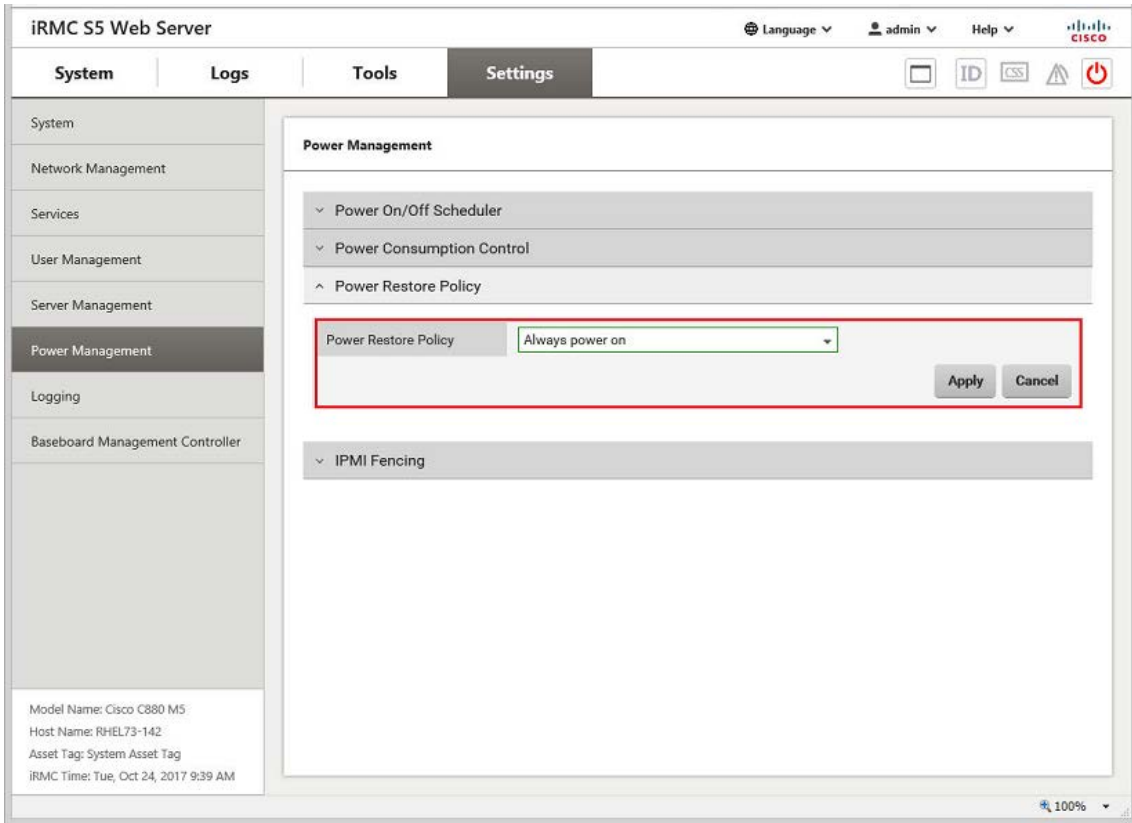
(2) Select the corresponding setting value at "Power Restore Policy" pull-down menu.
(3) Click the "Apply" button.
(4) Confirm the corresponding value was set.

E.10 FBU (BBU) status confirming

(1) Click on "System" tab, click on "Mass Storage", and click on "RAID Controllers".
→ The window shown in "Figure E.10-1" appears.

Figure E.10-1

(2) Click on ">" mark with RAID Controller.　(See "Figure E.10-1".)
(3) Confirm "Status" display under "Battery Backup Unit" is "Normal".　(See "Figure E.10-2".)

Figure E.10-2

Appendix F Handling the Units

F.1 Unit location

Figure F.1-1 Front

Figure F.1-2 Rear

Management Port

Shared Port
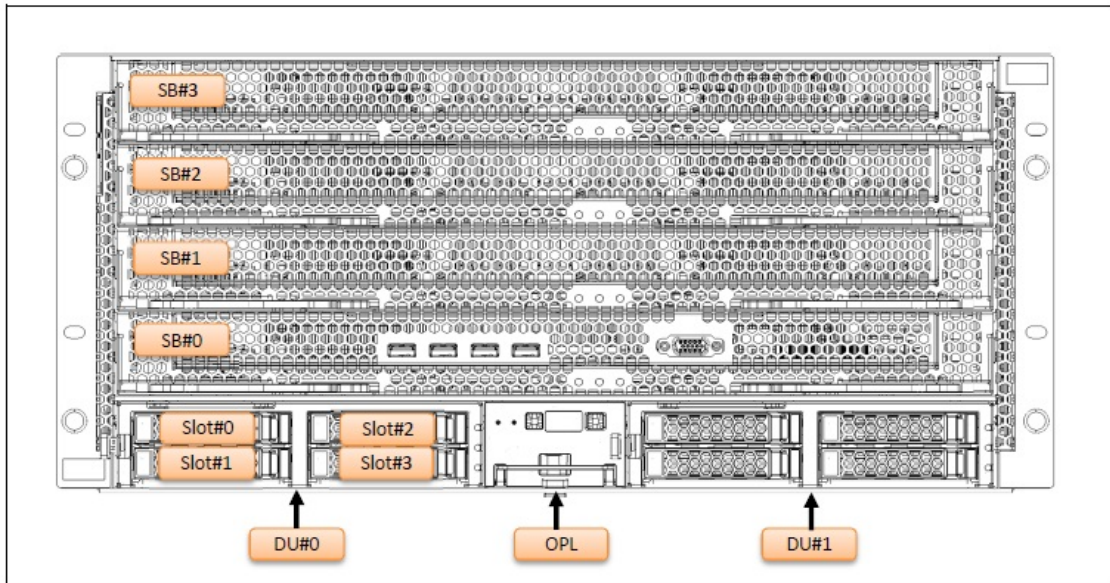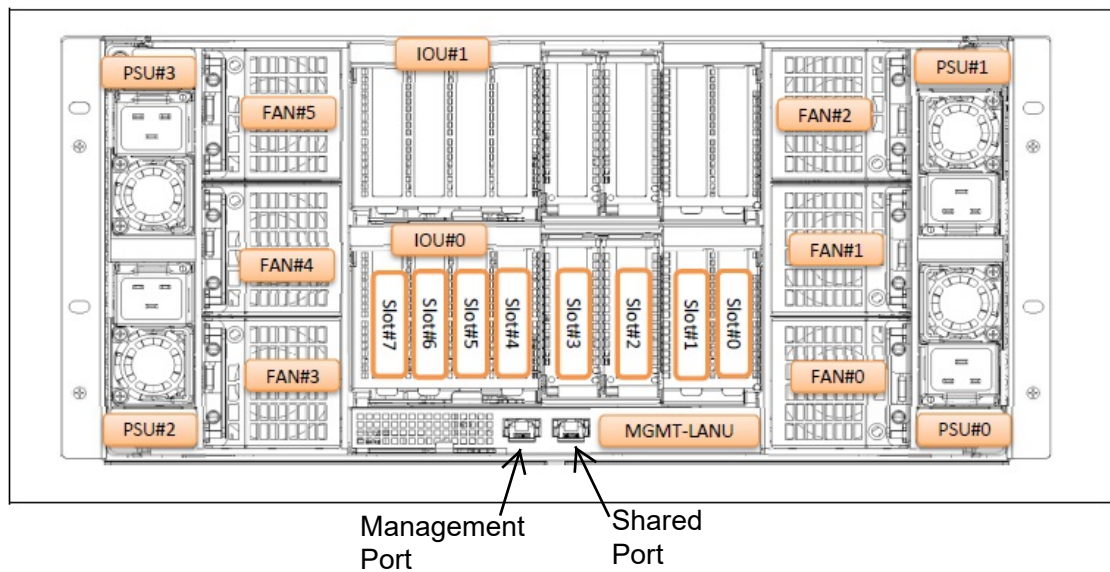
F.2 SB

F.2.1 Installing SB

(1) Insert a SB into the Base Unit.
(2) Move the left and right the B parts of the SB in the direction of the arrow. (See "Figure F.2.1-1".)
(3) Lock the B parts with the A parts. (See "F.2.1-2".)

Figure F.2.1-1
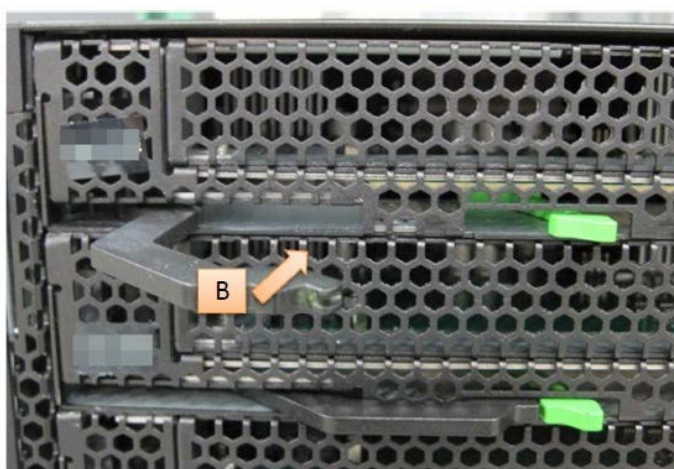
Figure F.2.1-2

F.2.2 Removing SB

(1) Move the left and right the A parts of the SB, and unlock the B parts. (See "Figure F.2.2".)
(2) Move the left and right the B parts of the SB in the direction of the arrow.
(3) Pull a SB out of the Base Unit.

Figure F.2.2
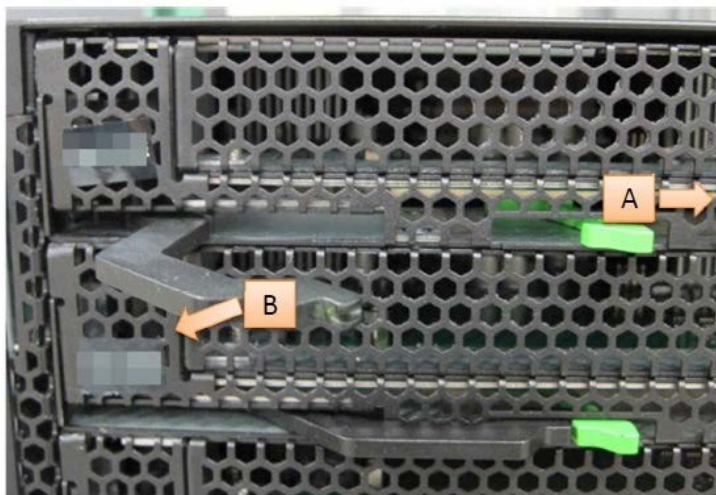
F.2.3 Installing a cover of SB

(1) Slide a cover in the direction of the arrow. (See "Figure F.2.3".)

Figure F.2.3

F.2.4 Removing a cover of SB

(1) Slide a cover in the direction of the arrow while pressing part A. (See "Figure F.2.4".)

Figure F.2.4
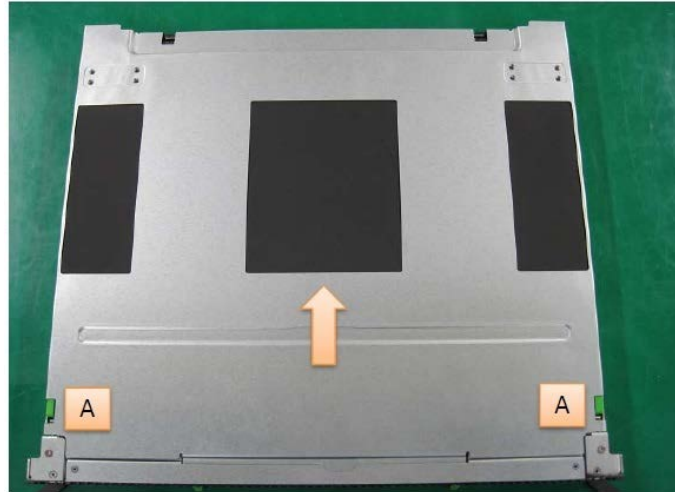
F.3 IOUB

F.3.1 Installing IOUB

(1) Insert IOUB into the Base Unit.
(2) Move the B part in the direction of the arrow. (See "Figure F.3.1-1".)
(3) Lock the B part with the A part. (See "Figure F.3.1-2".)

Figure F.3.1-1
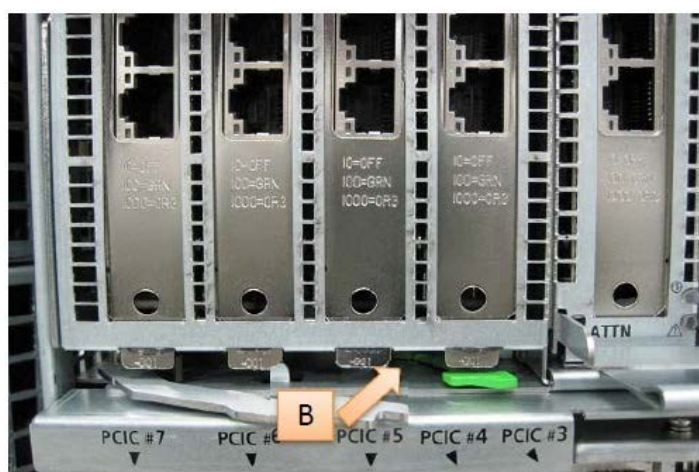
Figure F.3.1-2
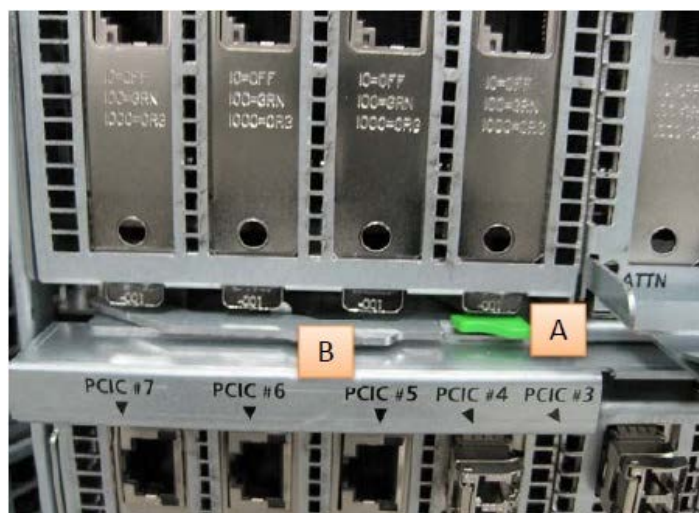
F.3.2 Removing IOUB

(1) Move the A part and unlock the B part. (See "Figure F.3.2".)
(2) Move the B part in the direction of the arrow.
(3) Pull IOUB out of the Base Unit.

Figure F.3.2
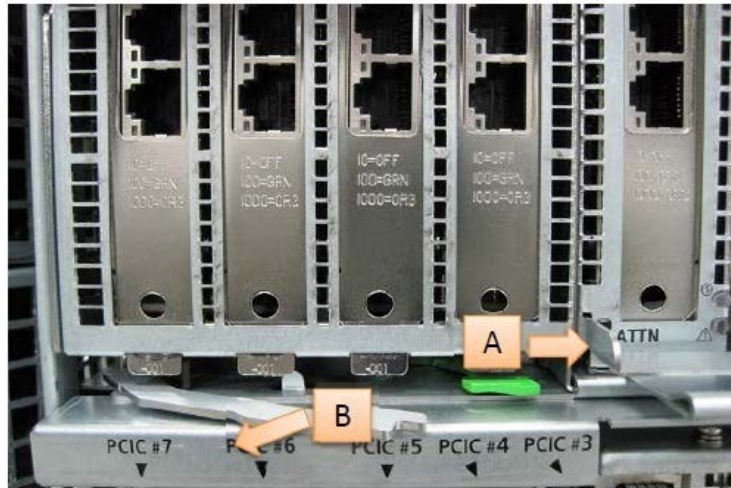
F.3.3 Installing IOUB cover

(1) Slide the cover in the direction of the arrow and fix with the screws. (See "Figure F.3.3".)

Figure F.3.3
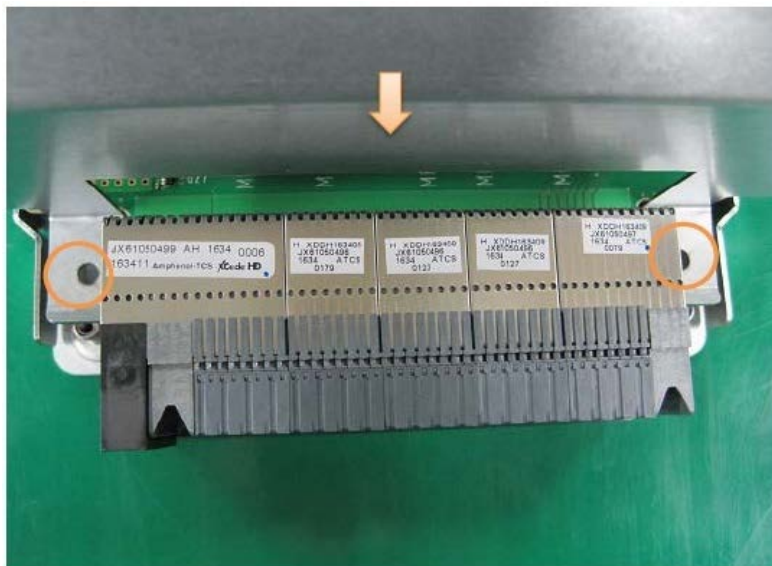
F.3.4 Removing IOUB cover

(1) Remove the screws and slide the cover in the direction of the arrow. (See "Figure F.3.4".)

Figure F.3.4

F.4 DU_SAS

F.4.1 Installing DU_SAS

(1) Insert DU_SAS into the Base Unit.
(2) Move the B part in the direction of the arrow. (See "Figure F.4.1".)

Figure F.4.1
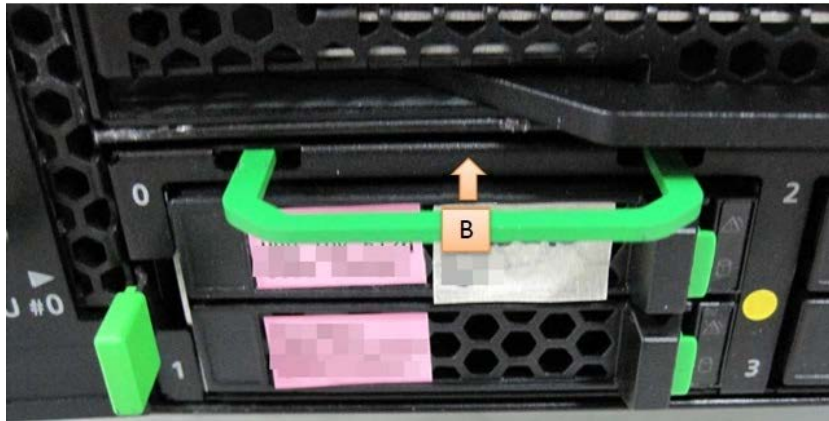
F.4.2 Removing DU_SAS

(1) While moving the A part in the direction of the arrow move the B part in the direction of the arrow.
(See "Figure 6.4.2".)

Figure F.4.2
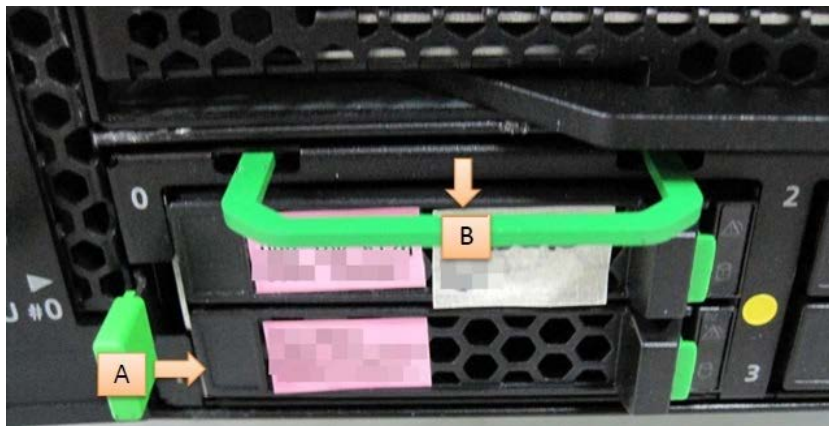
(2) Pull a DU_SAS out of the Base Unit.

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F.5 DU_PCIE

F.5.1 Installing DU_PCIE

(1) Insert a DU_PCIE into the Base Unit.
(2) Move the B part in the direction of the arrow. (See "Figure F.5.1".)

Figure F.5.1
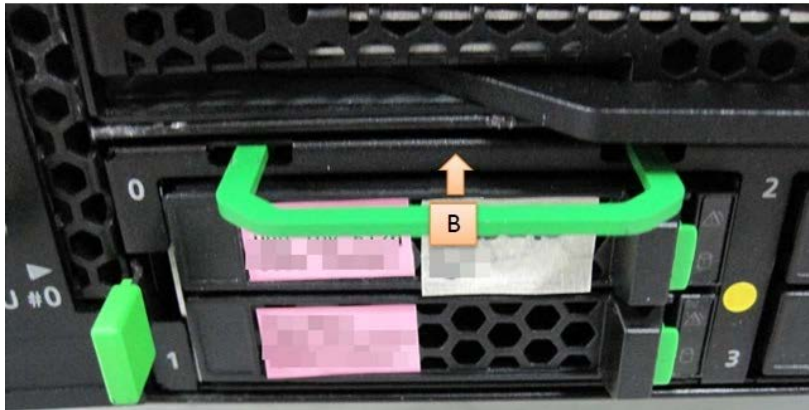
F.5.2 Removing DU_PCIE

(1) While moving the A part in the direction of the arrow move the B part in the direction of the arrow.
   (See "Figure F.5.2".)

Figure F.5.2
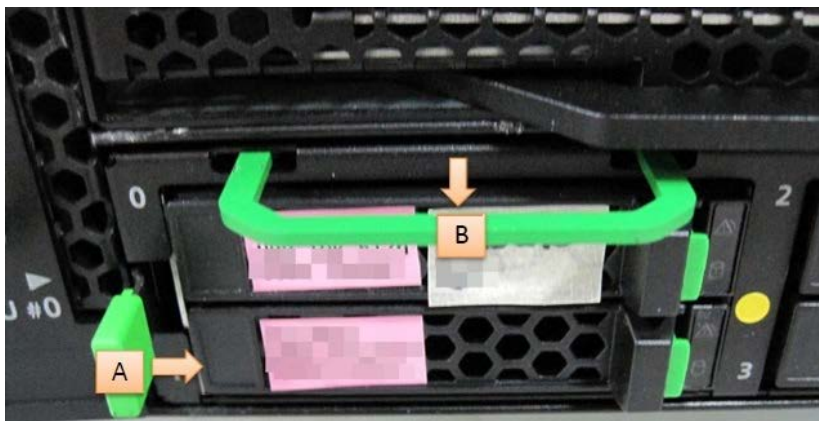
(2) Pull DU_PCIE out of the Base Unit.

F.6 PSU

F.6.1 Installing PSU

(1) Insert PSU into the Base Unit.
(1) Push the B part to install. (See "Figure F.6.1".)
(2) Connect the power cable and fix the power cable using the C part.

Figure F.6.1
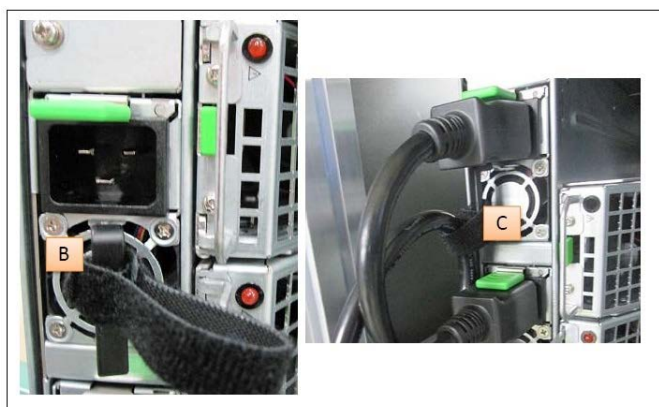
F.6.2 Removing PSU

(1) Turn off the AC power and disconnect the power cable.
(2) Hold down the A part and pull the B part. (See "Figure F.6.2".)
(3) Pull PSU out of the Base Unit.

Figure F.6.2

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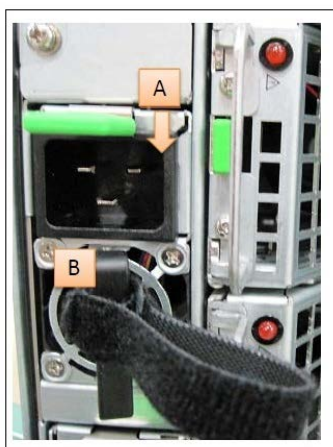
F.7 CPU

Figure F.7 Location of CPUs
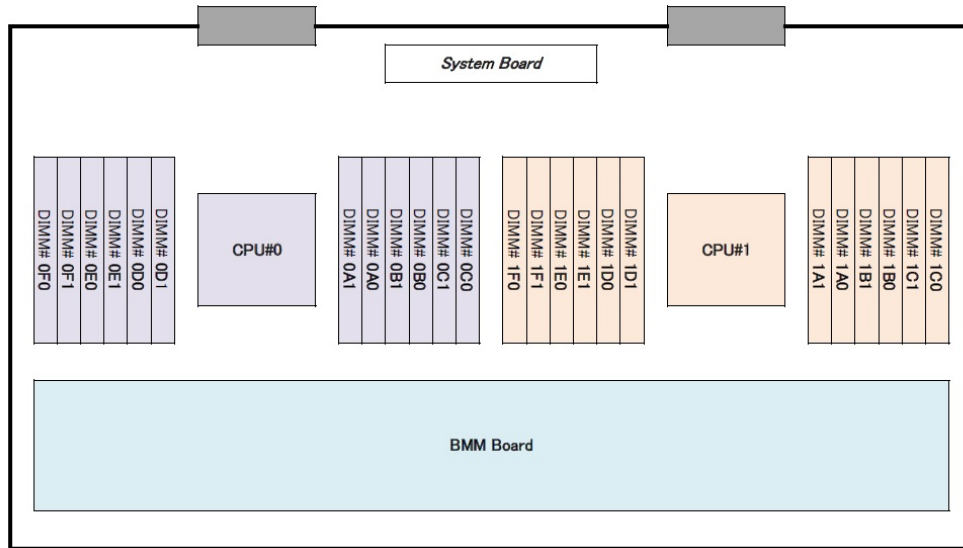
F.7.1 Installing CPU

(1) The key and the keyway (red circle part) are matched, and Processor Clip is installed in CPU package. (See Figure "F.7.1-1".)
   Do not touch on back (PAD) of CPU package.

Figure F.7.1-1
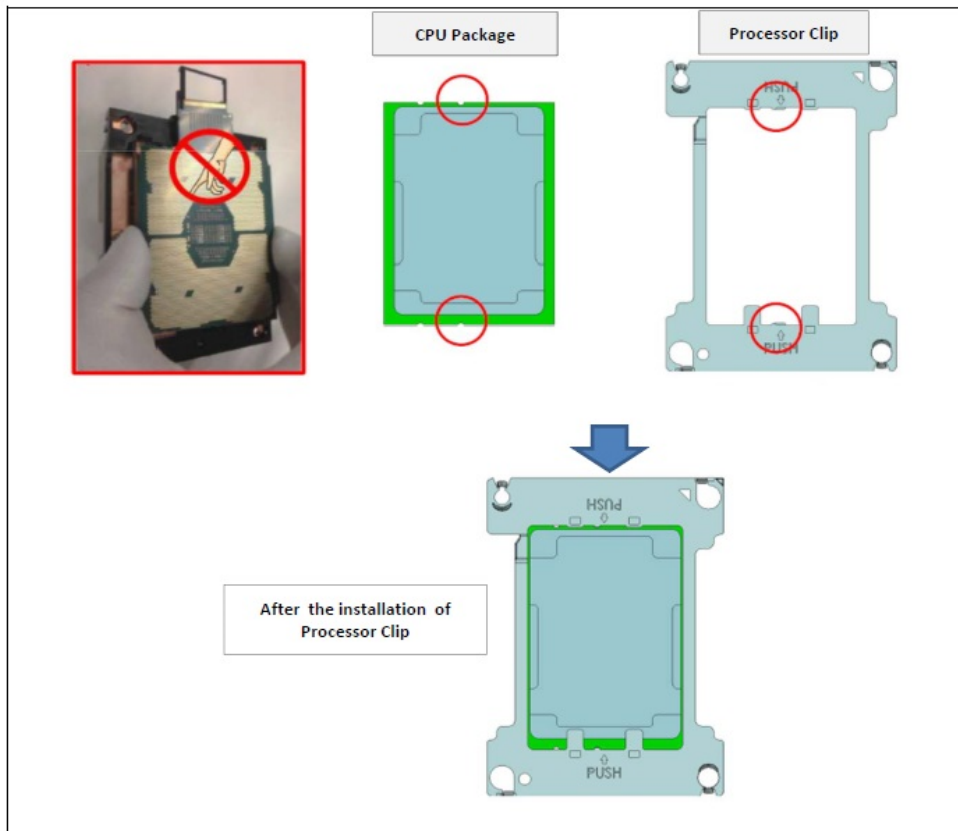
(2) Fast pin position (red circle part) is matched, and install the CPU package to the heat sink. (See "Figure F.7.1-2".)

Figure F.7.1-2
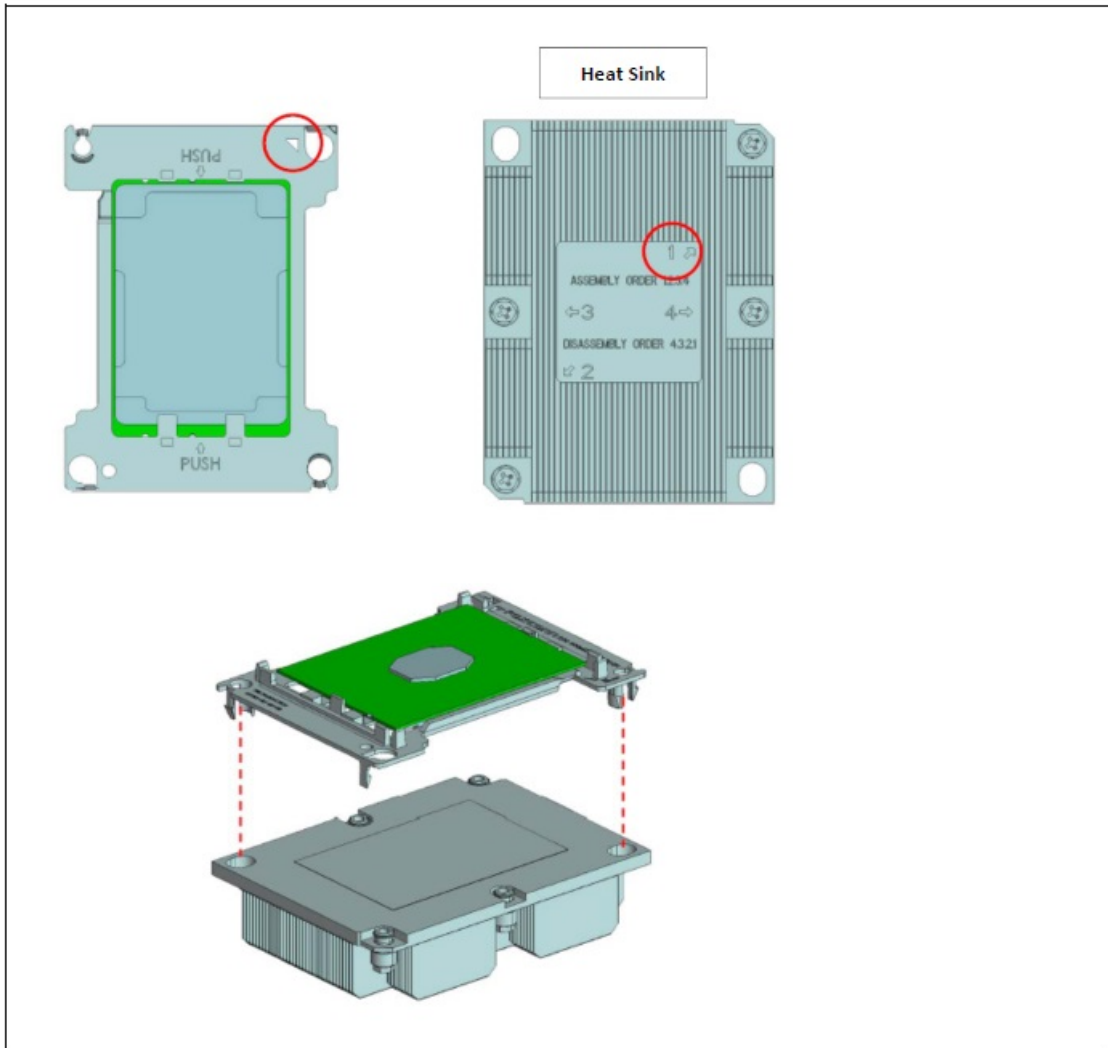
(3) Hold the groove of the Socket cover, and it lift, and remove it from the SB. (See "Figure F.7.1-3".)

Figure F.7.1-3
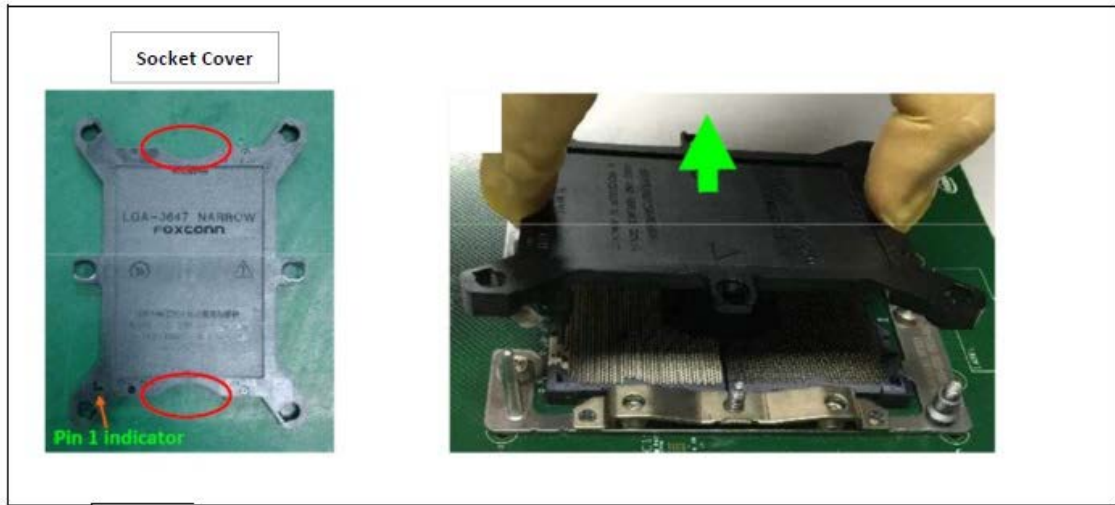
(4) The size of guide pin is noted (red circle part and blue round part). Mount the CPU package installed the heat sink on SB.   (See "Figure F.7.1-4".)

Figure F.7.1-4
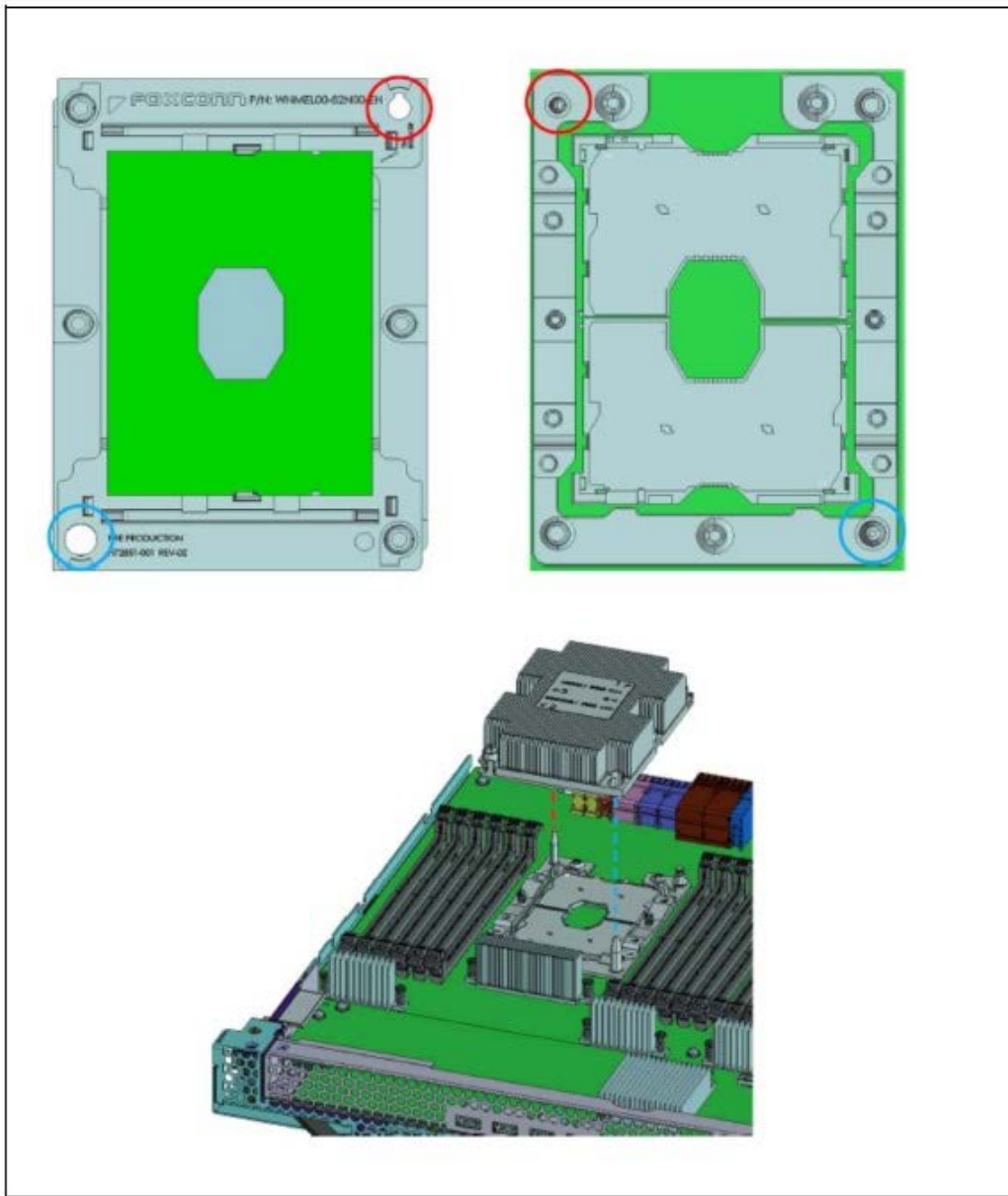
(5) Tighten the heat sink screw in order number 1, 2, 3, 4, and fix to SB. (See "Figure F.7.1-5".)

Figure F.7.1-5

APP0608000
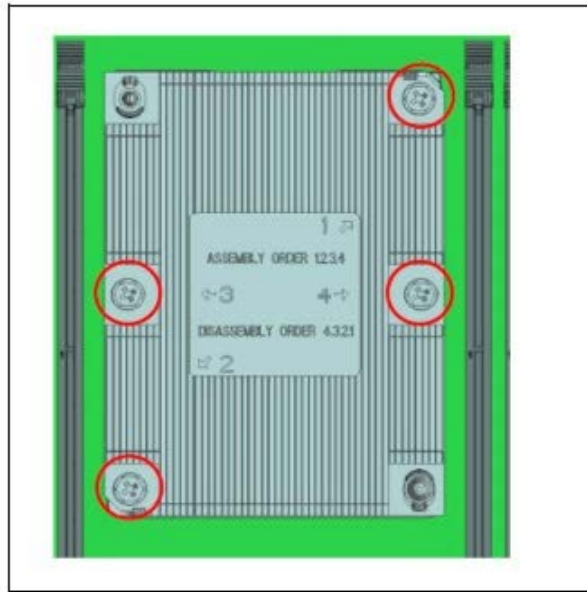
F.8 Memory

Figure F.8 Location of DIMMs

System Board

DIMM# 0F0
DIMM# 0F1
DIMM# 0E0
DIMM# 0E1
DIMM# 0D0
DIMM# 0D1

CPU#0

DIMM# 0A1
DIMM# 0A0
DIMM# 0B1
DIMM# 0B0
DIMM# 0C1
DIMM# 0C0

DIMM# 1F0
DIMM# 1F1
DIMM# 1E0
DIMM# 1E1
DIMM# 1D0
DIMM# 1D1

CPU#1

DIMM# 1A1
DIMM# 1A0
DIMM# 1B1
DIMM# 1B0
DIMM# 1C1
DIMM# 1C0

BMM Board

APP0608010
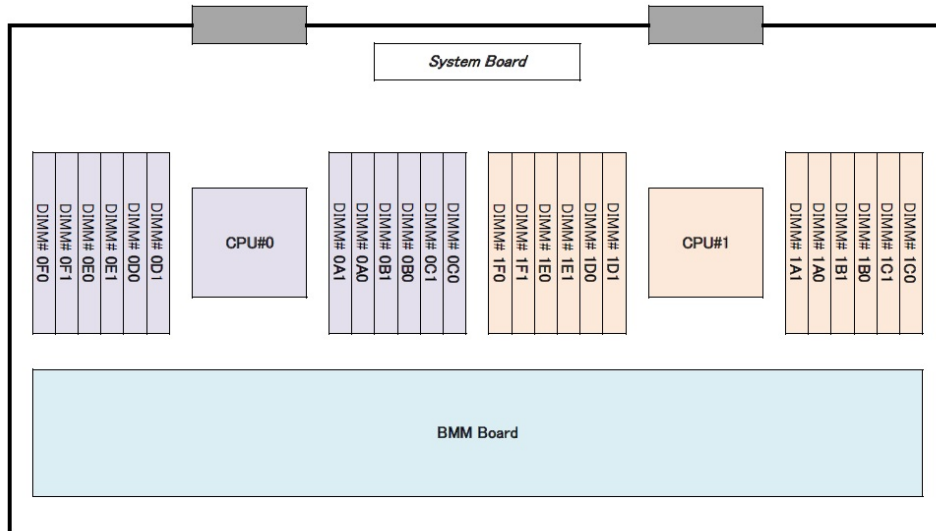
F.8.1 Installing Memory

(1) Detach the cover of the A part. (See "Figure F.8.1-1".)
    Since the cover of the A part is not fixed, it can be easily detached.
(2) Open the B part at both ends of the memory slot. (See "Figure F.8.1-2".)
(3) Mount the DIMM in the memory slot.
(4) Press down the DIMM and lock with the B part. (See "Figure F.8.1-3".)
(5) Attach the cover of the A part.

Figure F.8.1-1

Figure F.8.1-2
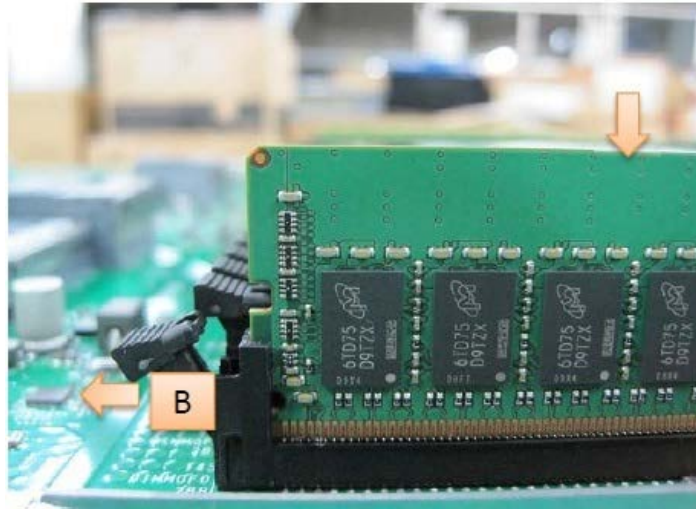
Figure F.8.1-3

F.8.2 Removing Memory

(1) Detach the cover of the A part. (See "Figure F.8.2-1".)
    Since the cover of the A part is not fixed, it can be easily detached.
(2) Open the B part at both ends of the memory slot and eject the DIMM. (See "Figure F.8.2-2".)
(3) Remove the DIMM.
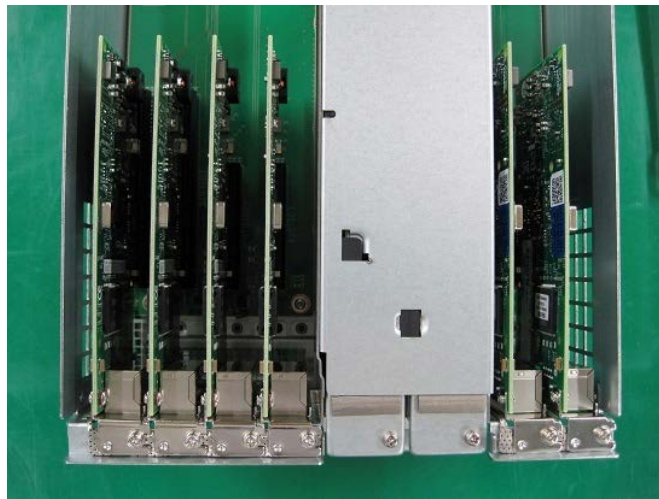
Figure F.8.2-1

Figure F.8.2-2
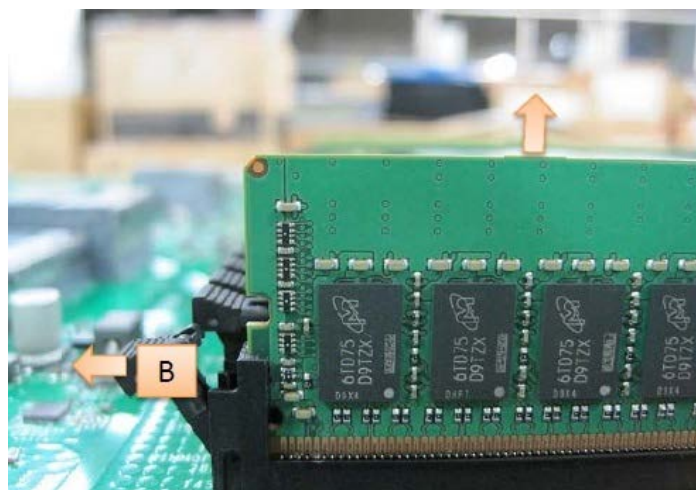
F.9 PCI card

AS for slot#2 and slot#3, PHP is possible.

F.9.1 Installing PCI card (Other than slot#2 and slot#3)

(1) Remove the PCI card dummy. (See "Figure F.9.1".)
(2) Install the PCI card and fix with the screw.

Figure F.9.1

F.9.2 Removing PCI card (Other than slot#2 and slot #3)

(1) Remove the screw and remove the PCI card. (See "Figure F.9.2".)

Figure F.9.2

F.9.3 Installing PCI card (slot#2 and slot#3)

(1) Push down the A part until touch the B part for unlock. (See "Figure F.9.3-1".)
(2) Pull the B part then remove the PCI cassette out of a IOUB.   (See "Figure F.9.3-2".)
(3) Remove the screw and PCI card dummy.
(4) Install the PCI card and fix with the screw. (See "Figure F.9.3-3".)
(5) Insert the PCI cassette into the IOUB and lock it by moving up the A part. (See "Figure F.9.3-4".)

Figure F.9.3-1
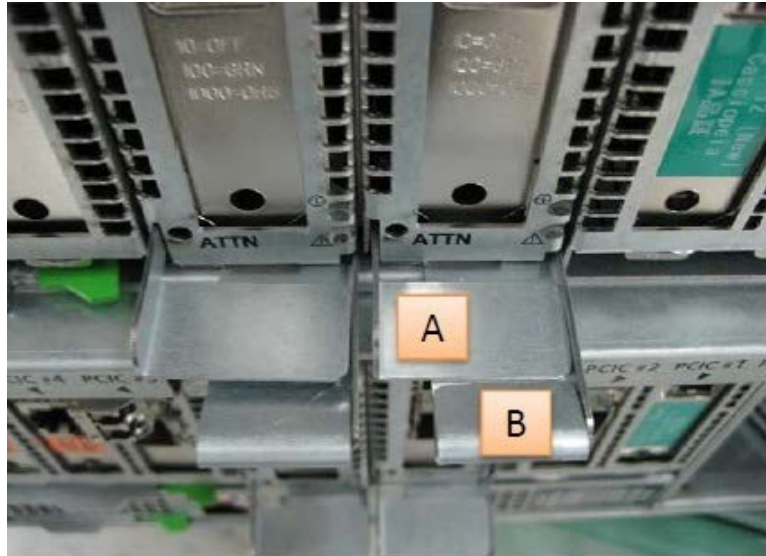
Figure F.9.3-2

Figure F.9.3-3

Figure F.9.3-4
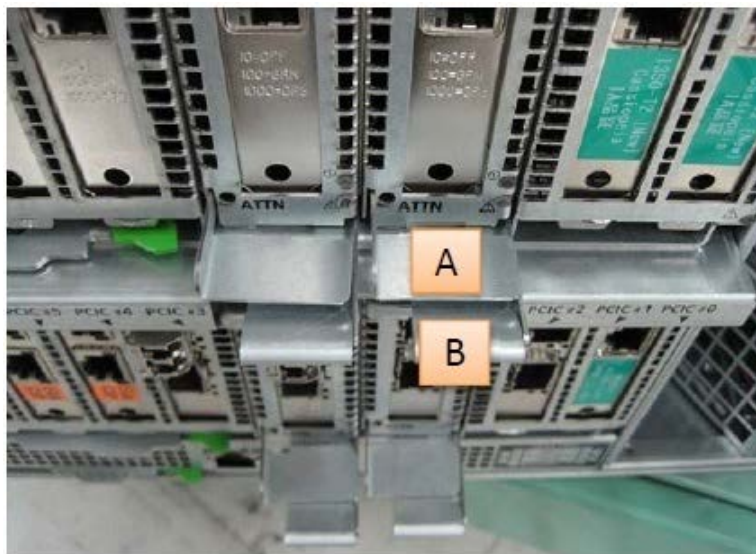
F.9.4 Removing PCI card (slot#2 and slot#3)

The operation of the PCI cassette: as well as "F.9.3 Installing PCI card (slot#2 and slot#3)".

F.10 FBU for DU_SAS
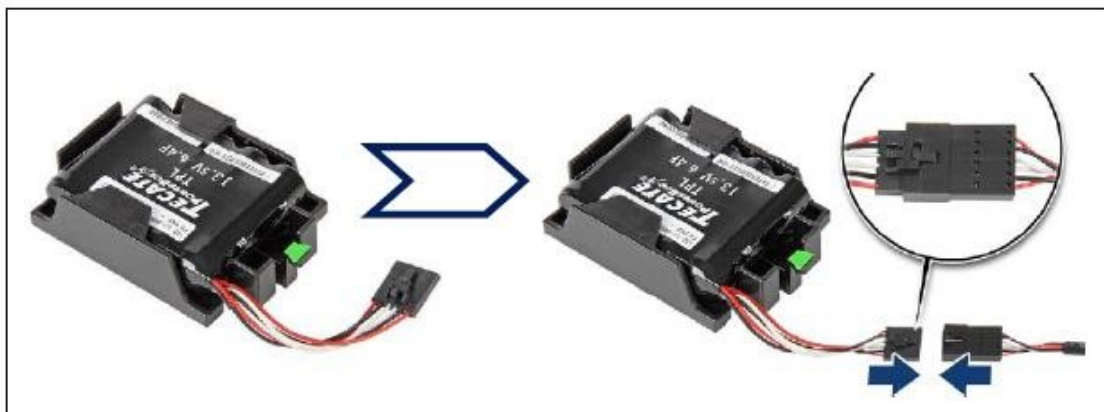
F.10.1 Installing a FBU

(1) At a slight angle, fit the FBU under both retaining brackets of the FBU holder as shown in "Figure F.10.1-1". Push in the FBU until it locks in place. See "Figure F.10.1-1".

Figure F.10.1-1

(2) Connect the FBU cable. (See "Figure F.10.1-2".)

Figure F.10.1-2

(3) Secure the FBU. (See "Figure F.10.1-3".)

Figure F.10.1-3

F.10.2 Installing a TFM module

(1) Install a TFM module to the SAS array controller card or Dual SAS array controller card.
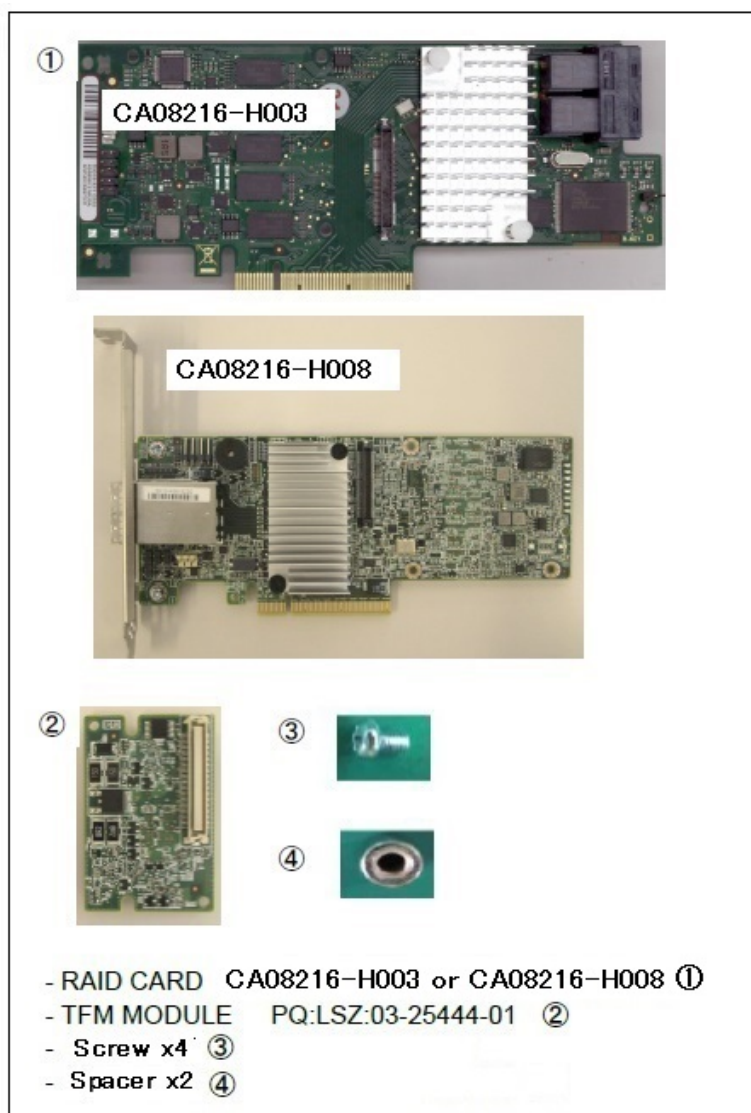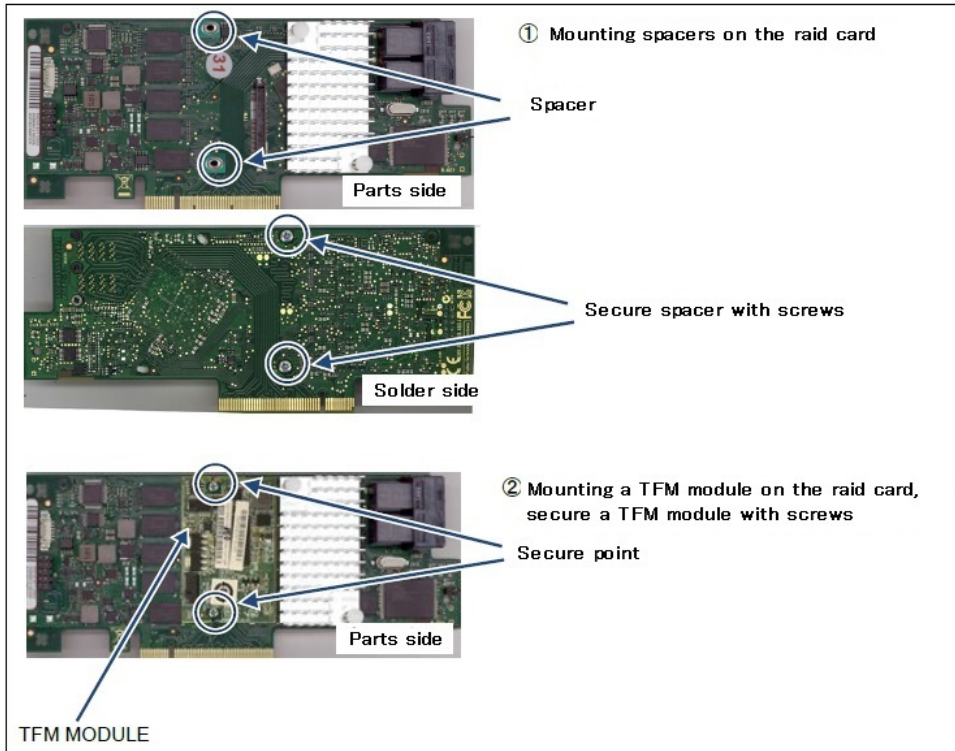(See "Figure F.10.2-1" and "Figure F.10.2-2".)

Figure F.10.1-1

- RAID CARD CA08216-H003 or CA08216-H008 ①
- TFM MODULE   PQ:LSZ:03-25444-01 ②
- Screw x4 ③
- Spacer x2 ④

Figure F.10.1-2

① Mounting spacers on the raid card

Spacer

Parts side

Secure spacer with screws

Solder side

② Mounting a TFM module on the raid card,
secure a TFM module with screws

Secure point

Parts side

TFM MODULE

APP0610030

F.10.3 Connecting FBU cable

(1) Connect between the FBU and the TFM module with the FBU cable.
   (See "Figure F.10.3-1".)
   The FBU cable are the attached items of the flash backup unit.
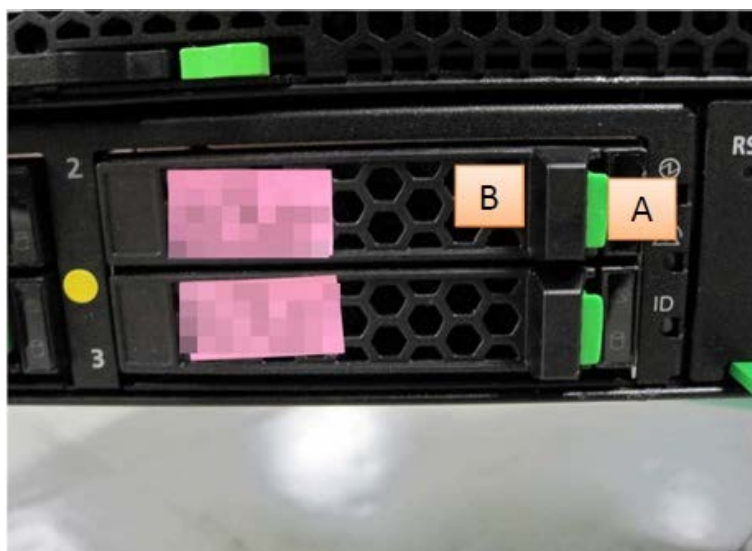
Figure F.10.3-1

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F.11 HDD/SSD

F.11.1 Installing HDD/SSD

(1) Insert HDD/SSD into the HDD/SSD slot.
(2) Move the B part in the direction of the arrow. (See "Figure F.11.1-1".)
(3) Lock the B part with the A part. (See "Figure F.11.1-2".)
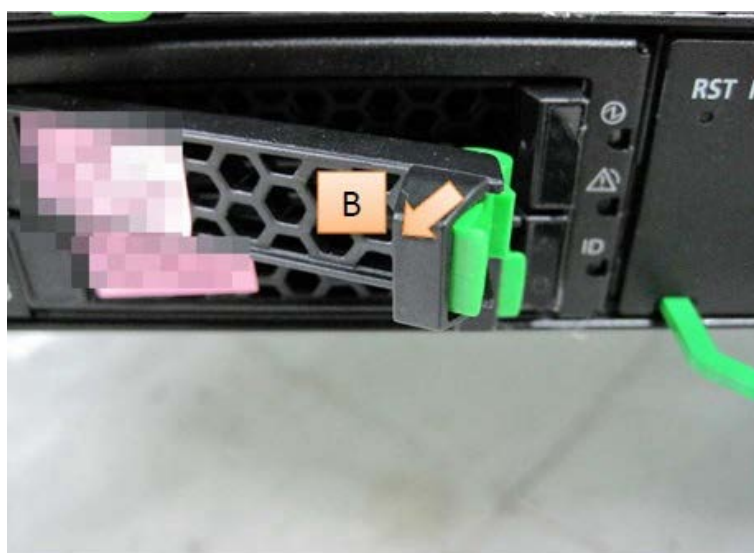
Figure F.11.1-1

Figure F.11.1-2

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F.11.2 Removing HDD/SSD

(1) Push the A part and unlock the B part. (See "Figure F.11.2-1".)
(2) Move the B part in the direction of the arrow. (See "Figure F.11.2-2".)
(3) Remove HDD/SSD.

Figure F.11.2-1

Figure F.11.2-2

F.12 PCIe SSD SFF

F.12.1 Installing PCIe SSD SFF

(1) Insert PCIe SSD SFF into the PCIe SSD SFF slot.
(2) Move the B part in the direction of the arrow. (See "Figure F.12.1-1".)
(3) Lock the B part with the A part. (See "Figure F.12.1-2".)
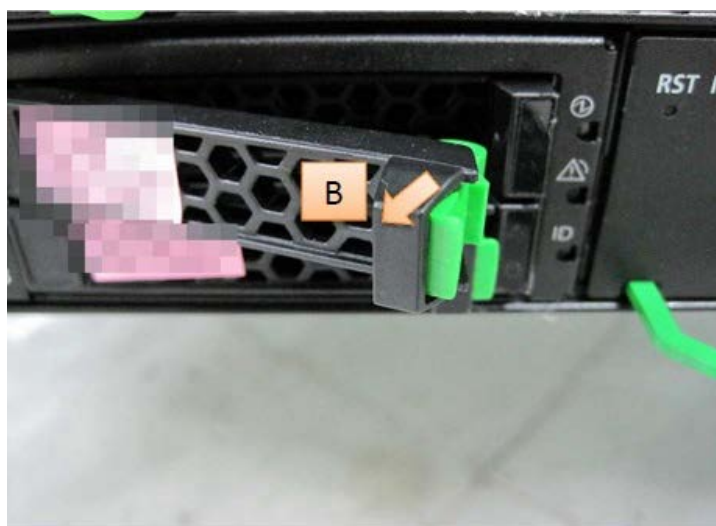
Figure F.12.1-1

Figure F.12.1-2

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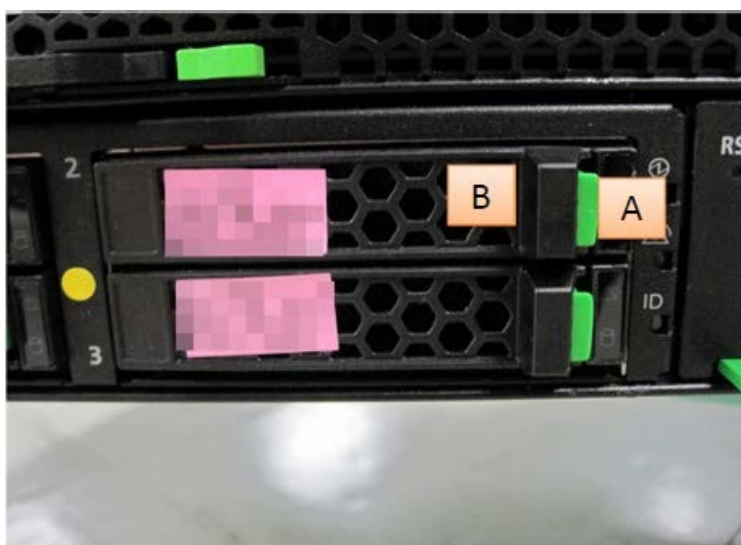
F.12.2 Removing PCIe SSD SFF

(1) Push the A part and unlock the B part. (See "Figure F.12.2-1".)
(2) Move the B part in the direction of the arrow. (See "Figure F.12.2-2".)
(3) Remove PCIe SSD SFF

Figure F.12.2-1

Figure F.12.2-2

F.13 Installing LAN card module

F.13.1 10G BASE LAN Card

Table F.13.1

Product Name (order number)	Module order number
PLAN EP X710-DA2 2x10Gb SFP+ (MC-0JXEK1)	MC-0JXEL1
PLAN EP X710-DA4 4x10Gb SFP+ LP (MC-0JXEA1)	MC-0JXEL1
PLAN EP OCe14102 2x 10Gb LP (MC-0JXEN1)	MC-0JCEK1

- When order number of "10G BASE LAN card" is MC-0JXEK1, install the module shown in "Figure F.13.1-1". Any module shown in "Figure F.13.1-1" can be installed.

- When order number of "10G BASE LAN card is MC-0JXEA1, install the module shown in "Figure F.13.1-1". Any module shown in "Figure F.13.1-1" can be installed.

- When order number of "10G BASE LAN card" is MC-0JXEN1, install the module shown in "Figure F.13.1-2".

Figure F.13.1-1 Module: MC-0JXEL1
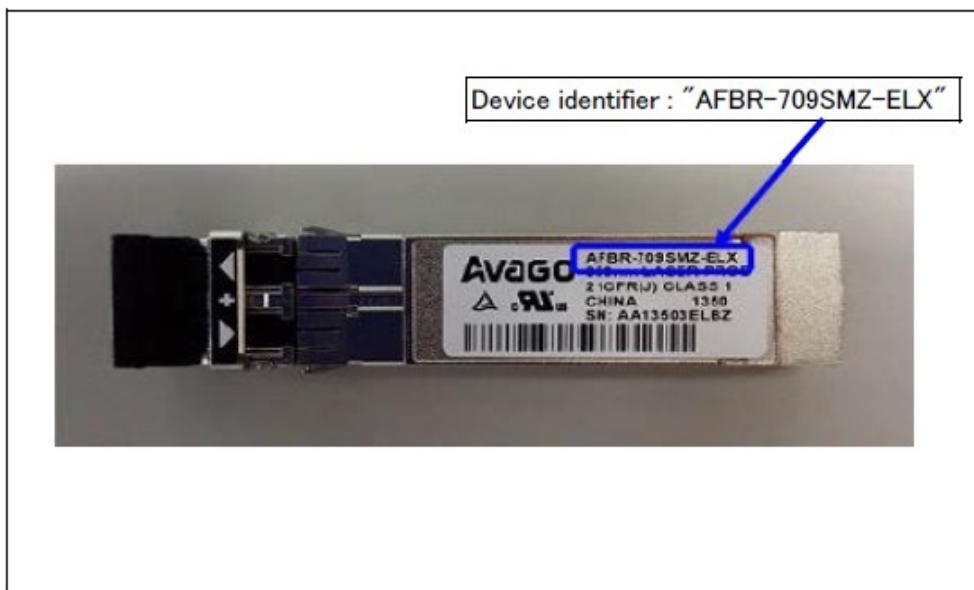

Figure F.13.1-2 Module : MC-0JCEK1
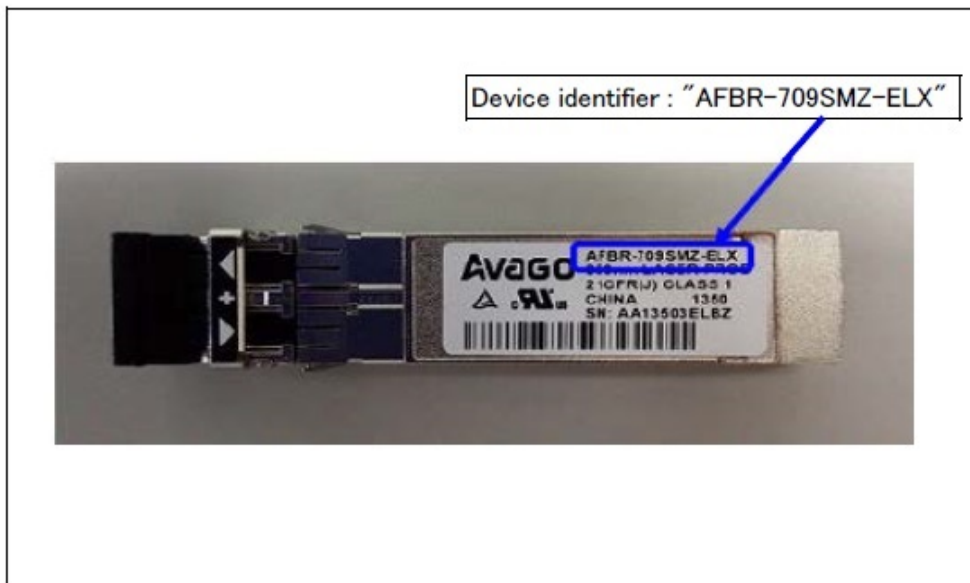
F.13.2 CAN (FCoE) card (10Gbps)

Table F.13.2

Product Name (order number)	Module order number
PCNA EP OCe14102 2x 10Gb LP (MC-0JCEL1)	MC-0JCEK1

- When order number of "CNA card (10Gbps)" is MC-0JCEL1, install the module shown in "Figure F.13.2-1".
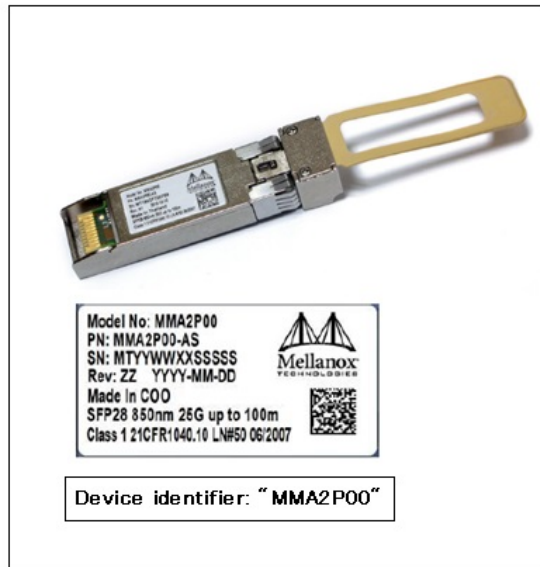
Figure F.13.2-1 Module : MC-0JCEK1

F.13.3 25G BASE LAN card

Table F.13.3

Product Name (order number)	Module order number
PLAN EP MCX4-LX 25Gb 2p SFP28 LP (MC-0JFE11)	MC-0JFE21

- When order number of "25G BASE LAN card" is MC-0JFE11, install the module shown in "Figure F.13.3-1".

Figure 13.3-1 Module: MC-0JFE21

F.13.4 40G BASE LAN card

Table F.13.4

Product Name (order number)	Module order number
PLAN EP MCX4-EN 40Gb 2p QSFP LP (MC-0JFE41)	MC-0JFE51
	MC-0JFE61

- When order number of "40G BASE LAN card" is MC-0JFE41, install the module shown in "Figure F.13.4-1" and "Figure F13.4-2".
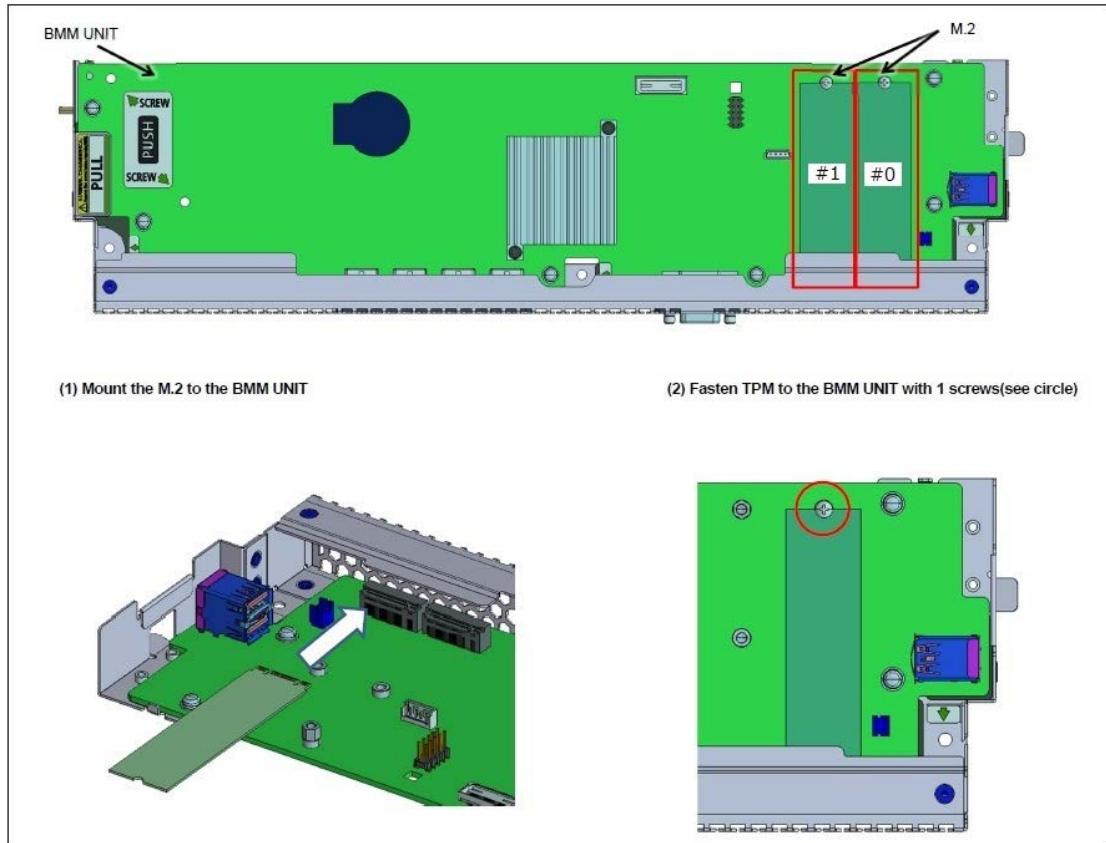
Figure F.13.4-1Module: MC-0JFE51

Figure F.13.4-2 Module: MC-0JFE61

F.14 Installing M.2 Flash Device

See "Figure F.14".

Figure F.14

(1) Mount the M.2 to the BMM UNIT

(2) Fasten TPM to the BMM UNIT with 1 screws(see circle)

F.15 Installing eLCM Activation License

The installation of Micro SD which is a component of eLCM Activation License will be explained.
See "Figure F.15".

Figure F.15

F.16 FBU for Ext. SAS RAID Card

F.16.1 Installing a TFM module

(1) Install a TFM module to the SAS array controller card or Dual SAS array controller card.
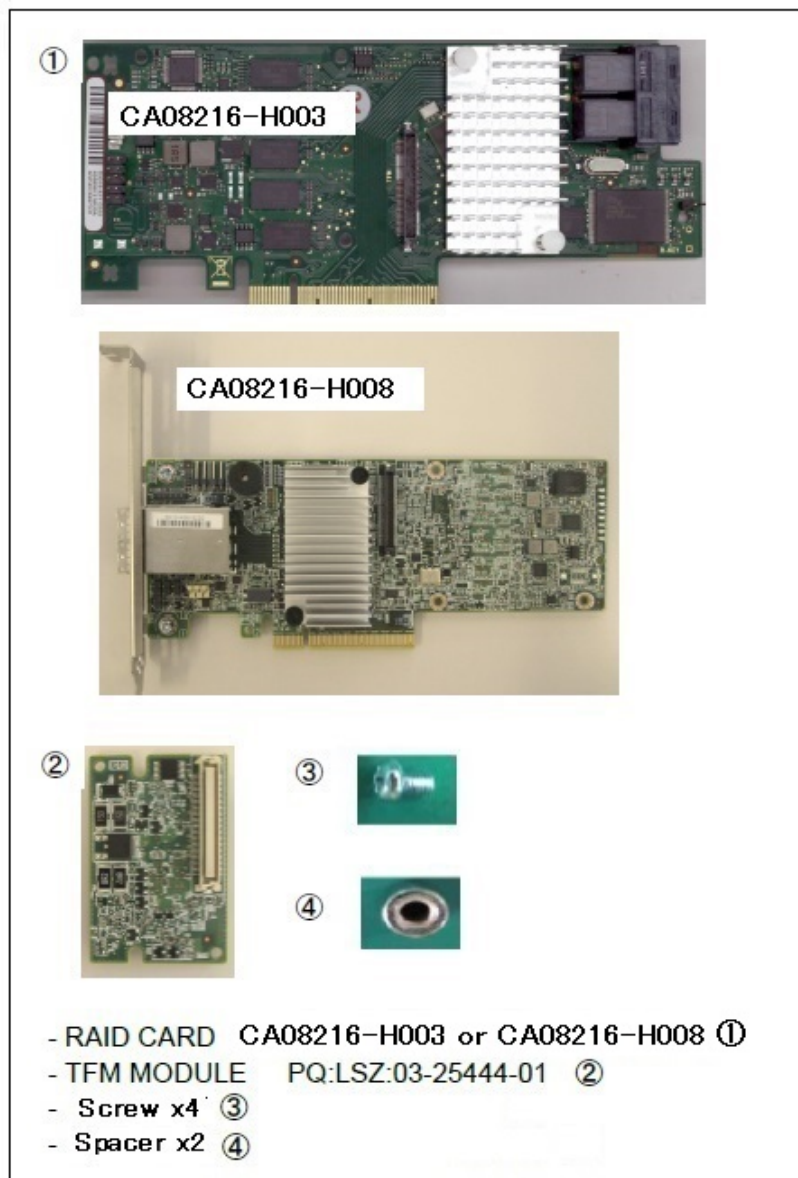   See "Figure F.16.1-1" and "Figure F.16.1-2".
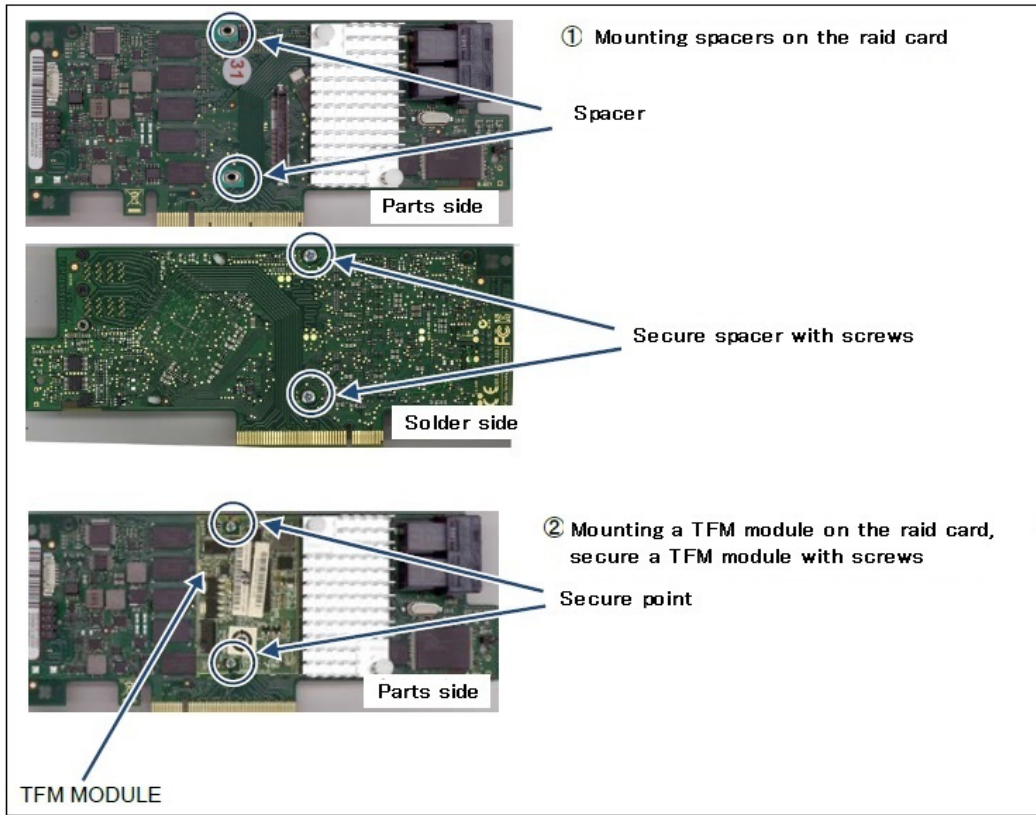
Figure F.16.1-1

Figure F.16.1-2

APP0616020

F.16.2 Connecting the FBU cable to RAID Card

(1) Connect between the FBU and the TFM module with the FBU cable. See "Figure F.16.2-1".
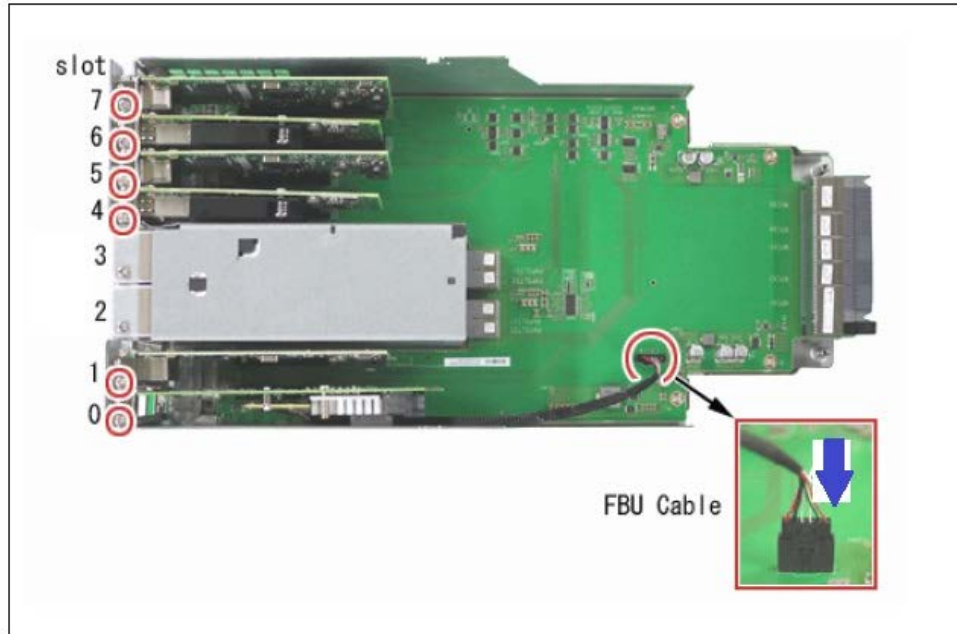   The FBU cable is an attached items of the flash backup unit.

Figure F.16.2-1

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F.16.3 Connecting FBU cable to connector on IOUB

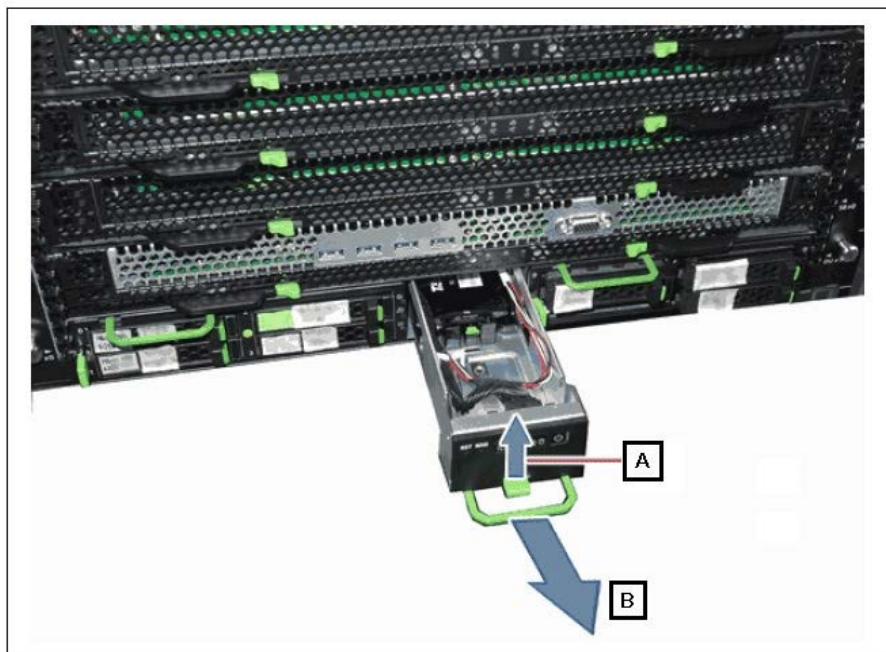(1) Connect the FBU cable to connector on IOUB. See "Figure F.16.3".

Figure F.16.3

F.16.4 Mounting FBU to OPUB

(1) Push up "A" then pull out the OPUB to front with "B". See "Figure F.16.4-1".
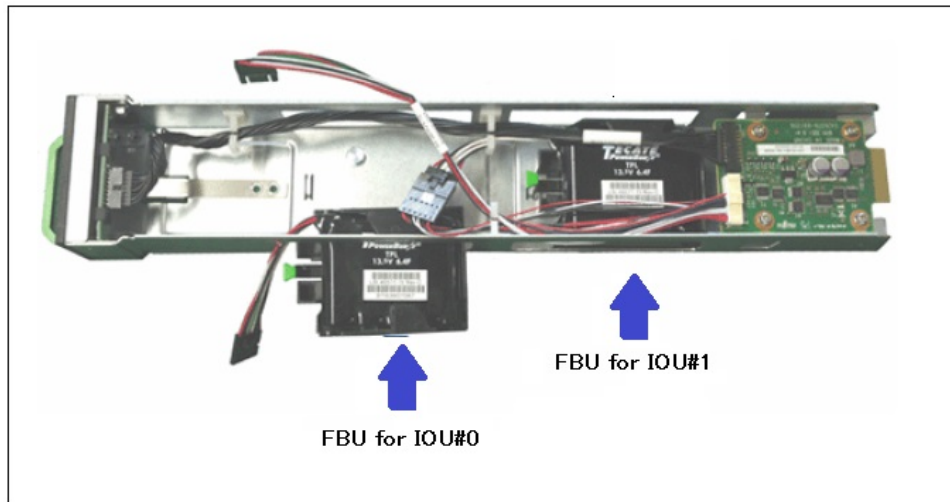
Figure F.16.4-1

(2) Push in the FBU to FBU holder until it locks in place. See "Figure F.16.4-2".
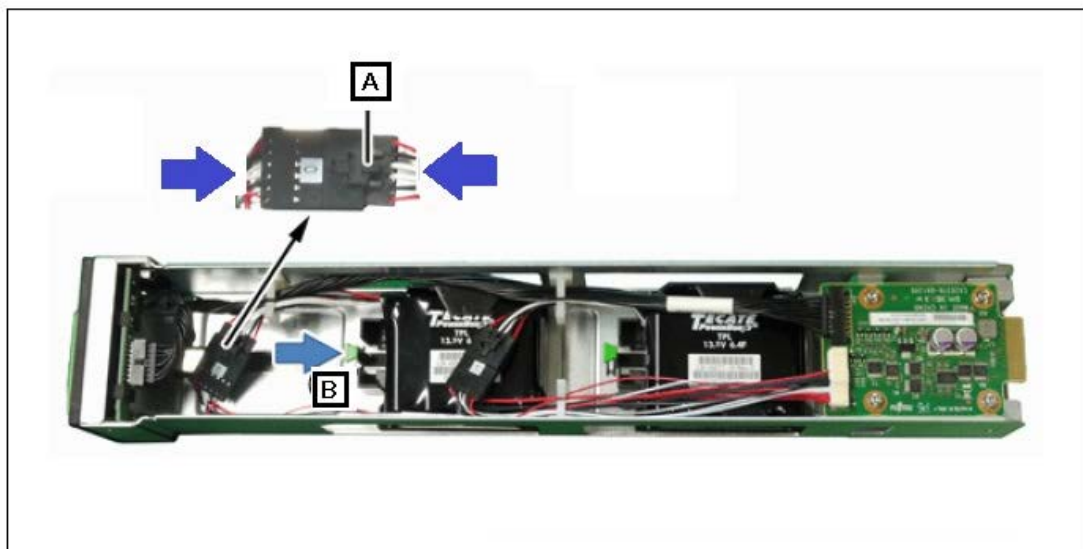
Figure F.16.4-2

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(3) Mount the FBU to the OPUB. See "Figure F.16.4-3".

Figure F.16.4-3

FBU for IOU#1

FBU for IOU#0

(4) Lock the FBU holder with "B" and connect the cable like "A". See "Figure F.16.4-4".
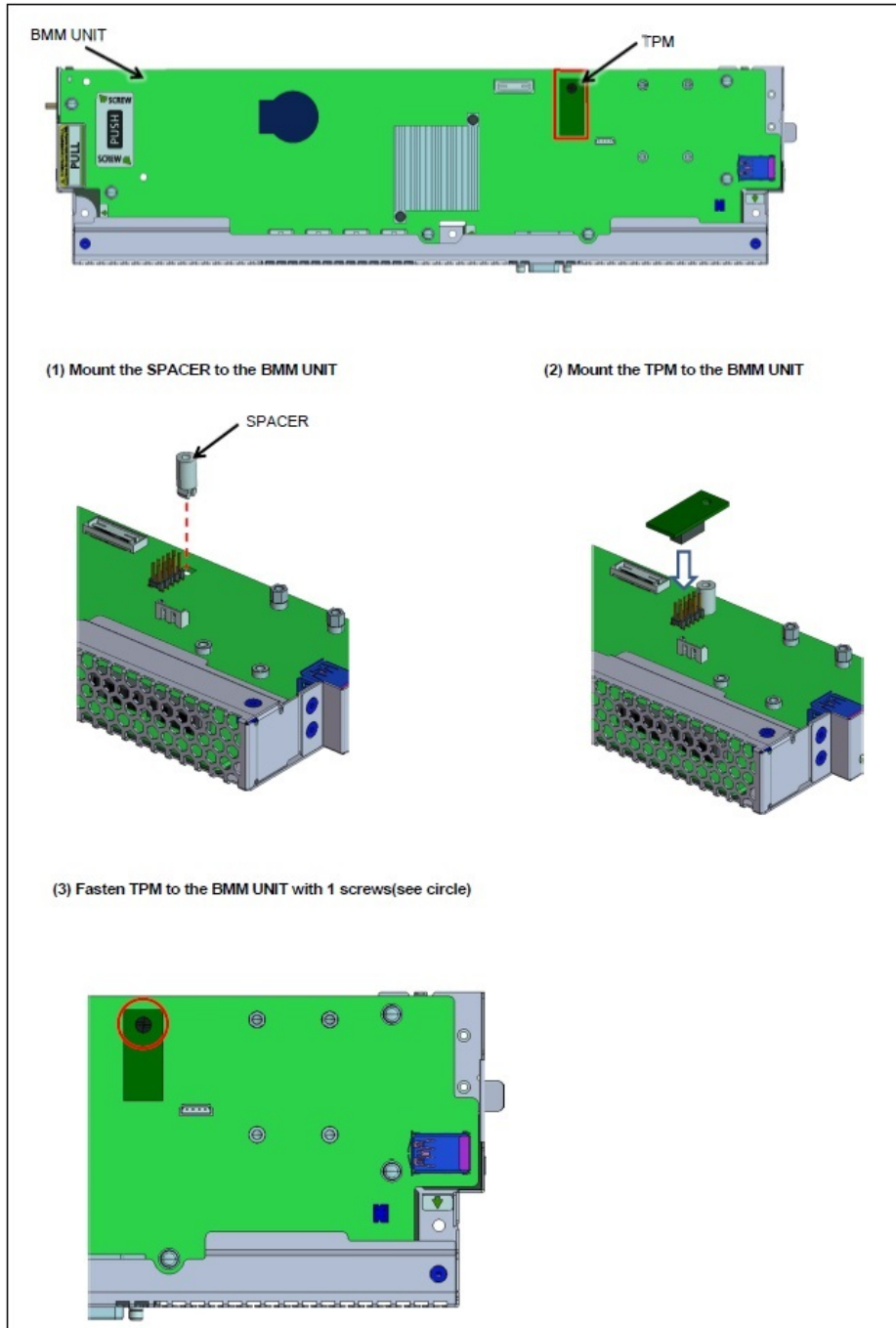
Figure F.16.4-4

A

B

(5) Insert the OPUB.

F.17 Installing TPM

See "Figure F.17".

Figure F.17

Appendix G Cable Connection Diagram

This appendix describes the cables connected to the Base Unit.

G.1 Cable Connection Diagram

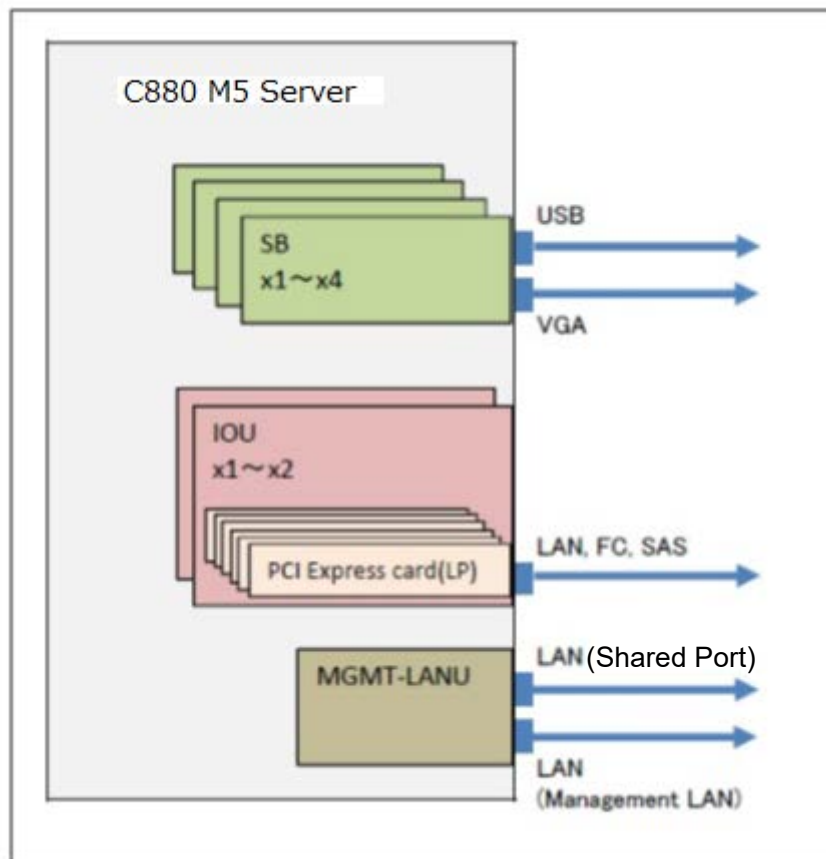See "Figure G.1-1" and "Figure G.1-2".

Figure G.1-1

Figure G.1-2

External interface	Product name	Cable specification xx and xxx are the lengths of the cable (m)	Remarks
FC LAN(10G BASE) CAN	Twinax cable	PY–CBN0xx	10GBASE–SR and Fibre channel (LC–LC)
	Multimode fibre channel cable '	CBL–MLLBxx (*1)	
		CBL–MLLCxx	
		CBL–MLSBxx (*1)	10GBASE–SR and Fibre channel (LC–SC)
		CBL–MLSCxx	
LAN(10G BASE–T/1000 BASE–T/100 BASE–TX)	Twisted pair cable (CT–5e)	TPABLxxxC	10G BASE–T/1000 BASE–T/100 BASE–TX (RJ45–RJ45)
		TPABLxxxM	
	Twisted pair cable (CT–5)	TPCBL–Bxxx	100 BASE–TX/10 BASE–T (RJ45–RJ45)
SAS	SAS cable	PY–CBS0xx	

*1:For connection in the same rack and for office installation.

G.2 Cable Routing

- Fix the cables to cable holder with the reusable cable tie.
- The power cables and the signal cables (such as LAN, SAS cable and FC cables) must be fixed in
  place.
- Secure an enough space where the maintenance of the unit is possible for cable routing.
  (See "Figure G.2".)
- To ensure sufficient clearance for inserting and removing the units, leave some extra cable
  length when routing the cables so that they do not overlap the units, which must be visible from the
  front.
- The AC cable must be fixed to reusable cable tie of PSU firmly.

**Figure G.2 Cable routing (recommendation)**

Appendix H Prevention of Improper Cable Connections

An improperly connected cable may damage user files and other resources.
To prevent cables from being improperly connected, attach "destination labels" to cables and cabinets during on-site installation.

To prevent signal cables of file system devices from being improperly connected during on-site installation or expansion, be sure to attach "destination labels" to both ends of each cable.
Following the procedure described below, affix a unit label with a unit identifier written on it to the unit cabinet, and use ties to attach cable labels with the cable destination written on them to both ends of each cable.

(1) Work preparations
  - Labels (consumable tool)
      One label is required for each unit.   Size: 50 x 15 (mm)
  - Cable labels with ties (consumable tool)
      Two labels are required for each cable.

Figure I-1 Cable label with tie
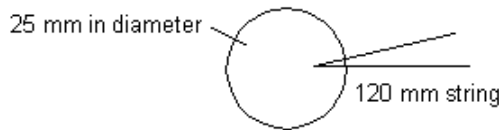
(2) Work procedure
  1) For each unit, write down a unit identifier on a label, and affix the label near the file system connector port on the unit. Also write down the unit identifier on the installation drawing (cable connection diagram).
     Unit label: Size: 50 x 15 mm
   If the label is too large, cut it to the appropriate size.

Xy

X: Unit symbol (See the table below.)
y: Unit number (Generally, unit numbers in a rack are assigned 1, 2, and so on in order by unit location from left to right and bottom to top.   However, they can be properly assigned (in a way that is easily comprehensible) according to the unit installation locations in the system).

Figure I-2 Unit symbols

Unit symbol (X)	Unit name
MU	Main unit (server, client)
HUB	Hub (Fibre Channel hub, etc.)
RLY	Relay converter other than a hub (BMC converter M-LINK, etc.)
FDU	Magnetic disk (expansion file unit/cabinet, FDU, DKC, etc.)
MT	Tape unit (tape LIB/changer, tape unit, MTC, etc.)
ARY	Disk array
MO	Magneto-optical disk unit (MO library, etc.)
ETC	Another type of unit

Example of the labels affixed to the array disks that are the first and second ones from the left at the bottom of a rack
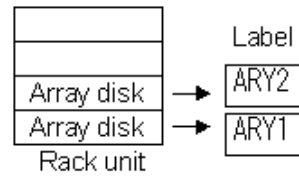
2) According to the installation drawing (cable connection diagram), write down the destinations on the cable destination labels to be attached to both ends of the cables to be connected.
   Cable destination label with ties 25 mm in diameter, 120 mm long.
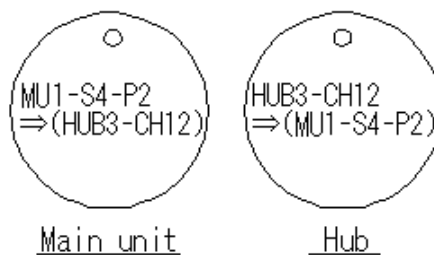
Figure I-3 Cable destination label with tie

Format of written destination

Format: Xy-ZZZ => (CCC)
Xy: See item 1) above.
ZZZ: Physical location of the connection destination of the connector at this end of the cable (Use the physical location name referring to the unit concerned.)
CCC: Destination of the connector at the other end of the cable (same format as above)

Example of written labels indicating a connection between port 2 of the PT board in slot 4 of the main unit (first from the left) and channel 12 of the hub (third from the left)

3) Attach the cable destination labels with ties to both ends of each cable.　(Wrap the string at least twice around the cable or affix cotton tape on the string to prevent the string from moving.)

　Make sure that the cable destinations on the two labels attached to each cable are reversed as shown in the following figure.

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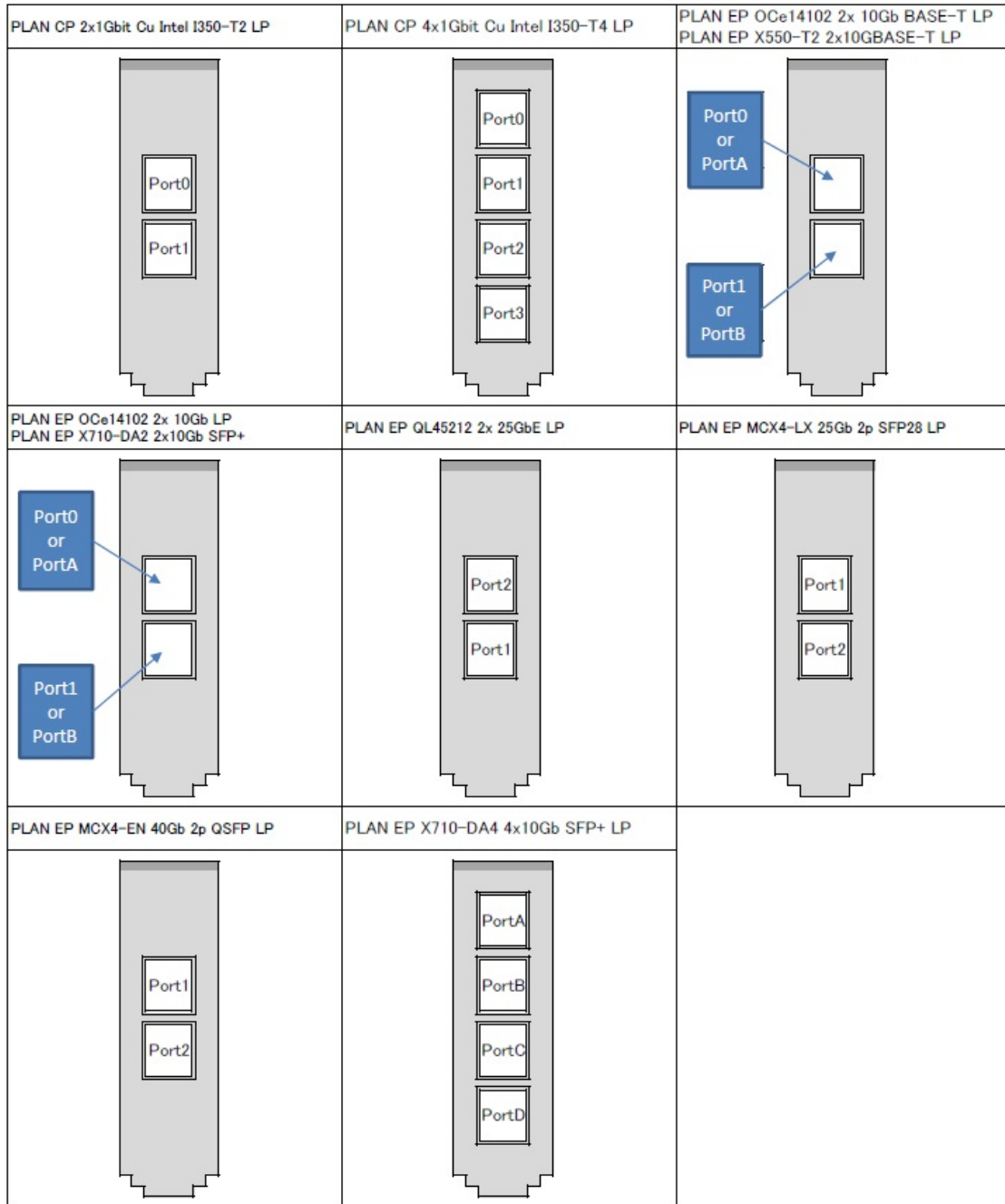**Figure I-4 Attaching cable destination labels with ties**
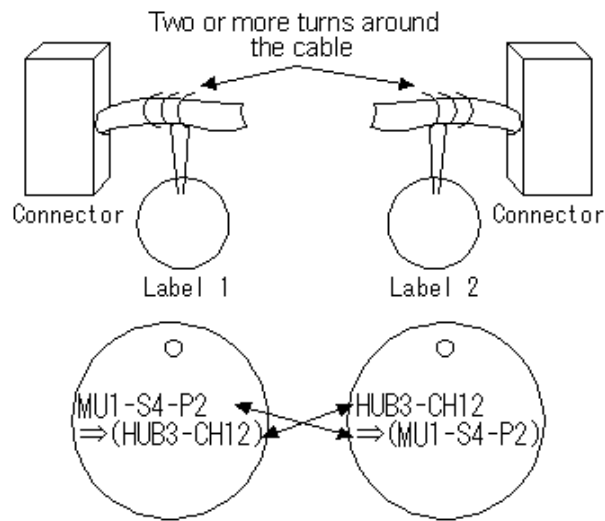
4) Connect the connectors at cable ends to the destination ports indicated on the first lines of their labels.

Appendix I Port number of PCI card

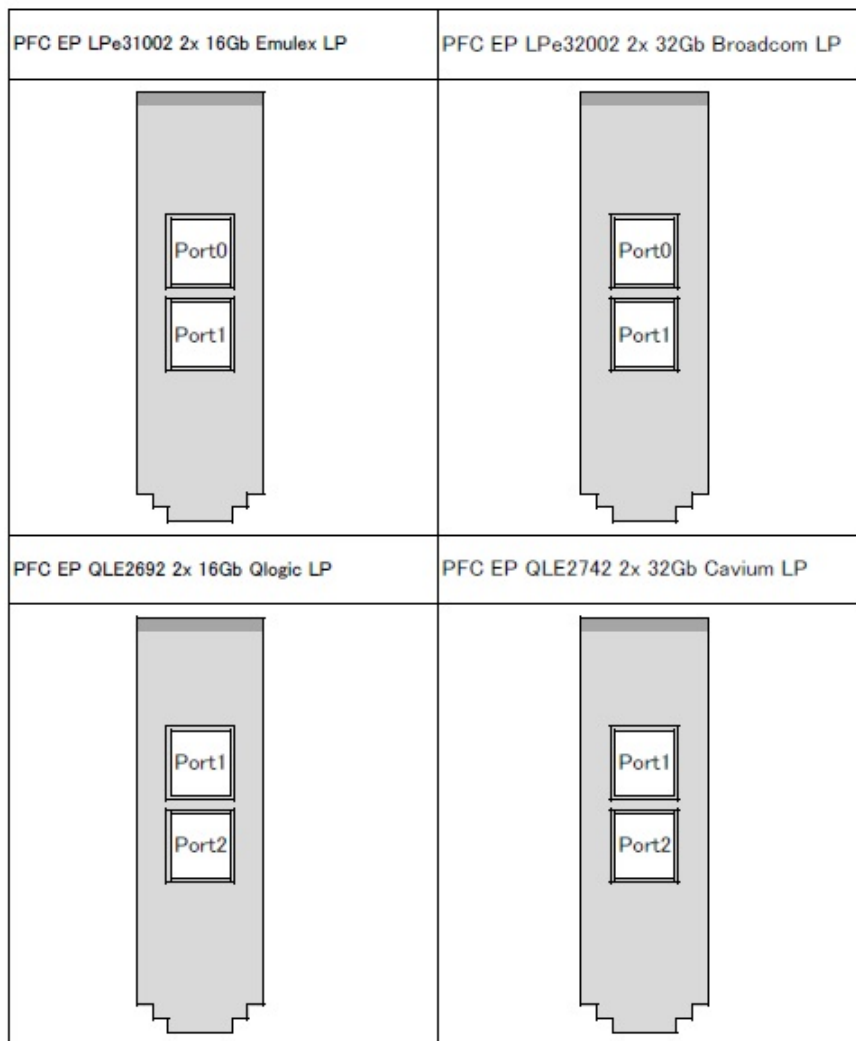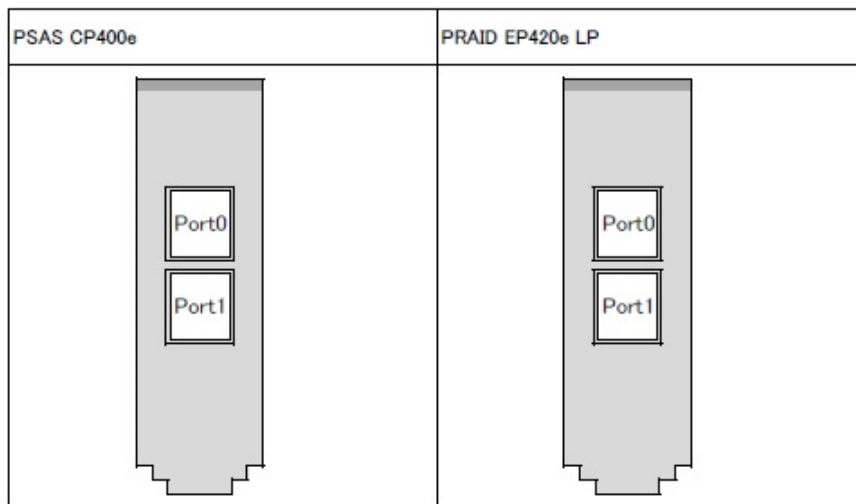Port number of PCI card that has two or more ports.

I.1 LAN card

Figure I.1

I.2 Fibre Channel card

Figure I.2

PFC EP LPe31002 2x 16Gb Emulex LP — Port0, Port1

PFC EP LPe32002 2x 32Gb Broadcom LP — Port0, Port1

PFC EP QLE2692 2x 16Gb Qlogic LP — Port1, Port2

PFC EP QLE2742 2x 32Gb Cavium LP — Port1, Port2

I.3 SAS card / SAS RAID controller card

Figure I.3

I.4 CNA card

Figure I.4

PCNA EP OCe14102 2x 10Gb LP

Port0

Port1
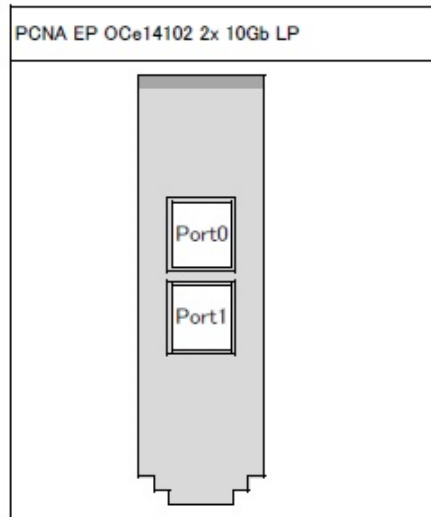
I.5 Infiniband HCA card

Figure I.5

IB HCA 56Gb 2 port FDR	IB HCA 100Gb 2 port EDR
Port1 Port2	Port1 Port2