

## Hitachi Compute Rack 220S Remote Management User's Guide

**FASTFIND LINKS** 

Getting Help Contents

**@Hitachi Data Systems** 

MK-90CRS004-02

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## Contents

Preface	v
Intended Audience Release Notes Referenced Documents	vi vi vi
Document Conventions	vii
Convention for storage capacity values	viii
Getting Help	viii
Comments	VIII
Overview	1-1
Functional overview	1-2
List of standard and extended functions	1-2
Precaution	2-1
Backing up Management settings	2-2
Setting management interface network	2-2
Launch remote console button	2-2
Setting IPMI Over LAN	2-2
Restricting access of BMC network	2-2 2_2
Indicating error about HTTP communication	2-2 2-3
Preparation	3-1
Connecting to management interface	2_7
Operational environment for the console terminal	3-4
Considering BMC network setting	
How to use the Web console (BMC version: 09-80 or higher)	
Configuration of Web console menu	4-2
Function of Web console	4-3
Starting Web console	4-7
Initializing Web console	4-10
Web console menu items	

Exiting Web console	4-95
How to use the Web console (BMC version: 09-79 or lower)	5-1
Configuration of Web console menu	
Function of Web console	
Starting Web console	
Initializing web console	
Exiting Web console	
Notice for setting up BMC network	6-1
Types and settings of BMC network setup methods	
Software license	7-1
Software license information	
SMASH	A-1
Overview	A-2
Setting up SMASH	A-4
SMASH-CLP	A-5
WS-Management	
SMASH Operation	A-11 م. ۸_22
Troubleshooting	
CLI Console	B-1
Common function	B-2
CLI command	B-5
MIB	C-1
Overview	C-2
Standard MIB	
Private MIB	C-5
IPMI Commands List	D-1
IPMI Commands List	D-2
LDAP Server Linkage	E-1
Overview of the LDAP Server Linkage	E-2
Supported LDAP Server	E-2
Environmental Setting for Active Directory	E-3 E_15
Security strongth	L-IJ
	F-1
Relationship between security strength and functions	
Comparing functions for security strength settings	F-4

## Preface

This document provides information of the Remote management function and how to use the Web console of the *Compute Rack 220S* (CR 220S).

This preface includes the following information:

- □ Intended Audience
- □ <u>Release Notes</u>
- □ <u>Referenced Documents</u>
- Document Conventions
- □ <u>Convention for storage capacity values</u>
- □ <u>Getting Help</u>
- □ <u>Comments</u>

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## **Intended Audience**

This document is intended for the personnel who are involved in planning, managing, and performing the tasks to prepare your site for the Compute Rack installation and to install the same.

This document assumes the following:

- The reader has a background in hardware installation of computer systems.
- The reader is familiar with the location where the Compute Rack will be installed, including knowledge of physical characteristics, power systems and specifications, and environmental specifications.

## **Release Notes**

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document.

## **Referenced Documents**

Compute Rack 220S (CR 220S) documents:

- Hitachi Compute Rack 220S Getting Started Giode, MK-90CRS001
- Hitachi Compute Rack 220S User's Guide, MK-90CRS002
- Hitachi Compute Rack 220S CRU Replacement Guide, MK-90CRS003
- Hitachi Compute Rack 220S Windows Installation Guide, MK-90CRS005
- Hitachi Compute Rack 220S BIOS Guide, MK-90CRS000
- Hitachi Compute Blade Series / Hitachi Compute Rack Series OS Installation Guide for Windows Server, MK-99COM076

## **Document Conventions**

The term "Compute Rack" refers to all the models of the Compute Rack, unless otherwise noted.

This document uses the following typographic conventions:

Convention	ntion Description	
<b>Regular text bold</b> In text: keyboard key, parameter name, property name, hardware la hardware button, hardware switch.		
	In a procedure: user interface item	
Italic Variable, emphasis, reference to document title, called-out term		
Screen text	Command name and option, drive name, file name, folder name, directory name, code, file content, system and application output, user input	
< > (angled brackets)	Variable (used when italic is not enough to identify variable).	
[ ] (square bracket)	Optional values	
{ } braces	Required or expected value	
vertical bar	Choice between two or more options or arguments	
_(underline)	Default value, for example, [ <u>a</u>   b]	

#### This document uses the following symbols to emphasize certain information.

Symbol	Label	Description	
WARNING This indicates the presence of a potential risk that might of severe injury.		This indicates the presence of a potential risk that might cause death or severe injury.	
	CAUTION	This indicates the presence of a potential risk that might cause relatively mild or moderate injury.	
NOTICE	NOTICE	This indicates the presence of a potential risk that might cause severe damage to the equipment and/or damage to surrounding properties.	
Note Note This indicates notes not directly related to injury equipment.		This indicates notes not directly related to injury or severe damage to equipment.	
Tip	Tip	This indicates advice on how to make the best use of the equipment.	

## **Convention for storage capacity values**

Physical storage capacity values (for example, disk drive capacity) are calculated based on the following values:

Physical capacity unit	Value
1 kilobyte (KB)	1,000 (10 <sup>3</sup> ) bytes
1 megabyte (MB)	1,000 KB or 1,000 <sup>2</sup> bytes
1 gigabyte (GB)	1,000 MB or 1,000 <sup>3</sup> bytes
1 terabyte (TB)	1,000 GB or 1,000 <sup>4</sup> bytes
1 petabyte (PB)	1,000 TB or 1,000 <sup>5</sup> bytes
1 exabyte (EB)	1,000 PB or 1,000 <sup>6</sup> bytes

Logical storage capacity values (for example, logical device capacity) are calculated based on the following values:

Logical capacity unit	Value
1 block	512 bytes
1 KB	1,024 (2 <sup>10</sup> ) bytes
1 MB	1,024 KB or 1,024 <sup>2</sup> bytes
1 GB	1,024 MB or 1,024 <sup>3</sup> bytes
1 TB	1,024 GB or 1,024 <sup>4</sup> bytes
1 PB	1,024 TB or 1,024 <sup>5</sup> bytes
1 EB	1,024 PB or 1,024 <sup>6</sup> bytes

## **Getting Help**

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support log on to the Hitachi Data Systems Portal for contact information: <u>https://portal.hds.com</u>.

## Comments

Please send us your comments on this document: <u>doc.comments@hds.com</u>. Include the document title and number including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Data Systems Corporation.

#### Thank you!

# 1

## **Overview**

This chapter describes the overview of remote management functions of the system unit.

- □ <u>Functional overview</u>
- □ List of standard and extended functions

## **Functional overview**

The system unit is equipped with a Baseboard Management Controller (BMC) on its motherboard that has additional functions for monitoring its operating status and power control.

The system unit is also provided with a management interface only for the BMC that enables remote access through a LAN connection and initialization for the BMC. The Web console provided as a standard function is used for remote access.

In addition, using the following application allows function expansion:

• Remote Console application

Enables you to use the remote console function that displays the system unit screen remotely and operate its keyboard and mouse, as well as the remote device function, such as a virtual floppy disk or virtual CD/DVD. This allows you to operate the BIOS or OS of the system unit remotely, and install utilities on the system from the virtual CD/DVD.

## List of standard and extended functions

The following are the main functions available with the Web console, a standard BMC feature and Remote Console application:

Function	Web console	Remote Console application	
Remote power control (ON/forced OFF/hard reset)	$\checkmark$	$\checkmark$	
Remote failure monitoring	-	-	
Remote console/ remote device	-	$\checkmark$	
NMI issue	$\checkmark$	$\checkmark$	
User management of Web console	$\checkmark$	_	
IPMI Over LAN setting	$\checkmark$	_	
Setting of power saving function	$\checkmark$	-	
Notes:			
√ Available			
- N/A			

#### Table 1-1: Standard and extended functions

# 2

## Precaution

This chapter describes the precautions for use of the remote management functions.

- □ Backing up Management settings
- □ <u>Setting management interface network</u>
- □ Launch Remote Console button
- □ <u>Setting IPMI Over LAN</u>
- □ <u>Restricting access of BMC network</u>

## **Backing up Management settings**

The setting data used for management of the system unit is required for recovery work in case of a failure.

Back up the Management settings in preparation for a failure and keep the data in a safe place whenever you change the settings when using the Web console and the Remote Console application.

For details, see <u>Backup server settings</u> on page 4-32.

### Setting management interface network

To use the Web console, set up the management interface network as BMC network. Before use, set the network in accordance with your system environment.

For details, see <u>Connecting to management interface</u> on page 3-2.

## Launch remote console button

The **Launch remote console** button is displayed on the console screen when the Remote Console application is applied.

## **Setting IPMI Over LAN**

The setting of IPMI Over LAN is not supported for the backup and restoration of the Management settings. The setting information of IPMI Over LAN may be lost when the motherboard is replaced in maintenance work. We recommend that you should note down the settings and keep in hand.

## **Restricting access of BMC network**

We strongly recommend that you set a connection restriction IP address for security improvement whenever setting a BMC network.

For the setting of a connection restriction IP address, see <u>Setting BMC network</u> on page 4-24.

## **Operating Web console**

Web console may run slow according to your system console environment when multiple operations are performed continuously in a Web console.

When Web console operation is extremely slow, log out from Web console and log in again.

## **Indicating error about HTTP communication**

In the Web console of the system unit that is registered in the managed HCSM, you may receive an error about the HTTP communication.

If this error is displayed, operate the Web console after waiting for a while.



Precaution

## 3

## Preparation

This chapter describes how to connect the Web console for use.

- □ <u>Connecting to management interface</u>
- Operational environment for the console terminal
- □ <u>Concidering BMC network setting</u>

## **Connecting to management interface**

To use the Web console, connect the console terminal to the management interface connector on the rear of the system unit through a switching hub and LAN cables .

The following are required for this connection:

- Console terminal (PC) (100BASE-TX compatible)
- LAN cable of category UTP-5 or higher, and switching hub (100BASE-TX compatible)
- HTTP client software

The connecting topology of each model is as follows:



Figure 3-1: Connecting console terminal to CR 220S

Tip	•	When connecting the console terminal directly to the management interface through LAN cable, you should use a cross cable depending on the console terminal specifications.
	•	When starting the BMC (supplying AC power to the system unit), connect a LAN cable first and turn on the switching hub and the console terminal.
		If you connect the LAN cable after starting the BMC, the BMC may not respond. In such a case, disconnect the AC cable of the system unit after connecting the LAN cable. And then wait at least 30 seconds, reconnect the AC cable.
	•	We recommend you use the management interface at 100BASE-TX. If the links speed of the management interface is 10 Mbps (10BASE-T link established, the Link LED is OFF), malfunction may occur in communication. In this case you need to reconfigure the network connected to the management interface.
	•	If you find the communication is unstable, turn off the system unit, shut down the AC power by, for example, disconnecting the AC cable, wait 30 seconds or more, and then reconnect AC power and turn on the system unit.

## **Operational environment for the console terminal**

The following list shows each item of the operational environment the console terminal needs to satisfy.

The conditions are differed depending on the BMC version.

## Table 3-1: Operational environment for console terminal (BMC version 09-80 or higher)

Console terminal	Operational environment
Flash Player	Adobe Flash Player 10.2 or higher <sup>1</sup>
Java Software	ORACLE Java 6.0 or higher <sup>2</sup>
OS	ORACLE Java 6.0 or higher*Windows Server 2012 R2 Standard3 4Windows Server 2012 R2 Datacenter3 4Windows Server 2012 Standard3 4Windows Server 2012 Datacenter3 4Windows Server 2008 R2 Standard3Windows Server 2008 R2 Enterprise3Windows Server 2008 StandardWindows Server 2008 EnterpriseWindows Server 2008 EnterpriseWindows Server 2008 StandardWindows Server 2008 EnterpriseWindows Server 2008 Enterprise without Hyper-VWindows Server 2008 R2, Standard EditionWindows Server 2003 R2, Enterprise EditionWindows Server 2003 R2, Enterprise EditionWindows Server 2003 R2, Enterprise K64 EditionWindows Server 2003, Standard Edition
	Windows Server 2003, Enterprise x64 Edition Windows 8 Pro <sup>3</sup> Windows 7 Professional <sup>3</sup>
	Windows Vista Business Windows XP Professional Windows XP Professional x64 Edition
Web browser	Internet Explorer 7.0 or higher <sup>5</sup>
Display	1024 x 768 resolution or higher
LAN	100BASE-TX compatible

Console terminal		Operational environment			
N	Notes:				
1	When the web bro "Flash Player 11"	owser is installed "Internet Explorer 9.0" or higher in the console terminal, install or later version.			
2	The function of the terminal is not ins See following web http://java.com/d	e Web console and the Remote Console may not operate properly when the console stalling ORACLE Java 6.0 or later. To site for download and install a newest version of Java.			
	64bit version Java Use Java 7 update	a is not available for Remote Console, even if OS is x64, apply 32bit Java. a 2 or higher when SSL/TLS communication of remote console is enabled.			
3	When connecting 2008 R2 or higher	to the Web Console by TLSv1.1/1.2, use Windows 7 or higher, or Windows Server $\gamma$ .			
4	You need to instal and features > Se Experience from t	I "Desktop Experience" additionally. Select Server Manager > Manage > Add roles rver Selection > Features > User Interface and Infrastructure, and install Desktop hem.			
-	<b>M</b> (	size a new installad consists if the cost business is installed "Instances Fouriers 7.0"			

5 We recommend using a pre-installed version if the web browser is installed "Internet Explorer 7.0" or higher in the console terminal.

## Table 3-2: Operational environment for console terminal(BMC version 09-79 or lower)

Console terminal	Operational environment
OS	Windows Server 2012 Standard
	Windows Server 2012 Datacenter
	Windows Server 2008 R2 Standard
	Windows Server 2008 R2 Enterprise
	Windows Server 2008 Standard
	Windows Server 2008 Enterprise
	Windows Server 2008 Standard without Hyper-V
	Windows Server 2008 Enterprise without Hyper-V
	Windows Server 2003 R2, Standard Edition
	Windows Server 2003 R2, Enterprise Edition
	Windows Server 2003 R2, Standard x64 Edition
	Windows Server 2003 R2, Enterprise x64 Edition
	Windows Server 2003, Standard Edition
	Windows Server 2003, Enterprise Edition
	Windows Server 2003, Standard x64 Edition
	Windows Server 2003, Enterprise x64 Edition
	Windows 8 Pro <sup>3</sup>
	Windows 7 Professional <sup>3</sup>
	Windows Vista Business
	Windows XP Professional
	Windows XP Professional x64 Edition
Web browser	Internet Explorer 7.0 or higher <sup>1</sup>
Java Software	ORACLE Java 6.0 or higher <sup>2</sup>
LAN	100BASE-TX compatible

C	Console terminal	Operational environment		
N	Notes:			
1	We recommend u or higher in the co	sing a pre-installed version if the web browser is installed "Internet Explorer 7.0" onsole terminal.		
2	The function of the terminal is not ins See following web <u>http://java.com/c</u>	e Web console and the Remote Console may not operate properly when the console stalling ORACLE Java 6.0 or higher. to site for download and install a newest version of Java. <u>lownload</u>		
	64bit version Java	a is not available for Remote Console, even if OS is x64, apply 32bit Java.		

## **Considering BMC network setting**

The management interface for the BMC network is set to factory defaults shown below:

Item	Factory default
IP address	Not set
Subnet mask	Not set
Default gateway	Not set
DHCP	used

#### Table 3-2: Factory defaults for BMC network

If you need to change the network settings of the management interface, set with the system BIOS setup menu. Otherwise, set the network of console terminal according to the factory defaults, and then log in the Web console and change the settings.

For details, see <u>Setting BMC network</u> on page 4-24 or ServerMgmt > BMC network configuration in *Hitachi Compute Rack 220S BIOS Guide*.

See <u>Notice for setting up BMC network</u> before setting up the BMC network.

Also, confirm the Web browser setting of the console terminal with regard to the following descriptions before using the Web console. If the setting is not appropriate, the Web console will not work normally.

- Cancel the setting for pop-up blocking. Also, cancel the settings by a tool bar or an application as well as browser functions.
- Enable the Java script.
- Set the use setting of Proxy server to connect to BMC network.
- Add IP address of BMC network in "Trusted Sites".
- Enable the screen display.
- Enable the use of cookies.

Tip .

• For the BMC network, maintenance personnel may connect a maintenance terminal and collect information for the purpose of fault investigation.

• Information obtained from the BMC is useful for fault investigation. We recommend that you set a network so that you can use the BMC network at any time irrespective of your system environment.



Before connecting the management interface to the network, make sure that no IP addresses overlap. If there is equipment with IP addresses overlapping on the network, a system unit failure will occur. When connecting the management interface of multiple system units to the same network, change the network settings for each management interface before connection. For details, see Setting BMC network on page 4-24

For details, see <u>Setting BMC network</u> on page 4-24.

• If you press the FUNCTION switch continuously for 10 seconds or more while the management interface is not connected to LAN, the system unit gets into the BMC maintenance mode and the ERROR LED will blink.

BMC maintenance mode is used during maintenance work. Avoid this operation. When into this mode, you can release the system unit from the BMC maintenance mode by pressing the FUNCTION switch continuously for 10 seconds or more using, for example, a ballpoint pen.

When BMC maintenance mode is canceled, the ERROR LED stops blinking.

• The DHCP address has lease period. We recommend that only using DHCP when setting up the system unit. Set disabled DHCP after setting up the system unit, and then changes a static IP address.

## 4

## How to use the Web console (BMC version: 09-80 or higher)

This chapter describes how to use the Web console in BMC version 09-80 or higher, and its initial setting and functionality.

- □ <u>Configuration of Web console menu</u>
- □ <u>Function of Web console</u>
- □ <u>Starting Web console</u>
- □ Initializing Web console
- □ <u>Web console menu items</u>
- □ Exiting Web console

## **Configuration of Web console menu**

This section describes the Web console menu items. See the following chart.



Figure 4-1: Web console menu (BMC version: 09-80 or higher)

## **Function of Web console**

This section describes the functions that you can set from the Web console.

## **Functions**

The Web console provides the following functions:

No.	Menu	Function					
Dash	board						
1	Server Information	Displays the information of the system unit.					
2	Power Summary	Displays the power consumption of the system unit.					
3	System Event Log	Displays the accumulated alert log in the BMC of the system unit.					
Reso	urces - Server						
4	Server Information	<ul> <li>Displays the system unit information.</li> </ul>					
		<ul> <li>Displays the POST code.</li> </ul>					
		<ul> <li>Displays the operation of power, reset, NMI, and LED, and the status of power and LED.</li> </ul>					
		<ul> <li>Backs up of the system unit settings.</li> </ul>					
		<ul> <li>Restores of the system unit settings.</li> </ul>					
		Reboots BMC*.					
Reso	urces – Systems						
5	Network	<ul> <li>Displays network settings and sets connection restrictions</li> </ul>					
		Set the DNS server settings.					
6	IPMI	Sets the IPMI Over LAN settings.					
7	Power Management	<ul> <li>Sets a mode for power saving function.</li> </ul>					
		<ul> <li>Displays the information of the system unit about intake temperature, power status and power consumption.</li> </ul>					
8	Firmware	Displays and update BMC firmware information.					
Alert	5						
9	System Event Log	Displays and sets BMC firmware information.					
Admi	nistration						
10	User and Roles	Displays and sets a user account.					
11	LDAP	Sets user authentication by LDAP.					
12	Date and Time	Displays and sets BMC time and time zone.					
13	Language	Sets a language that you use on the Web console.					
14	Security and Service	Enables or disables a service provided by the system unit and sets a port number.					
15	SNMP	Sets a SNMP server.					
16	SC/BSM	N/A					
17	HCSM	<ul><li>Sets a Hitachi Compute Systems Manager (HCSM) server.</li><li>Sends a test alert.</li></ul>					

#### Table 4-1: List of functions

No.	Menu	Function					
18	Hi-Track	Sets a Hi-Track server.					
19	Certificate	Manages an SSL server certificate.					
20	SSH	Sets an SSH authentication method and displays a host key.					
21	Asset Information	Sets asset information.					
Gene	eral Tasks						
22	Launch remote console	Launch a remote console					
23	Remote console settings	Sets mouse mode of remote console.					
24	Download logs	Collects and downloads a system unit log.					
* Tł us	nis function is available only sers (users for maintenance	for "user01" users (users for system administration) and "ceconsl" work) in initial settings.					

## **Requiring Role**

The Web console is restricted on operation according to the roles assigned to each use. The operations that can be performed on a role basis are as follows:

		Operation allowed by role							
No.	Menu	Admini- strator	Server Operation	User Account Manage- ment	Service Settings	IPMI Over LAN	SMASH CLP	CE	
Dash	board								
1	Server Information	All	All	All All					
2	Power Summary								
3	System Event Log				Information	display only			
Reso	urces – Server		<u>.</u>					•	
4	Server Information	All	All*		Information	display only		All	
Reso	urces – Systems		<u>.</u>		<u>.</u>		•	•	
5	Network	All	Information	display only	All	Information display only	Infor- mation	All	
6	IPMI				Informa- tion display only	All	display only	Information display only	
7	Power Management				All	Information display only			
8	Firmware				Informa- tion display only			All	
Alert	s						•	•	
9	System Event Log			All			Informa- tion display only	All	
Admi	nistration								
10	User and Roles	All	Display of general users and setting of own account	Informa- tion display only	Display of ge own account	eneral users and	setting of	Information display only	
11	LDAP				N	one		-	
12	Date and Time		Information	display only	All	Information di	splay only	All	
13	Language								

#### Table 4-2: Requiring role to operation

		Operation allowed by role							
No.	Menu	Admini- strator	Server Operation	User Account Manage- ment	Service Settings	IPMI Over LAN	SMASH CLP	CE	
14	Security and Service	All	Information	display only	All	Information d	isplay only	All	
15	SNMP	]					None		
16	SC/BSM					Information di	splay only	All	
17	HCSM	_				Non	e	None	
18	Hi-Track	-							
19	Certificate	-							
20	SSH	-							
21	Asset Information					Information di	splay only		
Gene	eral Tasks								
22	Launch remote console	All	Δ	All	All	All		All	
23	Remote console settings		None	None		None	e		
24	Download logs		All		None				
* The - B - R - R	e following operati ackup of the serve estore of the serv estart for BMC	ions are restric er settings er settings	cted.						



**Remote Console** and **Remote Media** roles do not affect on the Web console operation. Those roles are used to enabling the each function.

## **Starting Web console**

This section describes how to log in the Web console.

- 1. Power on the system unit.
- 2. Start the consol terminal's Web browser.
- 3. Enter the following URL into the address bar:

When the HTTP (Hypertext Transfer Protocol) is used for connection, enter the following into the address bar:

http://<IP address of management interface>

When the HTTPS (Hypertext Transfer Protocol over Secure Socket Layer) is used for connection, enter the following into the address bar:

https://<IP address of management interface>

When succeed in the connection, the login window opens.

4. Enter a user name and a password in the login window.



- Register the IP address of management interface and "about: blanks" on the trusted site.
- The server certificate is needed to register when connecting by HTTPS protocol.
- A scroll bar of browser may be not displayed under a situation requiring the scroll bar. In this situation, change the window size of browser by a mouse to display a scroll bar of browser.

5. Enter a **user name** and a **password** in the login window.

When your user authentication is successful and you log in to the Web console, the **Dashboard** tab is displayed.

Gile Antine Hale					/			HITAC
Help a				Server Name:	Chassis II	)1 00000000	aaaaa0 Logge	ed in as I user01 Log
Dashboard	Resources Alerts Admi	inistration						
								Ref
Server Status (aaaaaaa	aaaaaa0xxxxxx)							
					Ser	ver	Nor	mal
Power Summary		_	🗆 Systen	1 Event Log				_
Pover consumption (AC)	Present power consumption	0 W	2 Free	r/Warning event(s) occurred.		🐨 Em	or: 0 🧥 Warnin	g: 2
over capping	Mode	Disable					Dov	vnload logs Shov ale
over capping	Mode Consumption electricity upper limit set point	Disable 0 W	No.	Date and Time	Alert ID	Ale	Dov	vnload logs Shov ale Message
over capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64	Date and Time  4 2013-12-24 13:46:52	Alert ID fd90	Ale	Dov Module Mother board	Message Server is powered o.
over capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65	Date and Time 2013-12-24 13:46:52 2013-12-24 13:48:24	Alert ID fd90 fd40	Ale	Dov Module Mother board Mother board	Message Server is powered o. On server, a warnin.
over capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65	Date and Time 2013-12-24 13:46:52 2013-12-24 13:48:24 2013-12-24 13:50:16	Alert ID fd90 fd40 fd40	Ale	Dov Module Mother board Mother board Mother board	Message Server is powered o. On server, a warnin. On server, a warnin.
over capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65 66 67	Date and Time 2013-12-24 13:46:52 2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:54:21	Alert ID fd90 fd40 fd40 fd41	Ale	Dov Module Mother board Mother board Mother board Mother board	nload logs Shov ale Message Server is powered o. On server, a varnin On server, a varnin Server is powered o.
over capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65 66 67 68	Date and Time         A           2013-12-24         13:46:52           2013-12-24         13:48:52           2013-12-24         13:50:16           2013-12-24         13:51:21           2013-12-24         13:55:53	Alert ID fd90 fd40 fd40 fd91 fd90	Ale	Dow Module Mother board Mother board Mother board Mother board	Message Server is powered o. On server, a varnin On server, a varnin Server is powered o. Server is powered o.
ver capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65 66 67 68 69	Date and Time         Image: Constraint of the second	Alert ID fd90 fd40 fd40 fd91 fd90 fd91	Ale	Dow Module Mother board Mother board Mother board Mother board Mother board	Message Server is powered o. On server, a warnin On server, a warnin Server is powered o. Server is powered o. Server is powered o.
ver capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65 66 67 68 69 70	Date and Time  2013-12-24 13/46:52 2013-12-24 13/46:24 2013-12-24 13/46:24 2013-12-24 13/50:16 2013-12-24 13/54:21 2013-12-24 13/54:27 2013-12-24 13/54:27 2013-12-24 13/56:27	Alert ID fd90 fd40 fd40 fd91 fd90 fd91 fd90 fd91	Ale	Dow Module Mother board Mother board Mother board Mother board Mother board Mother board	Inload logs Shov ale Message Server is povered o. On server, a wamin. On server, a wamin. Server is povered o. Server is povered o. Server is povered o.
ver capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65 66 67 68 69 70 70 71	Date and Time         A           2013-12-24 13146/52         2013-12-24 13146/24           2013-12-24 13146/24         2013-12-24 1315016           2013-12-24 1315016         2013-12-24 1315016           2013-12-24 1315513         2013-12-24 1315772           2013-12-24 1406877         2013-12-24 1406877           2013-12-24 14109174         2013-12-24 14109174	Alert ID fd90 fd40 fd40 fd91 fd90 fd91 fd90 fd91	Ale	Dow Module Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Inload logs Shov ale Message Server is povered o. On server, a wamin. On server, a wamin. Server is povered o. Server is povered o. Server is povered o. Server is povered o.
ver capping	Mode Consumption electricity upper limit set point	Disable 0 W	No. 64 65 66 67 68 69 70 71 71 72	Date and Time         •           2013-12-24 13.46152         2013-12-24 13.46152           2013-12-24 13.46124         2013-12-24 13.46124           2013-12-24 13.56126         2013-12-24 13.55126           2013-12-24 13.55127         2013-12-24 13.55127           2013-12-24 14.06107         2013-12-24 14.06107           2013-12-24 14.06107         2013-12-24 14.06107	Alert ID fd90 fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91	Ale	Dow Module Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Inload logs Show ale Message Server is povered o. On server, a wamin. Server is povered o. Server is povered o.
ver capping	Mode Consumption electricity upper limit set point	Disable D W	No. 64 65 66 67 68 69 70 71 72 73	Date and Time         A           2013-12-24         13.46.52           2013-12-24         13.46.52           2013-12-24         13.46.52           2013-12-24         13.46.12           2013-12-24         13.45.21           2013-12-24         13.57.27           2013-12-24         14.06.97           2013-12-24         14.06.97           2013-12-24         24.40.90.40           2013-12-24         24.40.90.40	Alert ID fd90 fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91	Ale	Dow Module Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Alload logs Show ale     Alessage     Server is powered o.     On server, a wamin.     On server, a wamin.     Server is powered o.
ver sapping	Mode Consumption electricity upper limit set point	Disable O W	No. 64 65 66 67 68 69 70 71 72 73 73 74	Date and Time         L           2013-12-24         13/46/52           2013-12-24         13/46/52           2013-12-24         13/86/52           2013-12-24         13/86/52           2013-12-24         13/86/52           2013-12-24         13/86/52           2013-12-24         13/87/52           2013-12-24         14/08/72           2013-12-24         14/08/72           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04           2013-12-24         14/09/04	Alert ID fd90 fd40 fd91 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90	Ale	Doo Module Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Inload logs Show ale Message Server is powered o. On server, a varnin. Server is powered o. Server is powered o.
rer sapping	Mode Consumption electricity upper limit set point	Disable O W	No. 64 65 66 69 70 71 72 73 74 74 75	Date and Time         A           2013-12-24         13-46-52           2013-12-24         13-46-52           2013-12-24         13-46-52           2013-12-24         13-46-52           2013-12-24         13-46-52           2013-12-24         13-55-32           2013-12-24         140-57           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97           2013-12-24         140-97	Alert ID fd90 fd40 fd41 fd91 fd91 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91	Ale	Doo Module Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	International logs Show all Message Server is powered o. On server, a varnin. On server, a varnin. Server is powered o. Server
er capping	Mode Consumption electricity upper limit set point	Dirable D W	No, 64 65 66 67 68 69 70 71 72 73 73 74 75 76 75	Date and Time         A           2013-12-24         13.46.52           2013-12-24         13.46.52           2013-12-24         13.46.52           2013-12-24         13.46.22           2013-12-24         13.56.12           2013-12-24         13.57.27           2013-12-24         14.06.37           2013-12-24         14.06.37           2013-12-24         14.06.97           2013-12-24         14.09.42           2013-12-24         14.09.42           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97           2013-12-24         14.10.97	Alert ID fd90 fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd91 fd90 fd91 fd91 fd90 fd91 fd91	Ale	Doo Module Mother board Mother board	Initial loss Show all Message Server is porered o. Server is porered o.
er capping	Mode Consumption electricity upper limit set point	Derable O W	No. 64 65 66 67 68 69 70 71 72 73 73 74 75 76 77 75	Date and Time         Image: Control of the second sec	Alert ID Fd90 Fd40 Fd40 Fd90 Fd91 Fd90 Fd91 Fd90 Fd91 Fd90 Fd91 Fd90 Fd91 Fd90 Fd90 Fd90 Fd90 Fd91 Fd90	Ale	Dow Module Mother board Mother board	minad log: They also all log:     Server is powered o.     Or saver, a varnin.     Or saver, a varnin.     Server is powered o.

Tip a

- With the factory defaults for the system unit, you can login as an administrator by entering user01 and pass01 in response to the **user name** and **password** in the login window. If you have been changing an above user account setting, you can not log in the Web console. Enter the user name and password that
- have been already set to log in. For your security, we strongly recommend that you set a user account different from the factory default.
- For details, see <u>Setting user account</u>.
- The Launch remote console button is displayed on the console screen when the Remote Console application is applied.
   When you click Launch remote console, the Remote Console application is started and the user name and password entry window for the Remote Console is displayed.
   For details on how to use the Remote Console application, see the manual attached to the Remote Console application.
- Up to two users can log in to the Web console simultaneously. If two users have already logged in, or a user logs in again without logout after the same user has already logged in, and you cannot log in.



•

- When one of tabs/windows of browser is logged out, disconnect from the system unit under the following conditions:
  - Multiple tabs/windows of browser are opened in the same system console
  - Each tab/window is logged in the same single user account or multiple user accounts to the Web console of the same system unit

When the action corresponding to the operation including the BMC communication is executed after disconnecting from the system unit, the **Session failed** dialog box is displayed. Log out from the Web console, and log in again.



• If no operation is done for 30 minutes or longer when you has logged in to the Web console, an automatic logout will be performed. When the action corresponding to the operation including the BMC communication is executed after disconnecting from the system unit, the **Session failed** dialog box is displayed. Log out from the Web console, and log in again.

## **Initializing Web console**

This section describes the initial setting of the Web console. You should initially set the following data:

- <u>Setting user account</u>
- <u>Setting mouse mode of Remote Console</u>
- Setting BMC date and time
- <u>Setting BMC network</u>

### Setting user account

The setting of a user account is required for remote operation of the system unit. Each of the registered users can be given a user name, a password, and the authority for the Web console operation as well as can enable or disable own account.

For your security, we strongly recommend that you set a user account different from the factory default.

You can set above information in the **User Account** window. Click **Administration** from the top tab, and click **Users and Roles** in the left pane.



If you forget your user name and password to log in to the Web console, start the system BIOS setup menu and then set ServerMgmt > Reset BMC Web Connection to Yes, On next reset, and save the setting in **Save & Exit**. BMC network setting (connection restriction of Web console network setting, user account setting, and HTTP service setting) is initialized. The system unit is restarted after the SERVICE LED on the system unit blinks about 30 to 60 seconds. Log in to the Web console with the factory default user name and password, and then set the Web console network setting (connection restriction of Web console network setting, user account setting, and HTTP service setting) again. When Reset BMC Web Connection is executed, Security and Service is not initialized, however, Network and HTTP need to set up again. For the HTTP setting, see Security and Service. When **Security strength** is set as **Default** in Security and Service, Reset BMC Web Connection is executed, and then Network and Security and Service (without HTTP) are not initialized. When Security strength is set as High, Reset BMC Web **Connection** is executed, and then **Security strength** is set as Default, Security and Service is initialized. Network is not initialized.

• When confirm the BMC network configuration by the system BIOS setup menu, see "BMC network configuration" of the "ServerMgmt" section in *Hitachi Compute Rack 220S BIOS Guide*.

### **Configure User Accounts menu**

Click **Server Setting** from the top tab, and then click **User Accounts** in the left pane. The following window is displayed.

Hitachi Compute Ra	ick f	amily								/				HITAC	сні
File Action Help								Serve	r Name:	Chassis I	Di aaaaaa		Logged in as	: user01 Lo	g Out
Dashboard Resources	Aler	ts	Administration												
Administration			Users and Ro	<u>les</u>										Re	fresh
Administration	\$ 11s	er Account													
👷 Users and Roles	No.	User ID	Login	Admini	Server	User A	Service	Remot	Remot	IPMI Q	SMASH	CE Role			
LDAP	1	user01	Added	Added	-		-			-		-			_
O Date and Time	2	user02	-	-	-	-	-	-	-	-		-			
A Language	3	user03					-								_
Security and Service	4	user04	-	-	-	-	-	-	-	-	-	-			
n SNMP	5	user05	-	-			-		-		-	-			_
l∰_SC/BSM	6	user06							-	-					
<b>Ø</b> BHCSM	7	user07	-		-	-	-		-	-	-	-			
BHi-Track	8	user08			-	-	-		-			-			
Certificate	9	user09	-	-	-	-	-		-		-	-			
6 SSH	10	user10	-	-	-	•	-	-	-	-	-	-			
Asset Information	11	user11	*				-								
	12	ceconsl	Added	-	-	-	-	-	-	-	-	Added			
General Tasks															
I Launch remote console															
Remote console settings															
R Download loop															
1. C.															
															-
														Edi	15

The following table shows description of menu items in the window.

	Menu items	Description
Ref	resh button	Refreshes user account information.
Use	rname	User account name
Role	e	
	Login	Displays the roles given to user account.
	Administrator	
	Server Operation	
	User Account Management	
	Service Settings	
	Remote Console	
	Remote Media	
	IPMI Over LAN	
	SMASH CLP	
	CE	
Edit	:	Go to the Edit User Account window.

#### Roles

Giving roles to a user account allows the setting of actions that the user can do. Each has the following meaning:

Role name	Description
Login	A role for logging in to the service provided by the Web console. Any user without this role is considered invalid and cannot log in to a service.
Administrator	A role representing the user authority for an administrator. Any user with this role can perform all the functions of Web console except setting IPMI Over LAN and BMC restart.
Server Operation	A role for controlling the power to the system unit and making a reset operation.
User Account Management	A role for setting a user account.
Service Settings	A role for setting a service provided by the system unit.
Remote Console*	A role for the Remote Console function to display the system unit screen on a console terminal, and remotely manipulating both keyboard and mouse.
Remote Media*	A role for using the remote floppy disk function and remote CD/DVD function.
IPMI Over LAN	A role for setting a user account and an authentication type for IPMI Over LAN.
SMASH CLP	A role for setting user account for SMASH.
CE	A role representing the user authority for maintenance work, which can be given to <b>ceconsl</b> user only.
* The setting becomes valid w	hen the Remote Console application is applied.

Table 4-4: Role allowing operation and function

### Initial setting of a user account

The initial setting of a user account is as follows:

Username	Password	Role	Description
user01	pass01	Login Administrator	A user for system unit administration. This role is unchangeable.
user02	pass02	None	General users
user03	pass03		
user04	pass04		
user05	pass05		
user06	pass06		
user07	pass07		
user08	pass08		
user09	pass09		
user10	pass10		
user11	pass11		
ceconsl	Set at shipment	Login CE	A user for maintenance work. Maintenance personnel use this role during maintenance work. This setting is unchangeable.

### Table 4-5: Initial settings of user account

## **Configure User Accounts > Edit User Accounts**

it User Account settings			
ic oser Account settings.			
User Account			
No.:	1		
User ID:	user01		
Password:			
Retype Password:			
Role:	🗹 Login		
	🗹 Admir	istrator	
	Serve	r Operation	
	User)	Account Management	
	Servic	e Settings	
	Remo	te Console	
		te Media	
	SMASI	H CLP	
SSH Public Key 1:			
Key Dat	91	Not Registered	
Register	Public Key:		Browse
SSH Public Key 2:			
Key Dat	a;	Not Registered	
Register	Public Key:		Browse
SSH Public Key 3:			
Key Dat	91	Not Registered	
Register	Public Key:		Browse
SSH Public Key 4:			
Key Dat	91	Not Registered	
Postation of the second se	Dublis Kaus		
Register	FUDIIC NEY:		Browse

Changes the settings of a user account.
The following table shows description of menu items in the window.

Menu	ı items	Description
Username		User account name (up to 32 characters)
Password		Entry of a password (up to 32 characters)
Password (Confirm)		Re-entry of a password
Role		
Login		A checked role is given to a user account.
Administrator		
Server Operation	on	
User Account M	lanagement	
Service Setting	S	
Remote Consol	e	
Remote Media		
IPMI Over LAN		
SMASH CLP		
SSH Public Key1 to	4: Set the Public Key t	o use Secure Shell connection.
Key Data		Display information of a public key data. If a public key data is not registered, display <b>Not</b> <b>Registered</b> .
Register Public	Кеу	Upload a public key data, and register the public key data. If a public key data is not registered, this item is not displayed.
Key Length		Display a key length of registered public key data. If a public key data is not registered, this item is not displayed.
Fingerprint		Display a fingerprint of registered public key data. If a public key data is not registered, this item is not displayed.
Options		Display options of registered public key data. If a public key data is not registered, this item is not displayed.
Comment		Display a comment of registered public key data. If a public key data is not registered, this item is not displayed.
Update Public k	Кеу	Update a registered public key data.
Delete Public K	ey	Delete a registered public key data.
Confirm button		Enables what you edited, and goes to the confirming window.
Cancel button		Disables what you edited, and returns to the status before editing.

### Table 4-6: Configure User Accounts > Edit User Accounts menu items



- **Username** is a mandatory input item.
- When you set a password, enter the same value for both **password** and **password (Confirm)**.
- When you edit a user account, a password is not a mandatory item. When you do not enter a password, the BMC decides that the password remains unchanged.
- You can register a SSH public key file made with OpenSSH.
- A maximum size of a SSH public key file which you can register is 2 KB.
- The **user01**, which the administrator user's role is unchangeable.
- Only the user with Administrator role can change a role.
- The **ceconsl** is a user for maintenance personnel. Maintenance personnel use this role when a maintenance service is offered. This setting is unchangeable.



- The following error is displayed when a content of input string is not correct.
  - When a cursor is moved to other input string in a state which a content of input string is not correct, an incorrect input string is displayed with in a red frame.

Edit	Jser Account				×
Edit U	ser Account settings.				
	USEF ACCOUNT				
	No.:	1			
	User ID:	L			
	Password:				
	Retype Password:				
	Role:	🖌 Login			
		🖌 Admini	strator		
		Server	Operation		
		User A	ccount Management		
		Service	Settings		
		Remot	e Console		
		Remot	e Media		
		IPMI O	ver LAN		
		SMASH	CLP		-
	SSH Public Key 1:				
	Key Data:		Not Registered		
					- 11
	Register P	ublic Key:		Browse	
	11				·
	SSH Public Key 2:				- 8
	Key Data:		Not Registered		- 11
	Register P	ublic Key:		Brovse	
	SSH Public Key 3:				- 11
	Key Data:		Not Registered		- 11
					- 11
	Register P	ublic Key:	-	Browse	i H
					<u>ن</u>
	SSM Public Key 4:		11110-0010-0010-0010-001		
	Key Data:		Not Registered		•
				Confirm Cano	el la

 Place the cursor on the input string within the red frame, and the error message is displayed with a speech bubble.

er Account rettings			
er neuronne seconds.			
User Account			
No.1	1		
User ID:			This field is rec
Password:			
Retype Password	6		
Roles	Login		
	Admir	histrator	
	Serve	r Operation	
	User/	Account Management	
	Servic	e Settings	
	Remo	te Console	
	Remo	te Media	
	IPMI I	Over LAN	
SSH Public Key 1		1 OLF	
Key	Data:	Not Registered	
Reg	gister Public Key:		Browse
SSH Public Key 2			
Key	Data:	Not Registered	
Reg	gister Public Key:		Browse
SSH Public Key 3	11		
Key	Data:	Not Registered	
Reg	gister Public Key:		Browse
SSH Public Key 4	:		
Key	Data:	Not Registered	

Click **Confirm**, and the following **Confirm** dialog box is displayed.

(i) Edit User Accour Following value( If value(s) is co	<b>int</b> (s) will be set. irrect, press [OK].	
User Account		
No.	1	
User ID	user01	
Password	Will not be modified	
Role	Login Administrator	
SSH Public Key 1	Will not be modified	
SSH Public Key 2	Will not be modified	
SSH Public Key 3	Will not be modified	
SSH Public Key 4	Will not be modified	

Click **Back** to go back to **Edit User Account**.

Click **OK** to save the change settings, and go back to **Edit User Account**. Click **Cancel** to go back to **Edit User Account** without saving.

# Setting mouse mode of Remote Console

When the Remote Console application is applied to the system unit, set the mouse mode for remote console operation.

Set the mouse mode on **Remote console settings** from the General Tasks tab.

Click **Resources**, **Alerts**, or **Administration** from the global tabs, and click **Remote console settings** from **General Tasks** in the left pane. The following window is displayed.

Set mouse mode in accordance with the OS that you install.

Cancel

The following table shows description of menu items in the window.

Manu itama	Description
Menu items	Description
Mouse Mode	ABSOLUTE Mode: A mode for manipulating the mouse of remote console using the mouse cursor of a console terminal. Use this mode when the OS of the system unit is Windows or RHEL6.
	RELATIVE Mode: A mode for manipulating the mouse of remote console using the mouse cursor on the system unit screen. For use of a non-Windows OS and non-RHEL6.
Confirm button	Enables what you edited, and goes to the confirming window.
Cancel button	Disables what you edited, and returns to the status before editing.

#### Table 4-7: Remote KVM Settings menu items



When changing the mouse mode, terminate the remote console first. An attempt to change the mouse mode while the remote console is active, the mouse cursor may not work normally.



For details on how to use the Remote Console application, see *Remote Console Application User's Guide*.

And then click **Confirm**. The following **Confirm** dialog box is displayed.

onfirm	r:				>
1	Edit Remote co Following value	<b>nsole setti</b> (s) will be :	ngs set.		
		mect, pres	s [ON],		
Remo	te console set	tings	s [0(j)		

Click **Back** to go back to **Remote console settings**.

Click **OK** to save the change settings, and go back to **Remote console settings**. Click **Cancel** to go back to **Remote console settings** without saving.

# Setting BMC date and time

Set the BMC time and time zone.

Click **Administration** from the global tabs, and click **Date and Time** in the left pane. The following window is displayed.

The setting of BMC date and time is required for time stamp of an error log.



File Action Help	e Rack family	/		Server Name:	Chargie ID:	ABAABABABABABAD Logged I	n az : uzer01 Los Out
Dashboard Resources	Alerts	Administration					
Administration	Administration	> Date and Time					
Administration	The sector of th						
👷 Uzerz and Rolez	> Date and `	lime Summary	2010 40 04	10.10.00			
LUDAP	Time Zone		+00.00	10140100			
Date and Time	NTP Setting		Disable				
Sanguage	Construction of the	24 - 111 - 11 - 11 - 11 - 11 - 11 - 11 -					
Security and Service	A Date and 1	fime Information					
15 SNMP	Time Zone	NTP					
A LICOM	Time synchron	ization method		Do not use NTP.			
agincon Reterrate	NTP server 0	IP address	s/host name				
Certificate	NTP server 1	IP address	s/host name				
er ssh							
Asset Information							
_							
General Tasks							
Launch remote console							
🛒 Remote console settings							
😭 Download logs							
							Edit
ŕ							
				↓			
				•			
	Edit NTD						×
	Latervit						
	Edit NTP set	tings.					
	1						
	NTP						
	1072						
	Time sync	hronization metho	od:	<ul> <li>Do not use I</li> </ul>	NTP.	Use NTP.	
	NTD ac	• O TD address (h					_
	NIP serve	r u ip address/ho:	st name:				
	NTD serve	. 1 TD adduces/bas					-
	NIP serve	r 1 iP address/hos	schame:				
							1

## Table 4-8: BMC Time menu items

Menu items	Description			
Refresh button	Refreshes information.			
Edit	Goes to the Edit window.			
Timezone <sup>1</sup>	Set the time zone of the local area where the system unit is installed, according to its OS.			
Time Synchronization Method <sup>2</sup>	• <b>Do Not Use NTP</b> : BMC reads and synchronizes the system clock of the system unit periodically.			
	• <b>Use NTP</b> : BMC time is synchronized with the time distributed by an external NTP server.			
NTP server 0 to 1 <sup>2</sup>	When setting <b>Time Synchronization Method</b> to <b>Use NTP</b> , enter the IP address of NTP server.			
Confirm button	Enables what you edited, and goes to the confirming window.			
Cancel button	Disables what you edited, and returns to the status before editing.			
Notes:				
1 When change the settings, click the <b>Time Zone</b> tab on <b>Date and Time Information</b> , and click <b>Edit</b> .				
2 When change the settings, cl	ick the NTP tab on Date and Time Information, and click Edit.			

- When change time settings in a system console connected to a Web console, a display that Local time of Date and Times Summary is changed.
   Click Refresh to go back to the original time in the display of Local time.
  - Displays of Local time and Timezone are not reflected values retrieved from an NTP server just after setting to Use NTP in Time Synchronization Method.
     Click Refresh to reflect the values retrieved from an NTP server to

Local time and Timezone.

Click **Confirm** in the **Timzone** window, and the following **Confirm** dialog box is displayed.

onfirm		×
i) Edit Time Zor	ie.	
Following val	ue(s) will be set.	
If value(s) is	correct, press [OK].	
Time Zone		
Time Zone	00:00	

Click **Back** to go back to the settings window.

Click **OK** to save the change settings, and go back to the **Timezone** window. Click **Cancel** to go back to the **Timezone** window without saving.

Click **Confirm** in the **NTP** window, and the following **Confirm** dialog box is display displayed.

onfirm		×
i Edit NT	p ng value(s) will be set.	
If value	e(s) is correct, press [OK]	
If valu NTP Time synchron	ization method	
If value NTP Time synchron NTP server 0	ization method IP address/host name	

Click **Back** to go back to the settings window.

Click **OK** to save the change settings, and go back to the **NTP** window. Click **Cancel** to go back to the **NTP** window without saving.

## **Setting BMC network**

You can change the BMC network setting of the system unit from the factory defaults in accordance with your system environment.

When the BMC network setting is changed, the network is shut off and restarts. After that, you can connect to the BMC network only in the environment changed in setting. Confirm that the settings are correct when changing the BMC network setting.

You can make setting to restrict the IP address of network device allowed connecting to the system unit. Up to four IP addresses of the network devices that permits connection to the system unit.

Click **Resources** from the global tab in the **Network** window, and then click **Systems** > **Network** in the left pane.

Hitachi Compute	Rack family		нітасні			
File Action Help		Server Name: Chass	is ID: aaaaaaaaaaaaaaa Logged in as : user01 Log Out			
Dashboard Resources	Alerts Administration					
Resources	Systems > <u>Network</u> Refresh					
Systems	∧ Network					
D Network	IP Address MAC Address Limit Source IP Ad	ID Address	192 168 0 169			
ås IPMI		Subnet Mask	255.255.255.0			
C Pover Management		Default Gateway	0.0.0.0			
		Use DHCP	Disable			
General Tasks Escorb monte canada Servita entrade vettings O Dominad lags			EA. 1			
1	Edit IP Address		×			
	Edit IP Address settings.					
	IP Address BMC IP Address: Subnet Mask: Default Gateway: Use DHCP:	192.168.0.169 255.255.255.0 0.0.0.0 • Disable	C Enable			
			Confirm Cancel			

Hitachi Compute H	аск татш	у					HITACH
File Action Help					Server Name :	Charrie ID: assassassass.	Logged in as : user01 Log Ou
Dashboard Resources	Alerts	Administra	tion				
tesources		Network					Refrest
Server	2 Network						
systems	IP Address	MAC Address	Limit Source IP Address	DNS Server			
💑 Network	AMC		dei 3di 7ei 6ei aei ed				
å, IPMI	0110						
OP Power Management							
G Firmware							
-							
ieneral Tasks							
Launch remote console							
Remote console settings							
The second secon							
Consultant to As							

and a second a second a	,	Server Name: Charr	It ID: assassassassassassassassassassassassass
Dashhoard Pesources	Alarts Administration		
Coshoord Resources			
esources	ojotami > materia		Rat
ystems	* Network		
n Netvork	IP Address MAC Address Limit Source IP Address DNS	Dirable	
IPMI	IP address alloved to connect 1	C. Salar	
D Pover Management	IP address allowed to connect 2		
	IP address allowed to connect 3		
	IP address allowed to connect 4		
neral Tasks			
			b3
	dit Limit Course ID Address		Ed
	dit Limit Source IP Address	<b>I</b>	Ed
E	dit Limit Source IP Address		64
1	Edit Limit Source IP Address idit Limit Source IP Address settings. Limit Source IP Address	ł	e e e e e e e e e e e e e e e e e e e
2	dit Limit Source IP Address dit Limit Source IP Address settings. Limit Source IP Address	oconnect	
2	Edit Limit Source IP Address Edit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed t Set IP address: 192.168.0.01 Set subnet: 192.168.0.0/255.	o connect 255.255.0, 192.168.0.	0/24
2	Edit Limit Source IP Address idit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed t Set IP address: 192.168.0.1 Set zubnet: 192.168.0.1 Set zubnet: 192.168.0.0/255. Use:	o connect 255.255.0, 192.168.0. () Disable	0/24
2	tinit Source IP Address idit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed to Set IP address: 192.168.0.0/255. Use: IP address allowed to connect	• Disable	0/24
2	dit Limit Source IP Address idit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed t Set IP address: 192.168.0.1 Set subnet: 192.168.0.0/255. Use: IP address allowed to connect ID address allowed to connect	• Connect 255.255.0, 192.168.0. • Disable	0/24
	dit Limit Source IP Address dit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed to Set IP address: 192.168.0.1 Set rubnet: 192.168.0.0/255. Use: IP address allowed to connect IP address allowed to connect	<ul> <li>connect</li> <li>255.255.0, 192.168.0.</li> <li>Disable</li> <li>11</li> <li>21</li> </ul>	0/24
2	Edit Limit Source IP Address idit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed t Set IP address: 192.168.0.1 Set rubnet: 192.168.0.0/255. Use: IP address allowed to connect IP address allowed to connect IP address allowed to connect	• connect 255.255.0, 192.168.0. • Disable 11 21 31	0/24
3	dit Limit Source IP Address idit Limit Source IP Address settings. Limit Source IP Address Examples of IP address allowed to Set IP address allowed to connect IP address allowed to connect IP address allowed to connect IP address allowed to connect	o connect       255.255.0, 192.168.0.       • Disable       1:       2:       3:       4:	0/24

Hitachi Compute	e Rack famil	У		HITACHI
File Action Help			Server Name: Charziz ID: aaaaaaa	assas0 Logged in at I uter01 Log Out
Dashboard Resources	Alerts	Administration		
Resources		Natwork		Refrezh
Server	A Network			
Systems	X IVEOVOIK			
UN Network	DNS center IR	MRC Address Unit Source IP Address Dis	And the second s	-
di IPMI	ONS server IP	addrawr 2		
OPower Management	DNS server IP	address 3		
Ci Firmware				
-				
General Tasks				
Launch remote console				
Remote console settings				
Covnicad logs				
				Edit
			1	
	Edit DNS	Server		×
	Luit Divo			
	Edit DNS Se	rver settings.		
	DNS	Server		
		and the second se		
		DNS server IP address 1:		
		DNS server IP address 2:		
		DNO		
		DNo server IP address 3:		
				Confirm Cancel
				Conter

### Table 4-9: Network Setting menu items

Menu items	Description
Refresh button	Refreshes information.
Edit button	Goes to the Edit window.
IP Address Netmask Default Gateway <sup>1</sup>	Sets the BMC network. For the setting of the default IP address, the subnet mask, and the default gateway, see <u>Connecting to management interface</u> .
DHCP <sup>1,2</sup>	Enables or disables the DHCP.
MAC Address (Only display)	Displays MAC address of BMC network in a system unit.
Use <sup>3</sup>	Enables or disables the connection IP address restriction function.
IP Address Allowed to connect 1 IP Address Allowed to connect 2 IP Address Allowed to connect 3 IP Address Allowed to connect 4 <sup>3</sup>	Enter an IP address to permit connection to the system unit. You can set a single IP address or subnet. (Example) Single IP address: 192.168.10.1 Subnet: 192.168.10.0/255.255.255.0 or 192.168.10.0/24
DNA server <sup>4</sup>	Set a DNA server. For the setting of DNA server, see <u>Network &gt; DNA Server</u> .
Confirm button	Enables what you edited, and goes to the confirming window.
Cancel button	Disables what you edited, and returns to the status before editing.

Menu items	Description		
Notes:			
1 When changing the settings, click <b>Network &gt; IP Address &gt; Edit</b> .			
2 When you set <b>DHCP</b> to <b>Used</b> , settings of <b>IP Address</b> , <b>Netmask</b> , <b>and Default Gateway</b> are disabled.			
3 When changing the settings, cli	ck Network > Limit Source IP Address > Edit.		
4 When changing the settings, cli	ck Network > DNA Server > Edit.		

When you set **DHCP** to **Enable**, an IP address of the BMC network may be changed depending on the DHCP server. We recommend you use a DHCP only as temporary use to initialization

of an IP address, and set **DHCP** to **Disable** usually.

• Click **Confirm** in the **Edit IP Address** dialog box, and the **Confirm** window is displayed.

i Edit IP Addres	5	
Following value Please check a	(s) will be set. s there is risk of losing network connectivity.	
	fox1	
If value(s) is c	orrect, press [OK].	
If value(s) is c IP Address BMC	IP Address	192.168.0.169
If value(s) is c IP Address BMC	IP Address Subnet Mask	192.168.0.169 255.255.255.0
If value(s) is c IP Address BMC	IP Address Subnet Mask Default Gateway	192.168.0.169 255.255.255.0 0.0.0.0

Click **Back** to go back to the **IP Address** window.

Click **OK** to change IP address, and disconnect from a system unit. Input the changed IP address on a navigation bar of system console, and log in the Web console again after reconnecting the system unit.



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Tip .

When the action corresponding to the operation including the BMC communication is executed after disconnecting from the system unit, the **HTTP request error** dialog box is displayed.

Try to log out from the Web console, and the **HTTP request error** dialog box is displayed.



Click **Cancel** to go back to the **Network** window without saving.

• Click **Confirm** in the **Edit Limit Source IP Address** dialog box, and the **Confirm** window is displayed.

	3
Edit Limit Source IP Address Following value(s) will be set. If value(s) is correct, press [OK].	
Limit Source IP Address	
Limit Source IP Address Use	
Limit Source IP Address Use IP address alloved to connect 1	
Limit Source IP Address Use IP address alloved to connect 1 IP address alloved to connect 2	
Limit Source IP Address Use IP address allowed to connect 1 IP address allowed to connect 2 IP address allowed to connect 3	

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Limit Source IP Address** window.

Click **Cancel** to go back to the **Network** window without saving.

# Web console menu items

This section describes the Web console menus and setting items.

# Dashboard

#### Display Server Status, Power Summary, and System Event Log.

Hitachi C	ompute Rack family				/			HITACH
File Action Help				Server Name:	Chassis ID:		aaaaaa0 Logge	ed in as i user01 Log Out
Dashboard	Resources Alerts Adm	inistration						
								Refresh
Server Status (aaaaaaa	aaaaaa0xxxxxx)							
					Serve	<u>u</u>	Nor	mal
Power Summary		_	Systen	1 Event Log				_ 0
Pover consumption (AC)	Present pover consumption	0 W	2 Erro	r/Warning event(s) occurred.		👽 Erri	or: 0 🖄 Warnin	ig: 2
Pover capping	Mode	Disable					Dov	vnload logs Shov alerts
	Consumption electricity upper limit set point	0 W	No.	Date and Time	Alert ID	Ale	Module	Message
			64	2013-12-24 13:46:52	fd90			
			10000				Mother board	Server is powered o
			65	2013-12-24 13:48:24	fd40		Mother board Mother board	On server, a varnin
			65	2013-12-24 13:48:24 2013-12-24 13:50:16	fd40 fd40		Mother board Mother board	On server, a varnin
			65 66 67	2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:54:21	fd40 fd40 fd91	<u>A</u>	Mother board Mother board Mother board Mother board	On server, a warnin On server, a warnin Server is powered o
			65 66 67 68	2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:54:21 2013-12-24 13:55:53	fd40 fd40 fd91 fd90	<u>A</u>	Mother board Mother board Mother board Mother board	Server is powered o  On server, a warnin On server, a warnin Server is powered o Server is powered o
			65 66 67 68 69	2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:50:16 2013-12-24 13:54:21 2013-12-24 13:55:53 2013-12-24 13:57:27	fd40 fd40 fd91 fd90 fd91	<u>A</u>	Mother board Mother board Mother board Mother board Mother board	Server is powered o • On server, a warnin On server, a warnin Server is powered o Server is powered o Server is powered o
			65 66 67 68 69 70	2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:54:21 2013-12-24 13:55:53 2013-12-24 13:55:53 2013-12-24 13:57:27 2013-12-24 14:08:37	fd40 fd40 fd91 fd90 fd91 fd90	<u>A</u> <u>A</u>	Mother board Mother board Mother board Mother board Mother board Mother board	Server is powered o On server, a varnin On server, a varnin Server is powered o Server is powered o Server is powered o
			65 66 67 68 69 70 71	2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:50:16 2013-12-24 13:55:53 2013-12-24 13:55:53 2013-12-24 13:57:27 2013-12-24 14:00:37 2013-12-24 14:00:37	fd40 fd40 fd91 fd90 fd91 fd90 fd91	<u>A</u>	Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Server is povered o On server, a vamin On server, a vamin Server is povered o Server is povered o Server is povered o Server is povered o
			65 66 67 68 69 70 71 72	2013-12-24 13:48:24 2013-12-24 13:50:16 2013-12-24 13:55:15 2013-12-24 13:55:53 2013-12-24 13:57:27 2013-12-24 14:08:07 2013-12-24 14:09:00	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90		Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Server is povered o On server, a vamin On server, a vamin Server is povered o Server is povered o Server is povered o Server is povered o Server is povered o
			65 66 67 68 69 70 71 72 73	2013-12-24 13/48/24 2013-12-24 13/50/16 2013-12-24 13/50/16 2013-12-24 13/57/12 2013-12-24 13/57/12 2013-12-24 13/57/127 2013-12-24 14/08/07 2013-12-24 14/09/08 2013-12-24 14/09/08	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91		Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Server is povered o On server, a varmin On server, a varmin Server is povered o Server is povered o Server is povered o Server is povered o Server is povered o
			65 66 67 68 69 70 71 72 73 74	2013-12-24 13/48/24 2013-12-24 13/50/16 2013-12-24 13/50/16 2013-12-24 13/55/15 2013-12-24 13/57/27 2013-12-24 14/09/07 2013-12-24 14/09/09 2013-12-24 14/09/02 2013-12-24 14/09/42	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90		Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Server is povered o On server, a vamin On server, a vamin Server is povered o Server is povered o
			65 66 67 68 69 70 71 72 73 74 75	2013-12-24 13/48:24 2013-12-24 13/50:16 2013-12-24 13/50:16 2013-12-24 13/55:53 2013-12-24 13/57:27 2013-12-24 13/67:27 2013-12-24 14/08:37 2013-12-24 14/09:08 2013-12-24 14/09:08 2013-12-24 14/109:42 2013-12-24 14/10:57	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91		Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board Mother board	Server is powered o On server a varnin On server a varnin Server is powered o Server is powered o
			65 66 67 68 69 70 71 72 73 74 75 76	2013-12-24 13-48;24 2013-12-24 13:50:16 2013-12-24 13:50:16 2013-12-24 13:54:62 2013-12-24 13:55:53 2013-12-24 13:55:53 2013-12-24 14:06:57 2013-12-24 14:06:07 2013-12-24 14:07 2013-12-24 14:07 2013-	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90		Mother board Mother board	Server is powered o On server, a varnin Server is powered o Server is powered o
			65 66 67 68 69 70 71 72 73 74 73 74 75 76 77	2013-12-24 13-08-124 2013-12-24 13-050-16 2013-12-24 13-050-16 2013-12-24 13-050-16 2013-12-24 13-055-05 2013-12-24 14-08-07 2013-12-24 14-08-07 2013-12-08-07 2013-08-07 2013-08-07 2013-08-0	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91		Mother board Mother board	Server is powered o On server, a varnin On server, a varnin Server is powered o Server is powered o
			65 66 67 68 69 70 71 72 73 74 75 76 77 78	2013-12-24 13-040;24 2013-12-24 13-050;16 2013-12-24 13-050;16 2013-12-24 13-050;16 2013-12-24 13-050;16 2013-12-24 13-050;27 2013-12-24 14:09,00 2013-12-24 14:09,00 2013-12-24 14:09,10 2013-12-24 14:09,10	fd40 fd40 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90 fd91 fd90		Mother board Mother board	Server is powered o On server, a varnin Server is powered o Server is powered o

### **Server Status**

#### Table 4-10: Server Status menu items

Menu items	Description
Refresh button	Refreshes information.
Server	Displays a status of system unit.
	Normal: Event (error level) does not occur.
	Error: Event (error level) has occurred.

## **Power Summary**

#### **Table 4-11: Power Summary menu items**

Menu items	Description
Refresh button	Refreshes information.
Power consumption (AC)	Displays current power consumption in a system unit.
Power capping	Displays power capping setting in a system unit.

### System Event Log

For System Event Log, see <u>Alerts</u>.

## **Resources > Server**

The following indications and setups are available in the **Server Information** window.

- Displays the firmware information, power status, and LED status for a system unit.
- Performs the power supply, reset, NMI, or LED for a system unit.
- Displays the object identifier for a system unit.
- Displays the BMC settings for a system unit.
- Performs the backup settings of system unit. (see <u>Backup server settings</u>)
- Performs the restore settings of system unit. (see <u>Restore server settings</u>)
- Restarts BMC. (see <u>Restart BMC</u>)

#### **Server Information > Condition**

Display the firmware information, power status, and LED status for a system unit. Remote control (power ON/forced power OFF/reset/NMI) can be performed for a system unit.

Hitachi Compute	Rack family		Server Name	Chargie ID: 2222222		HITA	CHI
Dashboard Resources	Alerts Administration		Saraa Manay		Logges III		
Resources	Server > <u>Server</u>					R	efresh
Server	☆ Server Information					Action	
🏽 Server	Condition Hardware BMC						
	BMC version Current ver	sion 50-12					
	SDR version	210HM2d35					
	EFI version	01-02					
	Status	Normal					_
	Power	OFF					
	LID	ON					_
	ERROR(ALT)	OFF					
	Mode0	OFF					_
	Model	ON					
	Maintenance1 (CPU)	OFF					
	Maintenance2 (Memory)	OFF					
	Maintenance3 (MBD/Fuse)	OFF					
	Maintenance4 (PCI)	OFF					
	MaintenanceS (PS/Volt)	OFF					
	Maintenance6 (Fan)	OFF					
	Maintenance7 (Temp)	OFF					
	Maintenance8 (Others)	OFF					
Surtame	POST code	#					
	Maintenance mode	OFF					
General Tasks							
Launch remote console							
Remote console settings							
Download logs							
			LID ON	LID OFF Power ON	Force pover OFF	Server Action	

Menu items	Description
Refresh button	Refreshes information.
Action selection button	Backs up or restores server settings.
BMC version	Displays a BMC's firmware version.
SDR version	Displays a SDR's firmware version.
EFI version	Displays an EFI's firmware version.
Status	Displays the status of system unit.
Power	Displays the current power status of system unit. OFF: power off
	ON: power on
LID <sup>1</sup>	Displays the SERVICE LED status of system unit.
ERROR (ALT) <sup>1</sup>	Displays the ERROR LED status of system unit.
Mode0 <sup>1</sup>	Displays the following LEDs status of system unit.
Mode1 <sup>1</sup>	Mode0: MODE0 LED
	Mode1: MODE1 LED
Maintenanace <sup>1</sup>	Displays the Maintenance LEDs status of system unit.
	(see <u>Maintenance corresponding</u> )
POST code	Displays the POST code of BMC.
Maintenance mode	Displays that the operation mode of BMC is maintenance mode or not.
LID ON button <sup>2</sup>	Turns on the SERVICE LED of system unit.
	This operation is same as pressing the SERVICE LED switch when the SERVICE LED is turned off.
LID OFF button <sup>2</sup>	Turns off the SERVICE LED of system unit.
	This operation is same as pressing the SERVICE LED switch when the SERVICE LED is turned on.
Power ON button <sup>2</sup>	Turns on the system unit.
Force power OFF button <sup>2</sup>	Turns off the system unit forcefully. OS is not shut down. Normally, shut down from the OS to turn off the system unit.
Server Action selection button <sup>3</sup>	Perform the following operations from the menu.
	Reset:
	The system unit is performed a hardware reset. This operation is available when the system unit is turned on.
	• NMI:
	Issues interrupt signals. The dump processing is started depending on the OS settings. This operation is available when the system unit is turned on.
Notes:	

#### **Table 4-12: Server Information menu items**

1 For the detail of each LED, see "Name of each component and its functions" section in the "Getting Started Guide".

2 Click the button, and the **Confirm** windows is displayed. Click **OK** to perform the operation.

3 Click the button, and select a menu. The Confirm window is displayed. Click OK to perform the operation.



Types of BMC's operating modes are Normal Mode and Maintenance Mode. Maintenance Mode is used only by maintenance personnel during maintenance work. If **Maintenance Mode** is displayed **ON**, press the FUNCTION switch for at least 10 seconds with the tip of a ballpoint pen to cancel that mode.

### Maintenance corresponding

Each **Maintenance** corresponds to an event code displayed in MAINTENANCE LEDs on a system unit.

The following table shows **Maintenance** that corresponded to the MAINTENANCE LEDs when the event codes are displayed.

MAINTENANCE LEDs	Maintenance
1	Maintenance1 (CPU)
2	Maintenance2 (Memory)
3	Maintenance3 (MBD/Fuse)
4	Maintenance4 (PCI)
5	Maintenance5 (PS/Volt)
6	Maintenance6 (Fan)
7	Maintenance7 (Temp)
8	Maintenance8 (Others)

#### Table 4-13: MAINTENANCE LEDs

### **Backup server settings**

Backup server settings that are used for system unit management. Make sure to back up the settings when changing Web console settings.



Back up firmware settings when changing BMC firmware image, ADR, or something. Use the latest backup file.

Click the action selection button, and select **Backup server settings**. The following **Confirm** dialog box is displayed.



Click **Save**, and the following dialog box is displayed. Click **Save**.



The following window is displayed, and selects the saved folder. Click **Save**.

Save As				×
Admit	nistrator + Downloads	- 🖾	Search Downloads	<b>1</b>
Organize 🔻 New fold	er			955 - 60
	▲ Name *		Date modified	Туре
Desktop Downloads		No items match your	search.	
Libraries Documents Music Pictures Videos				
Computer				
Local Disk (C:)	- I			•
File <u>n</u> ame:	nanagement_backup_GQ-CR2	10HM-NDN-Y_323aaaaaaaaaa	aaaaa0xxxxxxx	•
Save as type: B	AK File			-
Hide Folders			Save	Cancel

The backup data is saved, and the download complete window is displayed. Click **Close**.

#### **Restore server settings**

Note

Restore the setting of system unit using the backup data that downloaded in <u>Backup server settings</u>. BMC is restarted automatically after restoring.

 For IPMI Over LAN function settings, IP address settings of BMC network, default gateway settings of BMC network, and subnet mask settings of BMC network are not backed up and restored. When a motherboard is replaced by failure and others, set these settings again.

- Do not restore the backup data of firmware settings using Web console to other system units. A unique type name of system unit, a serial number, and hardware configurations are wrote to other system unit, and the system unit might not operate properly. Restore the backup file to the system unit that is executed the backup.
- Do not restore the backup data of firmware settings using the Web console in BMC version 09-80 or higher, to the system units using the Web console in BMC version 09-79 or lower.
   Do not restore the backup data of firmware settings using the Web console in BMC version 09-79 or lower, to the system units using the Web console in BMC version 09-80 or higher.
   If you want to update BMC version 09-80 or higher from BMC version 09-79 or lower, you should note down the settings of the web console and keep in hand.

Click **Action**, and select **Restore server settings**. The following **Restore server settings** dialog box is displayed.

Restore server setti	ngs	×
Restore server settings	in this screen.	
<b>Restore server set</b> Backup file:	tings management_backup_GQ-CR210HM	Browse
		Confirm Cancel

Click **Browse**, and select a backup data file of server settings.

Then click **Confirm**, and the **Confirm** window is displayed. Make sure the backup data file is correct, and click **OK**. Start to restore the settings.

Tip a

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- When click **Confirm** in the **Restore server settings** dialog box while updating the BMC firmware or restoring the server settings, the dialog box that content indicated "wait a little while and try again" is displayed. Click **Close** to exit.
- When the following conditions are met, click OK in the Confirm window. The dialog box that confirms to restart BMC is displayed again. Click **OK** to continue.
  - Running BIOS
  - Running system unit
- When the system unit is not operated over 30 minutes in the **Confirm** dialog box, restore is suspended. Click **Close**, and try again from the start.

After setting restoration is completed, the following dialog box is displayed, and clicks **Close**. The connection is disconnected from the system unit due to restarting BMC.

	Finishad	
9	Fillislieu	
	Restore server settings was successful.	
	BMC will be automatically restarted.	
	After restarting, please login again.	
-		



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Tip .

When perform the operation occurred BMC communication after disconnecting from the system unit, the **HTTP request error** or **Session failed** dialog box is displayed.

Logout and log back in Web console.



SERVIC LED flashes for 30 to 90 seconds in the system unit after restarting BMC. Cut off the power supply after SERVIC LED flashing is completed.

Communications (such as HCSM or BIOS) and BMC functions (such as Web console and Remote console) are stopped after restarting BMC. These communications and functions cannot be available while BMC restart (30 to 90 seconds).

Problem may occur such as displaying error messages due to stopping BMC communication service while restarting BMC. This problem may occur depending on a communication program.

Do not restart BMC during running BIOS or operating a setup menu. BMC cannot communicate with BIOS, and then failures may occur in a system unit. We recommend that you restart BMC while a system unit is shut down.

# **Server Information > Hardware**

Display the information of identification for a system unit.

Hitachi Compute Ra	ck family	1			HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaaa Logged in as	i user01 Log Out
Dashboard Resources	Alerts	Administration			
Resources	Server > <u>S</u>	erver			Refresh
Server	☆ Server Inf	ormation			Action
🧯 Server	Condition	Hardware			
	Server Name				
	BMC IP address		192.168.0.169		
	BMC MAC addre	155	d413d17e16e1ae14d		
	UUID		0000000-0000-0000-000000000000		
	Product Name		Compute Rack 210H		
	Product Part/Mo	odel Number	GQ-CR210HM-NDN-Y		
	Product Version		0021R21500		
	Product Serial N	lumber	323aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa		
	I				
Systems					
 General Tasks					
Launch remote console					
Remote console settings					
Covnload logs					

## Table 4-14: Server Information menu items

Menu items	Description
Refresh button	Refreshes information.
Action selection button	Backs up or restores server settings.
	See <u>Backup server settings</u> , and <u>Restore server settings</u> .
Server name	Displays a server name that is set in Asset Information.
BMC IP address	Displays BMC IP address for a system unit.
	For the initial BMC IP address settings, see <u>Connecting to</u> management interface.
	For the BMC IP address changing, see Setting BMC network
BMC MAC address	Displays BMC MAC address.
UUD	Displays UUD.
Product Name	Displays a product name of system unit.
Product Part/Module Number	Displays product information of system unit
Product Version	Hardware version of system unit is displayed.
Product Serial Number	Product serial number of system unit is displayed.

# Server Information > BMC

Display the information of BMC settings.

File Action Help Doshboord Resources Resources Server Server	Alerts Admi Server > <u>Server</u> Server Information	inistration		Server	Name: Chassis ID:	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
Dashboard Resources Resources Server Server	Alerts Admi Server > <u>Server</u>	inistration				
Resources Server Server	Server > <u>Server</u>					
Server						Refresh
						Action
	Status	SMASH Database				Building completed
	BMC time	Time adjustment m	ethod			Do not use NTP
		Time zone		NTD conver 1		+00:00
				NTP server 2		a
	Netvork	Network		MAC address		d413d17e16e1ae16e
				Subnet mask		255.255.255.0
				Default gatevay		0.0.0.0
		Limit source IP add	ress	Use		Do not use Disable
				IP address alloved to co	onnect 1	
				IP address alloved to co IP address alloved to co	innet 2 innet 3	
				IP address alloved to co	nnect 4	
	IPMI	IPMI user accounts	1	Use		Enable
				Privilege Level		Administrator
			2	Use		Enable
				User name Privilege Level		root Administrator
			3	Use		Disable
				User name Privilege Lovel		
			4	Use		Disable
				User name		
			5	Privilege Level Use		Disable
				User name		
			4	Privilege Level		Dirable
			0	User name		
				Privilege Level		
			7	Use User name		Disable
				Privilege Level		
			8	Use User name		Disable
				Privilege Level		
			9	Use Use		Disable
				Privilege Level		
			10	Use		Disable
				Privilege Level		
		Authentication type		Callback		none / MD2 / MD5 / Straight password
				Operator		none / MD2 / MD5 / Straight passvord none / MD2 / MD5 / Straight passvord
				Administrator		none / MD2 / MD5 / Straight password
	Security and Service	Security strength		Current security strengt	,	Default Enable
				Port number		23
Systems		SSH (CLI)		Use		Enable
General Tasks		Remote console		Use		Enable
Caunch remote console				Access to SSL/TLS comm	nunication	Disable
Coverload logs				TLS version	SSLv3 TLSv1.0	Disable
					TLSv1.1	Disable
				Remote Kills	TLSv1.2	Disable
				Remote CD/DVD	Port number	4997
		1.0000		Remote FD	Port number	4995
		HTTP		Port number		80
		HTTPS		Use	1	Enable
				TLS version	SSLv3 TLSv1.0	Enable
					TLSv1.1	Enable
				Post number	TLSv1.2	Enable
		WS-MAN		Use		Disable
				TLS version		SSLv3 / TLSv1.0 / TLSv1.1 / TLSv1.2
		IPMI over LAN		Use Use		Enable
				Access to IPMI over LAN	v1.5 and null account	Permitted
				RMCP+ messaging ciph suite privilege levels	Cipher suite ID 0 Cipher suite ID 1	Administrator
					Cipher suite ID 2	Administrator
					Cipher suite ID 3 Cipher suite ID 6	Administrator
					Cipher suite ID 7	Administrator
					Cipher suite ID 8	Administrator
					Cipher suite ID 11 Cipher suite ID 12	Administrator Administrator
				Port number		623
		SVP		Use Port number		Enable 21001
	Remote console settings	Mouse Mode				Relative Mode
	-			18		Restart PMC

Hitachi Compute Rack 220S Remote Management User's Guide

Menu items	Description
Refresh button	Refreshes information.
Action selection button	Backs up or restores server settings.
	See Backup server settings, and Restore server settings.
Status	Displays current BMC status.
BMC time	Displays information of <b>Time Synchronization Method</b> , <b>Timezone</b> , and <b>NTP server 0 to 1</b> .
	See <u>Setting BMC date and time</u> .
Network	Displays information of BMC network settings and Limit source IP address.
	See <u>Setting BMC network</u> .
IPMI*	Displays information of <b>IPMI user accounts</b> and <b>Authentication type</b> .
	See <u>IPMI &gt; IPMI User Account</u> .
Security and Service	Displays the following contents:
	Port: Enable or Disable for each service
	Security settings Port number information.
	See Security and Service.
Remote console	Displays information of <b>Mouse Mode</b> .
	See Setting mouse mode of Remote Console.
Restart BMC button	Restarts BMC.
* When <b>Security</b> strength is set <b>and null account</b> is set as <b>Pro</b> displayed.	as High, and IPMI over LAN > Access to IPMI over LAN 1.5 ohibited in <u>Security and Service</u> , Authentication type is not

### Table 4-15: Server Information menu items

### **Restart BMC**

Restart BMC.



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Tip

BMC is usually not necessary to restart. Restart BMC, only when failures occur.

Click **Restart BMC** in the **BMC** tab, and the following **Confirm** dialog box is displayed.



Click **OK**, and BMC is restarted and disconnect from a system unit.

- When click **OK** in the **Confirm** dialog box while updating BMC firmware or while restoring server settings, the confirmation dialog box for restart execution is displayed again. Click **OK** to continue.
  - When the following conditions are met, click OK in the **Confirm** dialog box. The window that confirms to restart BMC is displayed again. Click **OK** to continue.
    - Running BIOS
    - Running system unit

Tip ...

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When perform the operation occurred BMC communication after disconnecting from the system unit, the **HTTP request error** or **Session failed** dialog box is displayed.

Logout and log back in Web console.



SERVIC LED flashes for 30 to 90 seconds in the system unit after restarting BMC. Cut off the power supply after SERVIC LED flashing is completed.

Communications (such as HCSM or BIOS) and BMC functions (such as Web console and Remote console) are stopped after restarting BMC. These communications and functions cannot be available while BMC restart (30 to 90 seconds).
 Problem may occur such as displaying error messages due to stopping BMC communication service while restarting BMC. This problem may occur depending on a communication program.
 Do not restart BMC during running BIOS or operating a setup menu. BMC cannot communicate with BIOS, and then failures may occur in a system unit. We recommend that you restart BMC while a system unit is shut down.

# **Resources > Systems**

The following indications and setups are available in the **Network**, **IPMI**, **Power Management**, and **Firmware** window.

- Performs the network settings and connection restriction.
- Performs the DNS server settings.
- Performs the IPMI Over LAN settings.
- Performs the mode settings for power capping function. (see <u>Power capping</u> <u>settings</u>)
- Displays the temperature and power consumption in BMC of system unit.
- Displays and updates the BMC firmware information. (see <u>BMC firmware /</u> <u>SDR update</u>)

#### **Network > DNS Server**

For the **IP address** tab, **MAC address** tab, and **Limit Source IP Address** tab, see <u>Setting BMC network</u>.

In the **DNS Server** tab, you can set DNS server IP address, and execute name resolution using DNS server. You can set for up to three DNS server IP address.

Hitachi Compute Ra	ck family	/			HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaa Logged in	as : user01 Log Out
Dashboard Resources	Alerts	Administration			
Resources		Network			Refresh
Server					
Systems	IP Address	MAC Address Limit Source IP Address	DNS Server		
Po Network	DNS server IP	address 1			
di IPMI	DNS server IP a	address 2			
D Power Management	DNS server IP	address 3			
General Tasks General Tasks General conclusion General Conclusi	D				
					Edit

Table 4-16	: Network	menu items
------------	-----------	------------

Menu items	Description
Refresh button	Refreshes information.
DNS server IP address 1 to 3	Displays DNS server IP address.
	You can set for up to three DNS server IP addresses, and DNS server IP address is used in order from top to bottom. When you do not set a second or third DNS server, enter "0.0.0.0".
	When you do not use DNS server, enter " $0.0.0.0$ " in all three DNS server IP addresses or leave them null.
Edit button	Edits DNS server IP address.

Click **Edit**, and the **Edit DNS Server** dialog box is displayed.

dit DNS Server	×
dit DNS Server settings.	
DNS Server	
DNS server IP address 1:	
DNS server IP address 2:	
DNS server IP address 3:	
	Confirm Cancel

Click **Confirm** after entering each item, the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **DNS** tab. Click **Cancel** to go back to the **DNS** tab without saving.

## **IPMI > IPMI User Account**

Set a user account for the IPMI Over LAN function.

Hitachi Compute Ra	ack family			нітасні
File Action Help			Server Name: Chassis ID: aaaaaaaaa	aaaa0 Logged in as : user01 Log Out
Dashboard Resources	Alerts Administration			
Resources	Systems > <u>IPMI</u>			Refresh
Server	TPMI			
Systems	TOMI Hour Account	-		
and Network	The To	line and the second sec		Patrilage level
dig IPMI	User ID	Use	User name	Administration
Pover Management	2	Enable	reat	Administrator
🕼 Firmvare		Disable		and a second
	4	Disable		
	5	Disable		
	6	Disable		
	7	Disable		
	8	Disable		
	9	Disable		
	10	Disable		
E Concernal Tackic				
Laundi remote console				
Remote console settings				
Dovnload logs				
				Edit

#### Table 4-17: IPMI menu items

Menu items	Description
Refresh button	Refreshes information.
User ID	Displays IPMI user account ID.
Use	Displays that IPMI user account is enabled or disabled.
User name	Displays IPMI user account name.
Password	Sets a password (20 numbers/characters) for IPMI user account.
Retype Password	Retype the password to confirm.
Privilege level	Displays the granted privilege level for IPMI user account.
Edit button	Edits IPMI user account.



- For User ID 1 and 2, change of condition is only available.
- User ID 1 and 2 are set at the time of factory shipment. The setting value is as follows:
  - User ID 1
     Condition: Enable
     User name: Blank
     Password: Blank
     Privilege level: Administrator
     User ID 2
     Condition: Enable
     User name: root
     Password: superuser
     Privilege level: Administrator

Click **Edit**, and the **Edit IPMI User Account** dialog box is displayed.

it IPMI User Account			
it IPMI User Account settings.			
IPMI User Account			
User ID:	3		
Use:	🔘 Disable	💿 Enable	
User name:	user03		
Password (20 numbers/characters):			
Retype Password (20 numbers/characters):			
Privilege level:	User	•	
	Callback		
	User		
	Operator	Confirm	Cancel

- When **Use** is disabled, **User name** and **Privilege level** are displayed as "-----" in the **IPMI User Account** tab.
- **User name** is up to 32 numbers/characters
- User ID 1 and 2 cannot be changed their settings.
- User ID 8, 9, and 10 cannot be set blank as their password.
- A password that can be set is 20byte password having compatibility with IPMI 2.0.

Click **Confirm** after entering each item, the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window. Click **OK** to save the change content, and go back to the **IPMI User Account** tab. Click **Cancel** to go back to the **IPMI User Account** tab without saving.



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- IPMI Over LAN function settings are saved even though a power code is drawn out from a system unit.
- When a server settings are backed up and restored in the Server Information window (see <u>Server Information > Condition</u>), IPMI Over LAN function settings are not backed up and restored. When a motherboard is replaced by failure and others, set the settings again.
- User ID is enabled when Security strength is set as High, or IPMI over LAN > Access to IPMI over LAN v1.5 and null account is set as Prohibited (see Security and Service).

## **IPMI > Authertication Type**

Set Authentication Type for the IPMI Over LAN function.

Hitachi Compute R	Rack family				нітасні
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaa	Logged in as : user01 Log Out
Dashboard Resources	Alerts	Administration			
Resources		<u>IPMI</u>			Refresh
Server					
Systems	IBMI Hear Acco	Authentication Type			
	TPHI OSEF ACCO		A Marketter Territor	L di sella di se Tra se MDE	
A IPMI	Callback	Authentication Type:none	Authentication Type:mD2	Authentication Type:mbb	Authentication Type:straight p
Dever Management	User	Enable	Enable	Enable	Enable
🚳 Firmvare	Operator	Inable	Enable	Enable	foable
	Administrator	Enable	Enable	Enable	Enable
Connel Toda					
General Tasks					
Launch remote console					
M Remote console settings					
। 🙀 Download logs	-				
		i.	l.		Edit

#### Table 4-18: IPMI menu items

Menu items	Description
Refresh button	Refreshes information.
Privilege Level	Displays the privilege level.
Authentication Type	Displays that the authentication type is enabled or disabled for the privilege level.
Edit button	Edits the authentication type for the privilege level.



IPMI > Authentication Type tab is not displayed when **Security strength** is set as **High**, or **IPMI over LAN** > **Access to IPMI over LAN v1.5 and null account** is set as **Prohibited** (see <u>Security and</u> <u>Service</u>). Click **Edit**, and the **Edit Authentication Type** dialog box is displayed.

dit Authentication Type				×
dit Authentication Type settings.				
Authentication Type				
Privilege Level:				
Callback:				
Authentication Type: 🗹 no	one 🗹 MD2	MD5	🗹 Straight password	
User:				
Authentication Type: 🗹 no	one 🗹 MD2	MD5	🗹 Straight password	
Operator:				
Authentication Type: 🗹 no	one 🗹 MD2	MD5	🗹 Straight password	
Administrator:				
Authentication Type: 🗹 no	one 🗹 MD2	MD5	🗹 Straight password	
			Confirm	ancel

Click **Confirm** after entering each item, the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Authentication Type** tab.

Click **Cancel** to go back to the **Authentication Type** tab without saving.

# **Power Information > Condition**

Display the information of Power consumption, Intake Temperature, and Power capping for a system unit. Set the power capping settings.

Hitachi Compute Ra	ck family					HITACHI
Dashboard Resources	Alerts Admi	nistration	Server name:	CRASSIS ID	r aasaasaasaasaau Logo	Jed in as 1 UserUI Log Out
Resources	Systems > <u>Pover Ma</u>	nagement				Refresh
Server Systems	Power Summary     Pover consumption (AC)		Present pover consumption		0 W	
륩 Netvork 승, IPMI	Pover capping		Mode Consumption electricity upper limit set p	oint	Disable 0 W	
😨 Pover Management	☆ Power Information		-			
-	Condition Informati	en accumulated temperature	and power (Current sort:By date)			
	Power consumption (AC)	Present power consumption		0 W		
		Average power consumption		4 W		
		Maximum power consumption	'n	239 W		
	Intake Temperature	Present Intake Temperature	(			
	Pover capping	Mode		Disable		
General Tasks General Tasks Semoto console attings Download logs						
						Edit pover capping

### **Table 4-19: Power Information menu items**

Menu items	Description		
Refresh button	Refreshes information.		
Power consumption (AC)	Displays the power consumption of system unit.		
	<ul> <li>Present power consumption</li> <li>Displays Present power consumption.</li> </ul>		
	<ul> <li>Average power consumption Displays Average power consumption after setting the power consumption (Mode or Consumption electricity upper limit set point).</li> </ul>		
	<ul> <li>Maximum power consumption</li> <li>Displays Maximum power consumption after setting the power consumption (Mode or Consumption electricity upper limit set point).</li> </ul>		
Intake Temperature	Displays Intake Temperature for system unit.		
Power capping	Displays the power capping settings.		
	<ul> <li>Mode</li> <li>Displays power capping function mode (see <u>Power capping</u> <u>settings</u>).</li> </ul>		
	<ul> <li>Consumption electricity upper limit set point</li> <li>Displays a target value of power consumption to reduce power consumption (see <u>Consumption electricity upper limit value</u>).</li> </ul>		
Edit power capping button	Edits the power capping for system unit.		

#### **Power capping settings**

Set power capping settings for system unit.

Power capping is a function that reduces the maximum power consumption for system unit. The power consumption that can be reduced differs depending on the installed processor type.

Click Edit power capping in Power Information > Condition, and the Edit power capping dialog box is displayed.

t power capping settings.			
ower capping			
Condition			
Power consumption (AC)	Present power consumption	o w	
	Average power consumption	4 W	
	Maximum power consumption	239 W	
Mode:		Disable	•
Consumption electricit	ty upper limit set point [W]:	0	

Select **Mode** from the pull-down menu, and enter a value in **Consumption electricity upper limit set point**. Click **Confirm**, the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Condition** tab. Click **Cancel** to go back to the **Condition** tab without saving.
# **Power capping modes**

Modes that can be set for the power capping are as follows.

Modes	Description
NM mode	It is a mode enabled Node Manager (NM) command. NM command bridges to BMC from management LAN, and NM command is published to Node Manager. When NM mode is set, a software used NM command can rewrite Policy settings of Node Manager that BMC firmware has set. However, power management functions cannot be used by BMC due to rewriting Policy settings. Do not set NM mode when normal use especially using power management functions by BMC. You can configure settings that the power source of system unit is forcedly turned off due to the value of temperature or power consumption depending on Policy parameter settings by NM command. However, if you configure incorrect settings, a normal system operation may be hindered. Therefore, we strongly recommend that use NM mode after performing evaluation of software used NM command sufficiently. When switching to other mode after using NM mode once, delete all Policy of NM that is set in the target software, and then switch to other mode. When using NM command, a software corresponded NM command is required separately.
DCMI mode	It is a mode that executes the power capping by DCMI command. When using DCMI command, a software corresponded DCMI command is required separately.
Dynamic capping mode	Enable Dynamic capping mode.
Disable	Disable Dynamic capping mode. Inhibit to NM command and DCMI command.

#### Table 4-20: Power capping modes menu items

#### **Consumption electricity upper limit value**

For the power capping function, when you set **Consumption electricity upper limit set point** to too low value, the CPU performance may be lowered constantly due to the state of being active for the power capping. In this state, it can not control the actual power consumption to less than or equal to the **Consumption electricity upper limit set point** setting value.

When you set a value equal to or greater than the maximum power consumption of the system unit for **Consumption electricity upper limit set point**, the power capping function will not work.

Therefore, you can use the power capping function effectively when set a **Consumption electricity upper limit set point** as follows:

Maximum power consumption of the system unit ≥ Setting value of **Consumption electricity upper limit set point** ≥ Maximum power consumption of the system unit -Maximum value of the power consumption that can be suppressed by power capping

- Setting value of Consumption electricity upper limit set point ≥ Maximum power Consumption of the system unit -Maximum value of the power Consumption that can be suppressed by power capping If this condition is not satisfied, the power saving function can work using the power capping, but the actual power consumption may exceed the setting of Consumption electricity upper limit set point.
- Maximum power consumption of the system unit ≥
   Setting value of Consumption electricity upper limit set point
   If this condition is not satisfied, the actual power consumption does not
   exceed the setting of Consumption electricity upper limit set point,
   but the power saving function does not have effect.

#### Maximum power consumption value of the system unit

When estimating the system unit, refer to the specification of the system unit for the maximum power consumption of the system unit.

However, the power consumption of the system unit is dependent upon the operating environment (such as temperature) and running program on the system unit.

In order to make fine adjustments, we recommend you that check the maximum power consumption of system unit by trial operation in an environment that uses the system unit.

Maximum power consumption of the system unit can be found in the following procedure.

- 1. Edit Power Capping Setting > Mode set to Disable.
- 2. Continuous operation under the maximum load condition in the system unit.
- 3. Check the value of **Power Information > Condition > Maximum power consumption**.

# Maximum power consumption value that can be suppressed by the power capping

The degree of suppression of power consumption is different depends on the model of the system unit, the CPU type of the mounted on the system unit, and the load condition of the program running on the system unit.

Approximate of the maximum value of the power consumption that can be suppressed are as follows:

# Table 4-21: Approximate of the maximum value of the power consumptionthat can be suppressed

CPU type	Clock speed	power consumption the (approximate of the	hat can be suppressed e maximum value)*		
		1 CPU	2 CPU		
Xeon processor E5-2470	2.30 GHz	60 W	120 W		
Xeon processor E5-2440	2.40 GHz	50 W	100 W		
Xeon processor E5-2420	1.90 GHz	20 W	40 W		
Xeon processor E5-2403	1.80 GHz	10 W	20 W		
Xeon processor E5-2430L	2 GHz	25 W	50 W		
* Power consumption that can be suppressed shows the values based on the measurement result of the model					

Power consumption that can be suppressed includes the effect that the power consumption of the peripheral circuit is reduced by reduced the power consumption of CPU.

# **Power Information > Information accumulated temperature and power**

Display an accumulated temperature and power consumption in a management module of system unit.

File Action Help					Serve	r Name: Chas	sis ID: aaaaaaa	aaaaaa0 Log	ged in as 1 user01 Log G
Dashboard Resources	Alerts	Administrat	ion						
Resources		Pover Managem	unt						Refres
Server		ummary							
Systems	Power consu	Power consumption (AC) Present power consumption 0 W							
Network	Power cappir	ng .		Mode			Disable		
dig IPMI				Consumption e	lectricity upper lin	nit set point	0 W 0		
Power Management		nformation							
( Firmware	Condition	Information accu	mulated temperat	are and power (furr	ot sort:By date)				
	Record	Date Time	Sensor Numbe	Sensor Name	Power	CUR	AVE	MAX	MIN
	0075	2013/09/18 13:41:49	09 92	INTAKE Temp PWR Cons_A	ON	23 C 260 W	23 C 255 W	23 C 290 W	23 C 90 W
	0071	2013/09/18 09:11:10	09 92	INTAKE Temp PWR Cons_A	OFF	23 C 140 W	23 C 235 W	23 C 265 W	23 C 110 W
	0068	2013/09/17 16:58:09	09 92	INTAKE Temp PWR Cons_A	OFF	23 C 115 W	23 C 225 W	23 C 245 W	23 C 85 W
	0062	2013/09/17 14:43:20	09 92	INTAKE Temp PWR Cons_A	OFF	24 C 100 W	24 C 65 W	24 C 100 W	24 C 60 W
	0057	2013/09/17 13:39:08	09 92	INTAKE Temp PWR Cons_A	OFF	23 C 285 W	23 C 400 W	24 C 415 W	23 C 200 W
	0054	2013/09/17 12:04:20	09 92	INTAKE Temp PWR Cons_A	OFF	23 C 10 W	23 C 320 W	23 C 335 W	23 C 10 W
	0052	2013/09/17 11:08:26	09 92	INTAKE Temp PWR Cons_A	ON	23 C 325 W	23 C 325 W	24 C 370 W	23 C 215 W
	0020	2013/09/17 08:22:13	09 92	INTAKE Temp PWR Cons_A	ON	23 C 210 W	23 C 210 W	23 C 215 W	23 C 210 W
	0049	2013/09/17 06:19:43	09 92	INTAKE Temp PWR Cons_A	ON	23 C 210 W	23 C 210 W	23 C 215 W	23 C 210 W
seneral lasks	0048	2013/09/17	09 92	INTAKE Temp PWB Cons A	ON	23 C	23 C 210 W	23 C 215 W	23 C 210 W
Remote console settings	0047	2013/09/17	09	INTAKE Temp	ON	23 C	23 C	23 C	23 C
😭 Download logs	0046	2013/09/17 00:11:50	09	INTAKE Temp PWR Cons A	ON	23 C 210 W	23 C 210 W	23 C 215 W	23 C 210 W
	****	**end data**	**	**********	**	****	****	****	****

#### Table 4-22: Power Information menu items

Menu items	Description
Refresh button	Refreshes information.
Power consumption (AC)	Displays power consumption in a system unit.
	-Present power consumption Displays Present power consumption.
Power capping	Displays the power capping settings.
	<ul> <li>Mode</li> <li>Displays power capping function mode (see <u>Power capping</u> <u>settings</u>).</li> </ul>
	Consumption electricity upper limit set point
	<ul> <li>Displays a target value of power consumption to reduce power consumption (see <u>Power consumption upper limit</u> <u>value</u>).</li> </ul>
Information accumulated temperature and power*	Displays an accumulated temperature and power consumption in a system unit.
Edit sort button	Displays temperature and power consumption in a system unit.
* Information is registered every	two hours, and up to two years information can be stored.



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When click **Refresh** after changing **Edit sort** from initial settings, the changed **Edit sort** is saved. When log out Web console after changing **Edit sort** from initial settings, **Edit sort** is backed to initial settings.

- The type of **Edit sort** is as follows:
  - Order of date:

Displays information up to 12 items in order from the latest date in "Date time" of the accumulated information.

- Order of power:

Displays information up to 12 items in order from the largest value of "\*\*\*W" in "MAX" of the accumulated information.

Order of temperature:
 Displays information up to 12 items in order from the largest value of "\*\*C°" in "MAX" of the accumulated information.

# Firmware > BMC firmware

Display and update BCM firmware.

Hitachi Compute F	Rack family					HITACHI				
File Action Help				Server Name:	Chassis ID: aaaaaaaaa	aaaa0 Logged in as I user01 Log Out				
Dashboard Resources	Alerts 4	dministration								
Resources	Systems > <u>Firm</u>	vare				Refresh				
Server	A Firmware									
Systems	BMC firmware									
型 家 前 Network	Version	Base F/W	Bank F/W	Remote Console F/W	Logical SVP	SDR Version				
G Down Management	Current version	01-13	50-12	01-00	01-00	210HM2d35				
Firmware						1				
	1									
Constant and the second s										
General Tasks										
Launch remote console						-				
Beneficial lass										
A Contractory										
						Update BMC firmware				

## Table 4-23: Firmware menu items

Menu items	Description
Refresh button	Refreshes information.
Base F/W	Displays version of base firmware.
Bank F/W	Displays version of firmware.
Remote Console F/W	Displays version of remote console function.
Logical SVP	Displays version of logical SVP.
SDR Version	Displays SDR version.
Update BMC firmware	Updates BMC firmware.

## **BMC firmware / SDR update**

Update BMC firmware and SDR from a Web console.

Click **Firmware** > **BMC firmware** > **Update BMC firmware**, the **Update firmware** dialog box is displayed.

Update BMC firmware Update BMC firmware in th	is screen.	×
Update BMC firmwar	e	
Target of update:	BMC firmware and SDR	
Firmware file:	rom.ima	Browse
SDR file:	sdr.tar	Browse

Click **Browse**, and select a BMC firmware image file or SDR file.

Click **Confirm** after specifying BMC firmware image file or SDR file, and the **Confirm** dialog box is displayed.

Confirm that the selected file is correct, and click **OK**. Writing to BMC firmware image file or SDR file is started.



Do not perform other operations during writing to BMC firmware image file or SDR file. Do not write to BMC firmware image file or SDR file during running BIOS or operating a setup menu. BMC firmware image file or SDR file may not be written normally.



- Communications (such as HCSM or BIOS) and BMC functions (such as Web console and Remote console) are stopped during writing to BMC firmware image file or SDR file. We recommend that BMC firmware image file or SDR file is written while a system unit is shut down.
- When click **Confirm** in the **Update firmware** dialog box while updating the BMC firmware or restoring the server settings, the dialog box that content indicated "wait a little while and try again" is displayed. Click **Close** to exit.
- When the following conditions are met, click OK in the Confirm window. The window that confirms to restart BMC is displayed again. Click OK to continue.
  - Running BIOS
  - Running system unit
- When BMC firmware image file or SDR file that a system unit is not supported is specified, BMC firmware image file or SDR file is not written.
- When the system unit is not operated over 30 minutes in the **Confirm** dialog box, update is suspended. Click **Close**, and try again from the start.

After writing to BMC firmware image file or SDR file is completed, the following dialog box is displayed, and click **Close**. The connection is disconnected from the system unit due to restarting BMC.

Finished	
BMC firmware update was successful.	
SDR update was successful. BMC will be automatically restarted.	
After restarting, please login again.	

Tip a

When perform the operation occurred BMC communication after disconnecting from the system unit, the HTTP request error or Session failed dialog box is displayed. Logout and log back in Web console.



SERVIC LED flashes for 30 to 90 seconds in the system unit after restarting BMC. Cut off the power supply after SERVIC LED flashing is completed.

Communications (such as HCSM or BIOS) and BMC functions (such as Web console and Remote console) are stopped after restarting BMC. These communications and functions cannot be available while BMC restart.
 Problem may occur such as displaying error messages due to stopping BMC communication service while restarting BMC. This problem may occur depending on a communication program.
 Do not restart BMC during running BIOS or operating a setup menu. BMC can not communicate with BIOS, and then failures may occur in a system unit. We recommend that you restart BMC while a system unit is shut down.

# Alerts

In the **System Event Log** window, accumulated system event logs (alert logs) are displayed in a management module of system unit.

Event logs are displayed up to the latest 255 logs (maximum) that are accumulated when the **System Event Log** window is displayed.

Hitachi Compute F	Rack fam	ily						HITACHI
File Action Help					Server N	ame: Chassis ID: 9	19999999999 Logged in	h as i user01 Log Out
Dashboard Resources	Alerts	Administration						
Alerts	Log >	<u>System Event Log</u>						Refresh
Log	System	Event Log Summary						
🗄 System Event Log	Information		5		Error		0	
	Warning		0					
		Event Log						
	No.	Date and Time	Alert ID	Alert L	Module	AID	System event log	Message
	2	1970-01-01 00:00:25	fd90		Mother board	1100000000000	0b00 02 190000	Server is powered o
	3	1970-01-01 00:00:26	fd90		Mother board	110000000000	1200 02 1a0000	Server is powered o
	4	2014-01-14 00:10:52	fdc9		Unknovn	1100000000000	1900 02 8c80d4	Updating firmware h
	5	2014-01-14 00:28:05	fd90		Mother board	110000000000	2100 02 9584d4	Server is powered o
	6	2014-01-14 00:33:32	fd91		Mother board	1100000000000	3f00 02 dc85d45	Server is powered o
General Tasks								
Jaunch remote console								
The settings								
Download logs								
							1	

Table 4-24: Alerts menu items

Menu items	Description			
Refresh button	Refreshes information.			
Information	Displays a number of event log as Information level.			
Warning	Displays a number of event log as Warning level.			
Error	Displays a number of event log as Error level.			
No.	Displays event numbers.			
Date and Time	Displays the date and time on which an event occurred.			
Alert ID	Displays Alert ID that indicates the type of event.			
Alert Level	Alert Level is separated into 3 levels. 3 levels displays as follows: Blank: Information level : Warning level : Error level			

Menu items	Description
Module	Displays the module that an event occurred.
	Mother board: temperature, power source voltage, mother board,
	CPU, memory, PCI
	Power Supply Module: Power supply unit
	Fan Module: Fan
	Front/Rear Panel: Intake temperature
	Unknown: Other hardware (HDD or something)
XID	Displays the code that indicates the event.
System event log	
Message	Displays the message of event summary.

- Tip a
- No. may not start with 1, because event logs are always displayed up to the latest 255 logs.
- When resuming the power or restarting BMC, BMC time reads and synchronizes a system clock of system unit. At this time, Date and Time of alert log recorded from BMC is displayed as [1970-01-01 00:00:XX] that is different from the actual date and time.
- When sorting **Date and Time** in increasing or decreasing order, [1970-01-01 00:00:XX] as event logs are consolidated at the top of list or the bottom of list. Therefore, context of other event log is not easily checked.
  - You should sort **No.** in increasing or decreasing order.

# **Administration**

Function settings can be configured for system unit management in the **Administration** tab.

## **User and Roles**

For details, see <u>Setting user account</u>.

#### LDAP

Set a user authentication using LDAP server.

Hitachi Compute Ra	ick family					нітасні
File Action Help				Server Name:	Chassis ID: aaaaaaaaaaaaaa.	Logged in as a user01 Log Out
Dashboard Resources	Alerts Adm	inistration				
Administration						Refresh
Administration	\$104P					
🧕 Users and Roles	LDAP server	User authentic	ation method	Do not use LDAP user authenti-	cation.	
W LDAP		LDAP server 1				
Oate and Time		LDAP server 2				
A Language		LDAP server 3				
Security and Service		TLS version	SSLv3	Enable		
In SHMP			TLSv1.0	Enable		
SC/BSM			TLSv1.1	Enable		
ing HCSM ∰ Hi-Track iii Certificate ∲ SSH Asset Information			TLSv1.2	Enable		
		Port number		636		
		Bind DN				
	Directory search	Base DN		cn=Users,dc=example,dc=local		
2		Login ID attrib	ute	sAMAccountName		
		Role attribute				
	Group authentication	Member attribute		member		
		Group DN 1				
		Group DN 2				
		Group DN 3				
		Group DN 4				
		Group DN 5				
General Tasks						
Dovnload logs						
						Łdit 🔻

Table 4-25: LDAP menu items

No.	Menu items	Description
1	Refresh button	Refreshes information.
2	User authentication method	Sets User authentication method by User authentication method LDAP.
		<ul> <li>No using LDAP for user authentication: Perform user authentication by specified user account.</li> </ul>
		<ul> <li>Perform user authentication in the order of local and LDAP: Perform user authentication by specified user account. If user authentication fails, perform user authentication by user account in LDAP server.</li> </ul>
3	LDAP server 1 to 3	Specifies LDAP servers by IP address or FQDN. (up to 127 characters)
4	TLS version	Specifies TLS version used for connecting a LDAP server.
5	Port number	Specifies Port number as a decimal number. (1 to 65535)
6	Bind DN	Specifies DN used for binding to LDAP server. (up to 256 characters) Displays "Anonymous" here when no input.

4-62

No.	Menu items	Description		
7	Base DN	Specifies DN for user search. (up to 256 characters)		
8	Login ID attribute	Specifies a login ID in a user entry attribute. (up to 64 characters)		
9	Role attribute	Specifies a string representing a role in a user entry attribute. (up to 64 characters)		
10	Member attribute	Specifies a user of member in a group entry attribute. (up to 64 characters)		
11	Group DN 1 to 5	Specifies a group DN allowed login. (up to 256 characters) Group authentication is not performed when no input of all DNs.		
12	Edit button	The following settings are performed from a menu.		
		<ul> <li>LDAP server settings: Performs "LDAP server settings" for item 1 to 5.</li> </ul>		
		<ul> <li>Directory search settings: Performs "Directory search settings" for item 6 to 8.</li> </ul>		
		<ul> <li>Group authentication settings: Performs "Group authentication settings" for item 9 and 10.</li> </ul>		



All SSL/TLS versions cannot be disabled. When security strength is set as High, SSL/TLS versions cannot be enabled or disabled. Only TLS1.2 can be enabled or disabled.

Click **Edit** and select each menu, and the following dialog box is displayed

• LDAP server settings

lit LDAP server			9
it LDAP server settings.			
LDAP			
LDAP server			
User authentication method:	<ul> <li>Do not use LDAP user authentication.</li> </ul>	<ul> <li>When local user authentication fails, do LDAP user authentication.</li> </ul>	
LDAP server 1:			
LDAP server 2:			
LDAP server 3:			
TLS version			
SSLv3:	🔘 Disable	💿 Enable	
TLSv1.0:	🔘 Disable	💿 Enable	
TLSv1.1:	🔘 Disable	💿 Enable	
TLSv1.2:	🔘 Disable	💿 Enable	
Port number:	636		
Bind DN:			
Bind password:			
Retype bind password:			
		Confirm Ca	ncel



In **Bind password**, specify a password when binding to LDAP server. (up to 32 characters)

A password is disabled when no input.

#### • Directory search settings

Edit directory search		×
dit directory search setting	ş.	
LDAP		
Directory search		
Base DN:	cn=Users,dc=example,dc=local	
Login ID attribute:	sAMAccountName	
Role attribute:		
		Confirm Cancel

#### • Group authentication settings

LDAP		
Group authentication	n	
Member attribute:	member	
Group DN 1:		
Group DN 2:		
Group DN 3:		
Group DN 4:		
Group DN 5:		

Click **Confirm** after entering each item, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window. Click **OK** to save the change content, and go back to the **LDAP** window. Click **Cancel** to go back to the **LDAP** window without saving.

#### **Date and Time**

For details, see <u>Setting BMC date and time</u>.

# Language

Set a system language on Web console.

Hitachi Compute Rack family					HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	user01 Log Out
Dashboard Resources	Alerts	Administration			
Administration	Administration	> Language			Refresh
Administration	☆ Language				
👷 Users and Roles	System Languag	e English			
to ap					
Date and Time					
Language					
Security and Service					
I octoon					
B-HCSM					
NG Hi-Track					
Certificate					
eeree ee e					
Asset Information					
-					
General Tasks					
Launch remote console					
Remote console settings					
Covnload logs					
	1				
					Edit

# Table 4-26: Language menu items

Menu items	Description
Refresh button	Refreshes information.
System Language	Displays a language set in Web console.
	<ul> <li>English</li> <li>System language of Web console is set as English.</li> </ul>
	<ul> <li>Japanese System language of Web console is set as Japanese.</li> </ul>
Edit button	Edits System Language.

#### Click **Edit**, the **Edit System Language** dialog box is displayed.

Edit System Language	×
Edit System Language settings.	
Language	
System Language:	English 🛛 👻
	Confirm Cancel

Click **Confirm** after selecting a system language from a pull down menu, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Language** window. Click **Cancel** to go back to the **Language** window without saving.

When change the settings, the changed settings are available after next login.

# Security and Service

Set a Security and Service.

Hitachi Compute F	Rack family				HITACHI	
File Action Help			Se	rver Name: Chassis ID: aaaaaaaaaaaaaa Logged	in as i user01 Log Out	
Dashboard Resources	Alerts Adr	ministration				
Administration		ecurity and Service			Refresh	
Administration	♦ Security and Semicol					
🙎 Users and Roles	Security strength	Current security strength		Default		
by LDAP	Telnet (CLI)	Use		Enable		
Date and Time		Port number		23		
M Language	SSH (CLI)	Use		Enable		
Security and Service		Port number		22		
IS SNMP	Remote console	Use		Enable		
( ucen		Access to SSL/TLS communi	cation	Disable		
Shirtrack	1	TLS version	SSLv3	Disable		
Certificate	1		TLSv1.0	Disable		
SSH SSH	1		TLSv1.1	Disable		
Asset Information			TLSv1.2	Disable		
		Remote KVM	Port number	7578		
	1	Remote CD/DVD	Port number	4997		
		Remote FD	Port number	4995		
	нттр	Use		Enable		
		Port number		80		
	HTTPS	Use		Enable		
	1	TLS version	SSLv3	Enable		
			TLSv1.0	Enable		
			TLSv1.1	Enable		
			TLSv1.2	Enable		
		Port number		443		
	WS-MAN	Use		Disable		
		TLS version		SSLv3 / TLSv1.0 / TLSv1.1 / TLSv1.2		
	1	Port number		5986		
=	IPMI over LAN	Use		Enable		
General Tasks		Access to IPMI over LAN v1.5 and null account		Permitted		
Launch remote console		RMCP+ messaging cipher	Cipher suite ID 0	Administrator		
Remote console settings		suite privilege levels	Cipher suite ID 1	Administrator		
Dovnload logs			Cipher suite ID 2	Administrator		
			Cipher suite ID 3	Administrator		
			Cipher suite ID 6	Administrator		
			Cipher suite ID 7	Administrator		
			Cipher suite ID 8	Administrator		
			Cipher suite ID 11	Administrator		
			Cipher suite ID 12	Administrator		
		Port number		623		
	SVP	Use		Enable		
		Port number		21001		
					Edit	
-					- un	

Menu items	Description
Refresh button	Refreshes information.
Security strength	Sets Security strength (see <u>Security strength</u> )
Telnet (CLI) SSH (CLI)	Enables or disables a port used Telnet or SSH. Not supported.
Remote Console <sup>1</sup>	Enables or disables a port used a Remote Console application, or set a port number. And sets Access to SSL/TLS communication or TLS version.
HTTP HTTPS	Enables or disables a HTTP port or HTTPS port used Web console And sets TLS version used HTTPS connection.
WS-MAN <sup>2</sup>	Enables or disables a port used WS-Manager, or set a port number. And displays TLS version.
IPMI Over LAN <sup>3</sup>	Enables or disables a port used IPMI Over LAN functions. And sets permission/ inhibition connection between IPMI over LAN v1.5 and null account, or set RMCP+messaging cipher suite privilege levels (Cipher suite ID <sup>4</sup> ).
SVP	Enables or disables a port used SVP functions.
Edit button	Edits Security and Service.
Notes:	

#### Table 4-27: Security and Service menu items

1 Only display when Remote Console application is applied.

2 While HTTPS is set as Disable, WS-MAN cannot be set as Enable.

3 IPMI Over LAN can only be available for some commands.

4 Cipher suite ID is defined IPMI specifications. Initial setting value of Cipher suite ID is compatible with setting value of conventional system unit.

Security and Service			
Security strength	Default	- Hiab	
Telnet (CLI)	. Derault	- High	
Use:	🔘 Disable	💿 Enable	
Port number:	23		
SSH (CLI)	O Disable	(a) Fashla	
Port number:	22	U chable	
Remote console			
Use:	O Disable	💽 Enable	
Access to SSL/TLS communication: TLS version	💿 Disable	🔘 Enable	
SSI v3:	Disable	C Enable	
TI Sul Or	Disable	O Enable	
TICHT		Carable	
TLOVIAL	Disable		
Remote KVM	Disable.	U Enable	
Port number:	7578		
Remote CD/DVD			
Port number:	4997	17	
Remote FD			
Port number:	4995		
нттр			
Use:	Disable	💽 Enable	
Port number:	80		
Use:	🔘 Disable	💽 Enable	
TLS version			
SSLv3:	🔘 Disable	💽 Enable	
TLSv1.0:	🔘 Disable	💿 Enable	
TLSv1.1:	🔘 Disable	💿 Enable	
TLSv1.2:	🔘 Disable	💿 Enable	
Port number:	443		
WS-MAN	Disable	Graphia	
TLS version	SSLv3 / TLSv1.0 / TL	Sv1.1 / TLSv1.2	
Port number:	5986		
IPMI over LAN			
Use: Access to IDMI away LAN vit 5	Disable	Enable     Devenitted	
and null account: RMCP+ messaging cipher suite	- Promoted	Permitted	
privilege levels			
Cipher suite ID 0:	Administrator	×	
Cipher suite ID 1:	Administrator	<b>•</b>	
Cipher suite ID 2:	Administrator	•	
Cipner suite ID 3:	Administrator		
Cipher suite ID 6:	Administrator	•	
Cipher suite ID 7:	Administrator		
Cipher suite ID 8:	Administrator	•	
Cipher suite ID 11:	Administrator	•	
Cipher suite ID 12:	Administrator	•	
Port number:	623		
SVP Use:	O Disable	Enable	
Port number:	21001	C	

## Click **Edit**, and the **Edit Security and Service** dialog box is displayed.

Click **Confirm** after setting and entering each item, the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Security and Service** window.

Click **Cancel** to go back to the **Security and Service** window without saving.



- All SSL/TLS versions cannot be disabled. When security strength is set as High, SSL/TLS versions cannot be enabled or disabled. Only TLS1.2 can be enabled or disabled.
- Do not disable both of HTTP service and HTTPS service. If you disable both of HTTP service and HTTPS service, Web console cannot be connected. If you disable both of HTTP service and HTTPS service, start the system BIOS setup menu and then set ServerMgmt > Reset BMC Web Connection to Yes, On next reset, and save the setting in Save & Exit. BMC network setting (connection restriction of Web console network setting, user account setting, and HTTP service setting) is initialized. The system unit is restarted after the SERVICE LED on the system unit blinks about 30 to 60 seconds. Log in to the Web console with the factory default user name and password, and then set the Web console network setting (connection restriction of Web console network) setting, user account setting, and HTTP service setting) again. When Reset BMC Web Connection is executed, Service and Security and Service are not initialized. When Security strength is set as Default in Security and Service, Reset BMC Web Connection is executed, and then Network and Security and Service (without HTTP) are not initialized. When Security strength is set as High, Reset BMC Web Connection is executed, and then **Security strength** is set as Default, **Security** and Service is initialized. Network is not initialized.
- When confirm the BMC network configuration by the system BIOS setup menu, see "BMC network configuration" of the "ServerMgmt" section in *Hitachi Compute Rack 220S BIOS Guide*.
- When click **OK** in the **Confirm** dialog box after changing **Security strength** while updating the BMC firmware or restoring the server settings, the dialog box that content indicated "wait a little while and try again" is displayed. Click **Close** to exit.
- When click **OK** in the **Confirm** dialog box after changing **Security strength** while running BMC firmware or while turning on the system unit, the confirmation dialog box for restart execution is displayed again. Click **OK** to continue.

Tip ...

When perform the operation occurred BMC communication after disconnecting from the system unit, the HTTP request error or Session failed dialog box is displayed. Logout and log back in Web console.



 Communications (such as HCSM or BIOS) and BMC functions (such as Web console and Remote console) are stopped after restarting BMC. These communications and functions cannot be available while BMC restart (30 to 90 seconds). Problem may occur such as displaying error messages due to stopping BMC communication service while restarting BMC. This problem may occur depending on a communication program. Do not restart BMC during running BIOS or operating a setup menu. BMC cannot communicate with BIOS, and then failures may occur in a system unit. We recommend that you restart BMC while a system unit is shut down.

#### **SNMP > SNMP Agent**

Set a SNMP Agent.

Hitachi Compute F	Rack family	'			HITACHI
File Action Help	Alorte	Administration	Server Na	mei Chassis ID: aaaaaaaaaaaaaaa Log;	red in as I user01 Log Out
Dasinbuaru Kesuarces	AIEIG				
Administration	Administration	> <u>SNMP</u>			Refresh
Administration	A SNMP				Action
Users and Roles	SNMP Agent	SNMP Manager MIB			
Contract Time	SNMP agent		Enable		
	System contact	name	snmp@hitachi.com		
Security and Service	System location		D3F		
SNMP	Port number		161		
SC/BSM	Trap level		All		
(B HCSM	SNMP version		v1/v2c/v3		
BHi-Track	Engine ID string		hitachi		
Certificate	Engine ID		800000740468697461636869		
General Tasks					
Launch remote console					
Remote console settings					
j <b>k</b> ≜Dovnload logr					
					Edit

#### Table 4-28: SNMP Agent menu items

Menu items	Description			
Refresh button	Refreshes information.			
Action select button	Sents SNMP Trap. (see <u>Send SNMP Trap</u> )			
SNMP agent	Displays enabling/disabling SNMP agent.			
System contact name	Displays information of System contact name.			
System location	Displays System location.			
Port number	Displays a port number used SNMP agent.			
Trap level	Displays Trap level.			
SNMP version	Displays SNMP version of SNMP agent.			
Engine ID string*	Displays Engine ID string used SNMP agent.			
Engine ID*	Displays Engine ID that is created from Engine ID string.			
Edit button	Sets a SNMP Agent.			
* Only display when SNMP version	n is set as v1/v2c/v3.			



•

When **Security strength** is changed from Default to High in <u>Security and Service</u> while SNMP agent is set as Enable and SNMP version is set as v1/v2c, SNMP agent is changed to Disable. When **Security strength** is changed from Default to High in

<u>Security and Service</u> while SNMP agent is set as Enable and SNMP version is set as v1/v2c/v3, SNMP agent is still set as Enable.



•

When **Security strength** is changed from High to Default in <u>Security and Service</u>, SNMP agent is changed to Disable and SNMP version is changed to v1/v2c.

Click **Edit**, the **Edit SNMP** dialog box is displayed.

Edit SNMP Agent				×
Edit SNMP Agent settings.				
SNMP Agent				
SNMP agent:	🔘 Disable	💽 Enab	ble	
System contact name:	snmp@hitachi.com			
System location:	D3F			
Port number:	161			
Trap level:	All	-		
SNMP version:	v1/v2c/v3			
Engine ID string:	hitachi			
			Confirm	ncel

Click **Confirm** after setting and entering each item, the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **SNMP Agent** window. Click **Cancel** to go back to the **SNMP Agent** window without saving.

#### Send SNMP Trap

You can send SNMP Trap to all registered SNMP manager.

Click **Action** in the SNMP window, and select **Send SNMP Trap**. The following **Send SNMP Trap** window is displayed.

(1)	Send SNMP Trap	
-	An SNMP test trap will be sent.	
	If correct, press [OK].	

Click **OK** to send the SNMP Trap, and go back to the **SNMP** window. Click **Cancel** to go back to the **SNMP** window without sending the SNMP Trap.

## SNMP > SNMP Manager

Set a SNMP Manager.

Hitachi Compute F	Rack family					HITACHI
File Action Help				Server Name:	Chassis ID: aaaaaaaaaaaaaa Lo	gged in as : user01 Log Out
Dashboard Resources	Alerts	Administration				
Administration	Administration >	SNMP				Refresh
Administration	& SNMP					Action
Q Users and Roles	SNMP Agent	NMP Manager MIB				and the second
Date and Time	SNMP Manager	IP address/host name	Port number	SNMP version	Community name / User name	Access type
A Language	1		162	v1/v2c		
Security and Service	2		162	v1/v2c		
6 SNMP	3		162	v1/v2c		
SC/BSM	4		162	v1/v2c		
<b>B</b> HCSM						
B Hi-Track						
Certificate						
et ssh						
Asset Information						
Enneral Tasks						
Caunda remote console						
wemote console settings						
Na Dovnload logs						
						Edit

#### Table 4-29: SNMP Manager menu items

Menu items	Description			
Refresh button	Refreshes information.			
Action select button	Sents SNMP Trap. (see <u>Send SNMP Trap</u> )			
SNMP Manager	Displays a registration Number.			
IP address/host name	Displays IP address/host name.			
Port number Displays a port number of Trap report destination.				
SNMP version Displays SNMP version.				
Community name/User name <sup>1, 2</sup> Displays Community name/User name.				
Access type <sup>3, 4</sup> Displays Access type.				
Edit button Sets a SNMP Manager.				
Notes:				
1 While SNMP version is set as "	v1/v2c", "Community name" is displayed.			
2 While SNMP version is set as "	v3", "User name" is displayed.			
3 While SNMP version is set as "	While SNMP version is set as "v1/v2c", "" is displayed.			

4 While SNMP version is set as "v3", "Access type" is displayed.

Select a SNMP Manager and Click **Edit**, the **Edit SNMP Manager** dialog box is displayed.

Edit SNMP Manager				×
dit SNMP Manager settings.				
SNMP Manager				
SNMP manager:	1			
Remove setting:	Remove this set	ting.		
IP address/host name:	192.168.0.169			
Port number:	20162			
SNMP version:	v3	•		
User name:	root			
Access type:	AuthPriv			
Authentication type:	MD5	•		
Authentication password:	*****			
Encryption type:	DES			
Encryption password:	******			
			Confirm Can	cel

- Community name is only displayed While SNMP version is set as "v1/v2c".
- User name and Access type are only displayed while SNMP version is set as "v3".
- Authentication type and Authentication password are only displayed while SNMP version or Access type is set as "v3", "AuthnoPriv", or "AuthPriv". Sets each Authentication type and Authentication password.
- Encryption type and Encryption password are only displayed while SNMP version or Access type is set as "v3" or "AuthPriv". Sets each Encryption type and Encryption password.

Click **Confirm** after entering each item, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **SNMP Manager** window.

Click **Cancel** to go back to the **SNMP Manager** window without saving.

#### **SNMP > MIB**

Download a Management Information Base (MIB) file.

Hitachi Compute Ra	ck family	/			НІТАСНІ
File Action Help			Server Nam	iei Chassis ID: aaaaaaaaaaaaaa Logge	ed in as 1 user01 Log Out
Dashboard Resources	Alerts	Administration			
Administration	Administration	> <u>SNMP</u>			Refresh
Administration					Action V
👷 Users and Roles	SNMP Agent	SNMP Manager MIB			
Date and Time	MIB version		00-00		
A Language					
S SNMP					
SC/BSM					
Внсям					
BHi-Track					
Certificate					
et ssh					
General Tasks	1				
					Download MIB file

#### Table 4-30: MIB menu items

Menu items	Description		
Refresh button	Refreshes information.		
Action select button	Sents SNMP Trap. (see <u>Send SNMP Trap</u> )		
MIB version	Displays MIB file version.		
Download MIB file button	Downloads MIB file.		

Click **Download MIB file**, and the following dialog box is displayed. Click **Save**.



The following dialog box is displayed, and click **Save** after selecting a destination.

Admin	nistrator 🗴 Downloads	- 67	Search Downloads	
		• 🔤 )	Search Downloads	
rganize 🔻 New fold	er			955 👻 🔞
😚 Favorites	Name *		Date modified	Type
Desktop Downloads		No items match you	r search.	
Libraries Documents Music Pictures Videos				
Computer Local Disk (C:)	- ( (		1	
			Seconomana	

 ${\sf MIB}$  file is saved, and the download complete dialog box is displayed. Click  ${\sf Close}.$ 

# SC / BSM Servers > SVP Alert Destination

This menu is not supported.

## SC / BSM Servers > SVP Alert Notification

This menu is not supported.

# **HCSM Information**

Set Hitachi Compute Systems Manager (HCSM).

Hitachi Compute	Rack family						HITACHI
File Action Help					Server Name: Chassis ID: a	aaaaaaaaaaaaa Logged	in as : user01 Log Out
Dashboard Resources	Alerts	Administration					
Administration		> <u>HCSM</u>					Refresh
Administration	A HCSM Infor	mation					Action X
🙎 Users and Roles	HCSM Servers						
Ey LDAP	HCSM server	IP address	Status	Alert port number	Alert level	Alert retry interval [min]	Alert retry duration [min]
Date and Time	1	0.0.0.0	DisConnect	22611	Information, varning and fa	2	10
A Language	2	0.0.0.0	DisConnect	22611	Information, varning and fa	2	10
Security and service	3	0.0.0.0	DisConnect	22611	Information, varning and fa	2	10
R SC/REM	4	0.0.0.0	DisConnect	22611	Information, varning and fa	2	10
To HOSM							
Purinsch Gestificete ≪fSH @Asset Information							
General Tasks							
Launch remote console							
Remote console settings							
Covriload logs							
							Edit

# Table 4-31: HCSM Information menu items

Menu items	Description			
Refresh button	Refreshes information.			
Action select button	Sents HCSM test alert. (see <u>Send HCSM Test Alert</u> )			
HCSM server	Displays a registration number of management server.			
IP address	Displays IP address of management server.			
Status	Displays a connection status to a management server.			
Alert port number	Displays a port number used HCSM alert.			
Alert level	Displays Alert level of HCSM alert.			
	• Do not notify: Alert is not notified.			
	• Only failure: Alert as failure level is notified.			
	<ul> <li>Warning and failure: Alert as warning and failure level is notified.</li> </ul>			
	<ul> <li>Information, warning and failure: Alert as information, warning and failure level is notified.</li> </ul>			
Alert retry interval [min]	Displays Alert retry interval. Setting possible range is 1 to 4 minutes.			
Alert retry duration [min]	Displays Alert retry duration. Setting possible range is 4 to 15 minutes.			
Edit button	Sets HCSM.			

Select a management server (HCSM server), and click **Edit**. The **Edit HCSM Servers** dialog box is displayed.

t HCSM Servers	
t HCSM Servers settings.	
HCSM Servers	
HCSM server:	1
Remove setting/disconnect manager:	Remove this setting./ disconnect manager.
IP address:	0.0.0.0
Alert port number (1024-65535):	22611
Alert level:	Information, warning and failure
Alert retry interval [min] (1-4):	Information, warning and failure
Alert retry duration [min] (4-15):	Warning and failure Only failure
	Do not notify

Click **Confirm** after entering each item, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Note

. . .

Tip .

Click **OK** to save the change content, and go back to the **HCSM Information** window.

Click **Cancel** to go back to the **HCSM Information** window without saving.

When you forcibly disconnect to HCSM from Web console due to failure, set to check **Remove setting/disconnect manager** in the **Edit HCSM Servers** dialog box. However, all other settings are deleted in HCSM.

- Only when the Connection Status is "Unconnect", you can change Management server Information each setting.
- Enter Alert port number same as destination settings. Default value of Alert port number is 22611.
- VMware vSphere ESXi regards system BIOS time as UTC time, but system BIOS manages internal time as local time. So the time of BIOS is changed to the time a difference of local time and the UTC slipped off (it is not local time) when you set time by vSphere Client after installing VMware vSphere ESXi. You can confirm the difference of time on BIOS setup screen. HCSM's Alert time and BMC Web console time also refer System BIOS time, so these times also have difference of time from VMware vSphere ESXi set time.

# Send HCSM Test Alert

You can send test alert to all registered management servers (HCSM).

Click the **Action** select button and select **Send HCSM Test Alert**, the following **Send HCSM Test Alert** dialog box is displayed.

Send test alert				×
Send test alert.				
HCSM Information				
Alert level:	Information	•	]	
	Information			
	Warning		onfirm	Cancel

Select Alert level as follows:

- Information: Send the alert as information level
- Warning: Send the alert as warning level
- Error: Send the alert as error level

Click **Confirm** after selecting the alert level, and the **Confirm** dialog box is displayed.

Click **OK** to send a test alert and go back to the **HCSM Information** window. Click **Cancel** to go back to the **HCSM Information** window without sending.



Test alert is sent to all registered SNMP managers.

# **Hi-Track Information menu**

Set Hi-Track Information menu.

Hitachi Compute Ra	ick family				HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaa Logged in a	s i user01 Log Out
Dashboard Resources	Alerts	Administration			
Administration		<u>Hi-Track</u>			Refresh
Administration	☆ Hi-Track Info	rmation			
<u> Users</u> and Roles	Hi-Track Servers				
LDAP	Hi-Track server	IP address			
Date and Time	1	0.0.0.0			
A canguage	2	0.0.0.0			
SNMP					
SC/BSM					
<b>B</b> HCSM					
S Hi-Track					
Certificate	-				
er sen er	-				
Age Asset Information					
	1				
	-				
	-				
General Tasks					
Launch remote console					
Remote console settings					
Covnload logs					
	_				
					Edit

## Table 4-32: Hi-Track Information menu items

Menu items	Description	
Refresh button	Refreshes information.	
Hi-Track server	Displays a registration number of Hi-Track server.	
IP address	Displays IP address of Hi-Track server.	
Edit button	Sets Hi-Track.	

Select a Hi-Track server and click **Edit**, the **Edit Hi-Track Servers** dialog box is displayed..

Edit Hi-Track Servers			×
Edit Hi-Track Servers setting	s.		
Hi-Track Servers			
Hi-Track server:	1		
Remove setting:	Remove this setting.		
IP address:	0.0.0.0		
		Confirm	ancel

Click **Confirm** after entering each item, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Hi-Track Information** window.

Click **Cancel** to go back to the **Hi-Track Information** window without saving.

# Certificate

Manage SSL server certificate. Display a registered server certificate, create self-signed certificate, create and down load CSR, and you can also import and download server certificate.

Hitachi Compute Ra	ack famil	у		HITACHI
File Action Help			Server Name: Ch	assis ID: aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
Dashboard Resources	Alerts	Administration		
Administration		> <u>Certificate</u>		Refresh
Administration	☆ Certificate	•		
🧕 Users and Roles	Version			3
LDAP	Serial number			d3:59:6c:0b:22:51:bc:a5
O Date and Time	Public key alg	orithm		R\$A(2048bit)
M Language	Validity (Not b	efore)		1970-01-01 00:01:00 UTC
Security and Service	Validity (Not a	fter)		2030-01-01 00:01:00 UTC
SNMP	Issuer		Common name (CN)	Hitachi
SC/BSM	Subject		Country (C)	
ang Husm			State or Province (ST)	
Catificate			Locality (L)	
A SSH			Organization (O)	
Asset Information			Organizational unit (OU)	
			Common name (CN)	Hitachi
			E-mail address	
			DN gualifier	
			Sumame	
			Given name	
			Initials	
	SHA1 Fingerpr	int		
Ceneral Tasks Cusuch remote console Remote console settings Covinidad logs				
				Certificate

Menu items	Description		
Refresh button	Refreshes information.		
Version	Displays server certificate version.		
Serial number	Displays serial number.		
Public key algorithm	Displays information for Public key algorithm.		
Validity (Not before)	Displays a start day of a valid term.		
Validity (Not after)	Displays an end day of a valid term.		
Issuer	Displays Common name (CN).		
Subject	Displays information for Subject.		
	Country (C): Upper-case 2 alphabets.		
	State or Province (ST), Locality (L), Organization (O), Organizational unit (OU): 1 to 60 alphanumeric characters and symbols		
	Common Name (CN): 1 to 60 alphanumeric characters including a hyphen (-) and a period (.)		
	Email Address: ASCII character string of up to 60 characters		
	DN Qualifier, Surname, Given Name: 1 to 60 alphanumeric characters and symbols		
	Initials: 1 to 30 alphanumeric characters and symbols		
SHA1 Fingerprint	Displays information for SHA1 Fingerprint.		

Menu items	Description
Certificate button	Sets the following items from a menu.
	Create self-signed certificate: Enters required information to create self-signed certificate. (see <u>Create self-signed Certificate</u> )
	Create and download CSR: Enters required information to create CSR, and download CSR. (see <u>Create and download CSR</u> )
	Import server certificate: Specifies server certificate that is imported. (see <u>Import server certificate</u> )
	Download server certificate: Downs load registered server certificate. (see <u>Download server certificate</u> )

## **Create self-signed Certificate**

Click **Certificate**, and select **Create self-signed Certificate**. The following **Create self-signed Certificate** dialog box is displayed.

eate self-signed certificate		
Create self-signed certificate		
Public key algorithm:	• RSA(2048bit)	
Subject:		
Country (C):	gt	
State or Province (ST):	Kanagawa	
Locality (L):	Yokohama	
Organization (O):	OrganizationTest	
Organizational unit (OU):	OrganizationUnitNameTest	
Common name (CN):	test	
E-mail address:	test@test.co.jp	
DN qualifier:		
Surname:		
Given name:		
Initials:		
	Confirm	Cancel

- Subject items are omissible except Common name (CN).
- The following symbols can be used for State or Province (ST), Locality (L), Organization (O), Organizational unit (OU), DN Qualifier, Surname, Given Name, Initials:
   Blank symbol, '(apostrophe), (hyphen), , (comma), = (equal), / (slash), ()(parentheses), . (period), : (colon), + (plus), and ? (question)

Click **Confirm** after entering each item, the **Confirm** dialog box is displayed.

Click **Back** to go back to the **Create self-signed Certificate** dialog box. Click **Cancel** to go back to the **Certificate** window without saving.

## Create and down load CSR

Click **Certificate**, and select **Create and down load CSR**. The following **Create and down load CSR** dialog box is displayed.

Create and download CSR			×
Create and download CSR.			
Create and download CSR			
Public key algorithm:	<ul> <li>RSA(2048bit)</li> </ul>	🔘 RSA(1024bit)	
File type:	• PEM	O DER	
Subject:			
Country (C):	JP		
State or Province (ST):	Kanagawa		
Locality (L):	Yokohama		
Organization (O):	OrganizationTest		
Organizational unit (OU):	OrganizationUnitNar	meTest	
Common name (CN):	Test		
E-mail address:	test@test.co.jp		
DN qualifier:			
Surname:			
Given name:			
Initials:	1		
Unstructured name:			
Challenge password:			
		Confirm	Cancel

- File type: Select CSR file type that is downloaded, PEM or DER.
- Subject items are omissible except Common name (CN).
- The following symbols can be used for State or Province (ST), Locality (L), Organization (O), Organizational unit (OU), DN Qualifier, Surname, Given Name, Initials: Blank symbol, '(apostrophe), - (hyphen), , (comma), = (equal), / (slash), ()(parentheses), . (period), : (colon), + (plus), and ? (question)
- Unstructured name: 1 to 60 alphanumeric characters and symbols (omissible)
- Challenge password: 1 to 30 alphanumeric characters and symbols (omissible)

Click **Confirm** after entering each item, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the **Create and down load CSR** dialog box. Click **Cancel** to go back to the **Certificate** window without saving. Click **OK**, and the following dialog box is displayed. Click **Save**.



The following dialog box is displayed, and click **Save** after selecting a destination.

Save As						×
Administra	ator - Downloads	•	Sea	arch Downloads		2
Organize 🔻 New folder					• ==	0
Favorites	Name *			Date modified	Type	
Desktop     Downloads     Downloads     Recent Places     Documents     Documents     Music     Pictures     Videos		No items ma	tch your sea	arch.		
الله Computer کل Local Disk (C:) کا File name: علی Save as type: CSR F	I∢I r_GQ-CR210HM-NDN-Y_3	23aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	aOxxxxxx	3		•
Hide Folders				Save	Cancel	

Certificate file is saved, and the download complete dialog box is displayed. Click **Close**.
#### **Import server certificate**

Click **Certificate**, and select **Import server certificate**. The following **Import server certificate** dialog box is displayed.

port server certificate.			
Import server certificate			
File type:	• PEM	O DER	
Server certificate file:	cert.pem		Browse

• File type: Select certificate file type that is downloaded, PEM or DER.

Click **Browse** to select an imported server certificate file.

Click **Confirm** after selecting a server certificate file and file type, the **Confirm** dialog box is displayed. Confirm the selected file, and then click **OK** to start importing.

Click **Back** to go back to the **Import server certificate** dialog box. Click **Cancel** to go back to the **Certificate** window without importing.

#### **Download server certificate**

Click **Certificate**, and select **Download server certificate**. The following **Download server certificate** dialog box is displayed.

Download server certific	ate		×
Download server certificate.			
Download server cert	ificate		
File type:	• PEM	O DER	
		Confi	rm Cancel

• File type: Select certificate file type that is downloaded, PEM or DER.

Click **Cancel** to go back to the **Certificate** window without downloading.

Click **Confirm** after selecting file type, and the following dialog box is displayed. Click **Save**.

Do you want to open or save this file? Name:0HM-NDN-Y_323aaaaaaaaaaaaaaaaaaxxx	
Name:0HM-NDN-Y_323aaaaaaaaaaaaaaaaaaaaxxx	
Type: Security Certificate From: 192.0.0.169	xxxx.cer
<u>Open</u> <u>Save</u>	ancel

The following dialog box is displayed, and click **Save**.

Save As						×
Administ	rator 🝷 Downloads	-	S S	earch Downloads		2
Organize 🔻 New folder					•	0
Favorites	Name *			Date modified	Type	
Desktop Downloads		No items mat	tch your s	earch.		
Libraries Documents Music Pictures Videos						
🖳 Computer 🏭 Local Disk (C:) 🗖						Þ
File <u>n</u> ame: ssl o Save as <u>t</u> ype: Secu	ert_GQ-CR210HM-NDN-Y_323 rity Certificate		aa0xxxx	oox.		•
Hide Folders				Save	Cancel	

Certificate file is saved, and the download complete dialog box is displayed. Click **Close**.

#### SSH > SSH Host Key

Display and recreate SSH Host Key.

Hitachi Compute F	ack family				HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaa Logg	ed in as 1 user01 Log Out
Dashboard Resources	Alerts Adn	ninistration			
Administration		<u>sh</u>			Refresh
Administration	SSH				
2 Users and Roles	SSH Host Key SSH	Settings			
LDAP	SSH Host Key 1	Key length	RSA(2048bit)		
Date and Time		Key fingerprint	f6:63:36:cf:a6:8c:5f:7b:c1:c4:fc:	41:7c:81:5a:c7	
A Language	SSH Host Key 2	Key length	DSA(1024bit)		
SINNP		Key fingerprint	b2:42:76:96:1a:f6:7c:fc:79:f3:b3	1631ecid7iceif0	
A SC/BSM					
₩ HCSM					
BHi-Track					
Certificate					
<b>₩</b> \$\$H					
	1				
General Tasks					
Launch remote console					
Remote console settings					
Dovnload logs					
					Recreate SSH Host Key

#### Table 4-34: SSH Host Key menu items

Menu items	Description
Refresh button	Refreshes information.
Key length	Displays host key length of SSH server.
Key fingerprint	Displays host key fingerprint of SSH server.
Recreate SSH Host Key button	Recreates host key of SSH server.

Click the **Recreate SSH Host Key** button, and the **Confirm** dialog box is displayed.

Click **OK** to recreate a host key, and go back to the **SSH Host Key** window. Click **Cancel** to go back to the **SSH Host Key** window without recreating.

#### SSH > SSH Settings

Set Authentication Method for SSH server.

Hitachi Compute Ra	ick famil	у			HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaa	Logged in as : user01 Log Out
Dashboard Resources	Alerts	Administration			
Administration	Administration	, > <u>ssн</u>			Refresh
Administration	SSH				
👷 Users and Roles	SSII Host Kaw	SSH Settings			
to LDAP	SSH Liver Auth	entication Method	Password Authentication and Public Key Authentication		
O Date and Time	San Oser Addi	endcadon neorod	Passooid Addientication and Public Rey Addientication		
M Language					
Security and Service					
IB SC/BSM					
R. HCSM					
₩a Hi-Track					
Certificate					
eger ss∺					
General Tasks E Lauch remote console Remote console settings Control logs					
					Edit

Table 4-35: SSH menu items

Menu items	Description
Refresh button	Refreshes information.
SSH User Authentication Method	Displays SSH User Authentication Method.
Edit button	Edits SSH User Authentication Method.

Click the **Edit** button, and the **Edit SSH Settings** dialog box is displayed.

dit SSH Settings		
ait SSH Settings.		
SSH Settings SSH User Authentication Method:	Password Authentication and Public Key Authentication	Public Key Authentication Only
		Confirm

Click **Confirm** after selecting **SSH User Authentication Method**, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window. Click **OK** to save the change content, and go back to the **SSH Settings** window. Click **Cancel** to go back to the **SSH Settings** window without saving.

#### **Asset Information**

Set Asset Information for a system unit.

Hitachi Compute Ra	ick family				HITACHI
File Action Help			Server Name:	Chassis ID: aaaaaaaaaaaaaaa	Logged in as I user01 Log Out
Dashboard Resources	Alerts Admir	istration			
Administration	Administration > <u>Assa</u>	at Information			Refresh
Administration	☆ Asset Information				
🙎 Users and Roles	Server name	HA8000 Server			
by LDAP	Server asset information	ESD C3F 201			
Date and Time					
A Language					
Security and Service					
IS SNMP					
(Burch					
B-Hi-Track					
Certificate					
er ssh					
Asset Information					
General Tasks Jaunch remota console Remota console settings Councead logs					
					Edit

#### Table 4-36: Asset Information menu items

Menu items	Description			
Refresh button	Refreshes information.			
Server name*	Displays Server name. (1 to 63 alphanumeric characters and symbols)			
	This information identifies a system unit as a log-in destination in Web console.			
Server asset information*	Displays Server asset information. (1 to 63 alphanumeric characters and symbols)			
	This information can be checked such as locality and administrator.			
Edit button	Edits Server asset information.			
<ul> <li>We recommend that the number of input character of Server name is 20 alphanumeric characters and symbols, and the number of input character of Server asset information is 25 alphanumeric characters and symbols. The information (such as server name, user name, and last login time) may not be displayed normally in the title.</li> </ul>				

Click the **Edit** button, and the **Edit Asset Information** dialog box is displayed.

Edit Asset Information		×
Edit Asset Information settings.		
Asset Information		
Server name:	HA8000 Server	
Server asset information:	ESD C3F 201	
		Confirm Cancel

Click **Confirm** after entering each item, and the **Confirm** dialog box is displayed.

Click **Back** to go back to the setting window.

Click **OK** to save the change content, and go back to the **Asset Information** window.

Click **Cancel** to go back to the **Asset Information** window without saving.

#### **General Tasks**

**General Tasks** is displayed on the left bottom pane of the **Resources** tab, the **Alerts** tab, and the **Administration** tab.

You can launch and set Web console, and download logs that BMC collected in **General Tasks**.

#### Launch remote console

When Remote Console application is applied to a system unit, **Launch remote console** is displayed. Remote Console is launched from this menu.

For details, see the manual attached to the Remote Console application.

#### **Remote console settings**

When Remote Console application is applied to a system unit, **Remote console settings** is displayed. Set the mouse mode for remote console operation.

For details, see Setting mouse mode of Remote Console.

#### **Download logs**

Download logs that BMC collected.



Logs are used for at the time of investigating hardware failure. It is not necessary to collect logs in normal operation.

If failure occurs, we may request you to collect logs using Web console for a cause investigation.

In other ways, you can download logs from the following menus.

- Dashboard tab > System Event Logs > Download logs button
- **Operation** of menu > **Download logs**

Click **Download logs**, and the **Confirm** dialog box is displayed.

Click **Download**, and the following dialog box is displayed. Click **Save**.



The following window is displayed, and selects the saved folder. Click **Save**.

Save As				×
Administ	rator 🝷 Downloads	- 🖾 🗉	Search Downloads	<b>1</b>
Organize 👻 New folder				
Favorites	Name *		Date modified	Туре
Desktop Downloads		No items match your :	search.	
Documents Documents Music Pictures Videos				
I Computer				
🚣 Local Disk (C:) 🗵	•			•
File name: og	GQ-CR210HM-NDN-Y_323aa	aaaaaaaaaaaaaa0xxxxxxx		•
Save as type: TAR	File			-
Alide Folders			Save	Cancel

The logs are saved, and the download complete window is displayed. Click **Close**.

# **Exiting Web console**

• • • .

Tip .

By pressing **Log Out** on the right of the window or pressing **File** from menu > **Logout**, you can log out of the Web console.



If you close the Web browser without logging out, the user login state will continue until the automatic logout is performed in 30 minutes. Therefore, if you repeat this action of closing the Web browser without logging out, you cannot log in to the Web console again until a lapse of 30 minutes. Before closing the Web browser, be sure to press **Logout** and log out of the Web console.

# 5

# How to use the Web console (BMC version: 09-79 or lower)

This chapter describes how to use the Web console in BMC version 09-79 or lower, and its initial setting and functionality.

- □ <u>Configuration of Web console menu</u>
- □ Function of Web console
- □ <u>Starting Web console</u>
- □ Initializing Web console
- □ <u>Web console menu items</u>
- □ Exiting Web console

# **Configuration of Web console menu**

This section describes the Web console menu items. See the following chart.



Figure 5-1: Web console menu (BMC version: 09-79 or lower)

# **Function of Web console**

This section describes the functions that you can set from the Web console.

## **Functions**

The Web console provides the following functions:

|--|

No.	Menu	Function
Serve	er Operation	
1	Server Information	Displays the information of the system unit.
2	Power and LED	Displays the power, reset operation, and LED status.
3	Information accumulated temperature and power	Displays information about the temperature and the accumulation of power.
Serve	er Settings	
4	Language Settings	Sets a language that you use on the Web console.
5	Asset Information	Sets asset information.
6	Network Settings	Displays network settings and sets connection restrictions.
7	Services Configuration	Enables or disables a service provided by the system unit and sets a port number.
8	User Accounts	Displays and sets a user account.
9	IPMI Over LAN Settings	Sets IPMI Over LAN.
10	BMC Date and Time	Displays and sets BMC time and time zone.
11	Remote KVM	Sets mouse mode of remote console.
12	SSH Server	Sets an SSH authentication method and displays a host key.
13	SSL Server	Manages an SSL server certificate.
14	DNS Client	Sets a DNS server.
15	LDAP	Sets user authentication by LDAP.
16	SNMP Setting	Sets a SNMP server.
17	SVP Settings	Displays and sets a destination where a SVP alert is reported.
18	Power Capping function setting	Sets a mode for power saving function.
19	Hitachi Compute Systems Manager Setting	Sets a Hitachi Compute Systems Manager (HCSM) server.
20	Hi-Track Setting	Sets a Hi-Track server.

No.	Menu	Function				
Main	Maintenance					
21 BMC Firmware Management		Displays and update BMC firmware information.				
22	Backup Server Management Settings	Backs up the settings of system unit.				
23 Restore Server Management Settings		Restores the settings of system unit.				
24 Restart BMC* Restarts BMC.		Restarts BMC.				
Logs	Logs					
25	25 Download Logs Collects and downloads a system unit log.					
* Tł	nis function is available only	for "ceconsl" users (users for maintenance work).				

## **Requiring Role**

The Web console is restricted on operation according to the roles assigned to each use. The operations that can be performed on a role basis are as follows:

		Operation allowed by role							
No.	Menu	Administrator	Server Operation	User Account Management	Service Settings	IPMI Over LAN	CE		
Serv	er Operation								
1	Server Information	All	All	Information	Information	Information	All		
2	Power and LED			display only	display only	display only			
3	Information accumulated temperature and power								
Serv	Server Settings								
4	Language Settings	All	Information	Information	All	Information	All		
5	Asset Information		display only	display only		display only	None		
6	Network Settings						All		
7	Services Configuration								
8	User Accounts		Only own account setting	Display and setting of general users	Only own account setting		None		
9	IPMI Over LAN Settings	None	None	None	None	All			
10	BMC Date and Time	All	Information	Information	All	Information	All		
11	Remote KVM		display only	display only		display only			
12	SSH Server						None		
13	SSL Server								

Table 5-2: Requiring role to operation

			Operation allowed by role							
No.	Menu	Administrator	Server Operation	User Account Management	Service Settings	IPMI Over LAN	CE			
14	DNS Client	All	Information display only	Information display only	All	Information display only	All			
15	LDAP		None	None	None	None	None			
16	SNMP Setting		Information display only	Information display only	All	Information display only				
17	SVP Settings		All	All			All			
18	Power Capping function setting		Information display only	Information display only			None			
19	Hitachi Compute Systems Manager Setting									
20	Hi-Track Setting									
Main	tenance									
21	BMC Firmware Management	All	Information display only	Information display only	Information display only	Information display only	All			
22	Backup Server Management Settings		None	None	None	None				
23	Restore Server Management Settings									
24	Restart BMC	None								
Main	tenance									
25	Download Logs	All	All	None	None	None	All			



**Remote Console** and **Remote Media** roles do not affect on the Web console operation. Those roles are used to enabling the each function.

# **Starting Web console**

This section describes how to log in the Web console.

- 1. Power on the system unit.
- 2. Start the consol terminal's Web browser.
- 3. Enter the following URL into the address bar:

When the HTTP (Hypertext Transfer Protocol) is used for connection, enter the following into the address bar:

http://<IP address of management interface>

When the HTTPS (Hypertext Transfer Protocol over Secure Socket Layer) is used for connection, enter the following into the address bar:

https://<IP address of management interface>

When succeed in the connection, the login window opens.

4. Enter a user name and a password in the login window.

Hitachi Compute Rack family Server Name: CR210-ESD0000	123456
Username user01 Password	Login
Launch Kemote Console All Rights Reserved Copyright (C) 2008–2012, Hitachi, Ltd.	асні

5. Enter a **user name** and a **password** in the login window.

When your user authentication is successful and you log in to the Web console, the **server information** is displayed.

litachi Compu	te Rack far	nily Branians I	ngin: Thu Esh 16 10:05:14 2012	HITACH	
Server Operation	Server Settings	Maintenance	Logs	Logout	
Server Information Power and LED	Server Info	rmation		(C) Refresh	
Information accumulated	Basic Inform	ation			
temperature and power	This section shows b	asic information of the	server.		
Laurah 1	Server Name		CR210-ESD0000123456		
Launch temote Console	BMC IP Addres	s	192.168.0.80		
	BMC MAC Add	ress	50:E5:49:A9:88:23		
	UUID		mmmr-mm-mm-50e549a987d8		
BMC F/W Version		ion	09-05		
	EFI F/W Version		00-00		
Operational mode of BMC		de of BMC	Normal Mode		
	Server FRU	Information			
	This section shows t	he server FRU Informat	ion.		
	Product Name		Compute Rack 210H		
	Product Part/M	odel Number	GQ-CR210HM-NDN-Y		
Product Version		1	0021R21500		
	Product Serial I	Number	323aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa		



With the factory defaults for the system unit, you can login as an administrator by entering user01 and pass01 in response to the **user name** and **password** in the login window. If you have been changing an above user account setting, you can not log in the Web console. Enter the user name and password that have been already set to log in.

- For your security, we strongly recommend that you set a user account different from the factory default.
   For details, see <u>Setting a user account</u>.
- The Launch Remote Console button is displayed on the console screen when the Remote Console application is applied. When you click Launch Remote Console, the Remote Console application is started and the user name and password entry window for the Remote Console is displayed. For details on how to use the Remote Console application, see *Remote Console Application User's Guide*.
- Up to two users can log in to the Web console simultaneously. If two users have already logged in, **Could not login on the Web console since it reached max sessions.** is displayed, and you cannot log in.
- If no operation is done for 30 minutes or longer when you has logged in to the Web console, an automatic logout will be performed.

# **Initializing Web console**

This section describes the initial setting of the Web console. You should initially set the following data:

- <u>Setting user account</u>
- <u>Setting mouse mode of Remote Console</u>
- Setting BMC date and time
- <u>Setting BMC network</u>

#### Setting user account

Tip .

The setting of a user account is required for remote operation of the system unit. Each of the registered users can be given a user name, a password, and the authority for the Web console operation as well as can enable or disable own account.

For your security, we strongly recommend that you set a user account different from the factory default.

You can set above information in the **Configure User Accounts** window. Click **Server Setting** from the top tab, and then click **User Accounts** in the left pane.

If you forget your user name and password to log in to the Web console, start the system BIOS setup menu and then set and save ServerMgmt > Reset BMC Web Connection to **Yes, On next reset**. BMC network setting is initialized.

When BMC is restarted, the SERVICE LED on the system unit blinks about 30 to 60 seconds. Log in to the Web console with the factory default user name and password after restarting BMC, and then set BMC network again.

#### **Configure User Accounts menu**

Click **Server Setting** from the top tab, and then click **User Accounts** in the left pane. The following window is displayed.

Hitachi Compute Rack family								н				
Server Omerical Server Settings - Maintenance Less								<u>u</u>				
Language Settings	Langue Settion Configure User Accounts CRefresh											
Asset Information	et Infernation											
Network Settings	List of User Accounts											
Services Configuration	To edit us	er account, che	cice the u	ser account and pres	s "Edit" button							
User Accounts	<b>6</b> .1		Role									
The first states	Select	Username	Login	Administrator	Server Operation	User Account Management	Service Settings	Remote Console	Remote Media	IPMI Over LAN	SMASH CLP	CE
IPAL OVER LAW Settings	0	user01	$\overline{\nabla}$	V	Г		Г		Г			Π.
BMC Date and Time	o	user02	Г	Г					Г	F		
Remote KVM	0	user03		F	E		E		F	E		
SSH Server	0	user04	Г				F					
SSL Server	0	user05	_	-	-	-	_	-	-	-		
The office of the other states of the other st	0	user06	-	-	-	-	-	-	-	-	-	-
DNS Client	0	user07	-	-	-	-	-	-	-	-	-	-
LDAP	0	user08	_	-	-		-		-	-	-	-
SNMP Setting	0	user09	-	-	-	-	-	-	-	-		-
SVP Settings	0	userio	-	E	-		-		E	-	-	-
Power Canning function setting	0	ceconst		- -							- -	2
17. 170											E	dit 1
Manager Setting												
Hi-Track Setting												
Launch												
Remote Console												
	•											•
			-									

The following table shows description of menu items in the window.

	Menu items	Description		
Ref	resh button	Refreshes user account information.		
Sel	ect	Radio button for selecting a user account.		
Use	rname	User account name		
Rol	e			
	Login	Displays the roles given to user account.		
	Administrator			
	Server Operation			
	User Account Management			
	Service Settings			
	Remote Console			
	Remote Media			
	IPMI Over LAN			
	SMASH CLP			
	CE			
Edit	t	Go to the <b>Configure User Accounts</b> window. However, this is valid only when the Radio button is checked.		

 Table 5-3: Configure User Accounts menu items

#### Roles

Giving roles to a user account allows the setting of actions that the user can do. Each has the following meaning:

Role name	Description
Login	A role for logging in to the service provided by the Web console. Any user without this role is considered invalid and cannot log in to a service.
Administrator	A role representing the user authority for an administrator. Any user with this role can perform all the functions of Web console except setting IPMI Over LAN and BMC restart.
Server Operation	A role for controlling the power to the system unit and making a reset operation.
User Account Management	A role for setting a user account.
Service Settings	A role for setting a service provided by the system unit.
Remote Console*	A role for the Remote Console function to display the system unit screen on a console terminal, and remotely manipulating both keyboard and mouse.
Remote Media*	A role for using the remote floppy disk function and remote CD/DVD function.
IPMI Over LAN	A role for setting a user account and an authentication type for IPMI Over LAN.
SMASH CLP	A role for setting user account for SMASH.
CE	A role representing the user authority for maintenance work, which can be given to <b>ceconsl</b> user only.
* The setting becomes valid w	hen the Remote Console application is applied.

Table 5-4: Role allowing operation and function

#### Initial setting of a user account

The initial setting of a user account is as follows:

Username	Password	Role	Description
user01	pass01	Login Administrator	A user for system unit administration. This role is unchangeable.
user02	pass02	None	General users
user03	pass03		
user04	pass04		
user05	pass05		
user06	pass06		
user07	pass07		
user08	pass08		
user09	pass09		
user10	pass10		
user11	pass11		
ceconsl	Set at shipment	Login CE	A user for maintenance work. Maintenance personnel use this role during maintenance work. This setting is unchangeable.

 Table 5-5: Initial settings of user account

#### **Configure User Accounts > Edit User Accounts**

To change a user account, check the radio button of a user account that you want to change in the **Configure User Accounts** window, and click **Edit**. The following window for setting the selected user account is displayed.

Hitachi Compute Rack family					HITACHI
server Name: CR210-ESD00	00123456 Username	: user01 Previous Login: Tu	te Dec 11 14:03:5	3 2012	Logout
Server Operation	Server Settings	Maintenance	Logs		
Lanzuage Settings	Configure	User Accounts			
Network Settings	Edit User A	ccounts			
Services Configuration	This section is for	modifying user account settings.			
User Accounts	Username			user02	
IDMI Over I AN Settions	Password			•••••	
PMC Data and Time	Password (Con	firm)			
Remote KVM				Cogin Administrator Super Operation	
SSH Server				User Account Management	
SSL Server	Kole			Remote Console	
DNS Client				□Remote Media □IPMI Over LAN □SMASH CLP	
Shin Constant		Key Data		Not Registered	
active second	SSH Public Ke	yl Register Pu	blic Key		Browse
SVP settings	COUD-LU- V.	Key Data		Not Registered	
Power Capping function setts	ng SSH Fuolic Ke	y2 Register Pu	blic Key		Browse
Hitachi Compute Systems Manager Setting	SSH Public Ke	Key Data		Not Registered	
Hi-Track Setting		Register Pu	blic Key		Browse
	SSH Public Ke	v4 Key Data		Not Registered	
Launch		. Register Pu	blic Key		Browse
Remote Console					Back Reset Modify

The following table shows description of menu items in the window.

Menu items		Description		
Username		User account name (up to 32 characters)		
Password		Entry of a password (up to 32 characters)		
Password (Confirm)	)	Re-entry of a password		
Role				
Login		A checked role is given to a user account.		
Administrator				
Server Operat	ion			
User Account I	Management			
Service Setting	gs			
Remote Conso	le			
Remote Media				
IPMI Over LAN	1			
SMASH CLP				
SSH Public Key1, S	SH Public Key2, SSH P	ublic Key3, SSH Public Key4		
Key Data		Display information of a public key data.		
Кеу Туре		If a public key data is not registered, display <b>Not</b> <b>Registered</b> .		
Fingerprint				
Options				
Comment				
Update Public	Key	Update a specified public key data.		
Delete Public k	Key	Delete a public key data.		
Register Public	с Кеу	Register a specified public key.		
Back button		Disables what you edited, and returns to the <b>Configure User Accounts</b> window.		
Reset button		Disables what you edited, and returns to the status before editing.		
Modify button		Enables what you edited, and goes to the confirming window.		

#### Table 5-6: Configure User Accounts > Edit User Accounts menu items



- **Username** is a mandatory input item.
- When you set a password, enter the same value for both **password** and **password (Confirm)**.
- When you edit a user account, a password is not a mandatory item. When you do not enter a password, the BMC decides that the password remains unchanged.
- You can register a SSH public key file made with OpenSSH.
- A maximum size of a SSH public key file which you can register is 2 KB.
- The **user01**, which the administrator user's role is unchangeable.
- Only the user with Administrator role can change a role.
- The **ceconsl** is a user for maintenance personnel. Maintenance personnel use this role when a maintenance service is offered. This setting is unchangeable.

Changes the settings of a user account.

And then click **Modify**. The following Confirm window is displayed.

achi Comp	ute Rack fa	mily	gin: Tue Dec 11 14:02:6	2 2012		HITZ
erver Operation	Server Settings	Maintenance	Logs	5 2012		Lo
Language Settings	Configure	User Accounts				
Asset Information	comgure					
Network Settings	Edit User A	Account (Confirm)				
Services Configuration	If "Confirm" butto	on is pressed, the user accou	nt will be modified as follow:	L		
	Username				user02	
User Accounts	Password				Will be modified	
IPMI Over LAN Settings	Role				Login User Account Management	
DAIC Date and Lime	SSH Public Ke	eyl			Will not be modified	
Remote KVM	SSH Public Ke	ey2			Will not be modified	
SSH Server	SSH Public Ke	ey3			Will not be modified	
SSL Server	SSH Public Ke	ey4			Will not be modified	
DNS Client						Back Confirm
I DAD						
LUXP						
SNMP Setting						
SVP Settings						
Power Capping function set	ting					
Hitachi Compute Systems Manager Setting						
Hi-Track Setting						
Launch emote Console						

Click **Confirm** to save the change settings of a user account.



If you want to return to the status before editing, click **Back**.

#### Setting mouse mode of Remote Console

When the Remote Console application is applied to the system unit, set the mouse mode for remote console operation. Otherwise, no setting is required.

Click **Server Setting** from the top tab, and then click **Remote KVM** in the left pane. The following window is displayed.

Hitachi Comput	e Rack farr	nily			HITACHI
Server Name: CR210-ESD0000	123456 Username: u	iser01 Previous L	ogin: Thu Feb 16 10:13:36 2012		Logout
Server Operation S	erver Settings	Maintenance	Logs		
Lanzuage Settings Asset Information	Remote KV	M Settings			CRefresh
Network Settings	Remote KVN	I Settings			
Services Configuration	This section is for rer	note KVM settings.			
User Accounts	Mouse Mode		©RELATIVE Mode CABSOLUTI	E Mode	
IPMI Over LAN Settings					Reset Modify
BMC Date and Time					
Remote KVM					
SSH Server					
SSL Server					
DNS Client					
LDAP					
SNMP Setting					
SVP Settings					
Power Capping function setting					
Hitachi Compute Systems Manager Setting					
Hi-Track Setting					
Launch Remote Console					

The following table shows description of menu items in the window.

Table 5-7: Remote	KVM	Settings	menu items
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Menu items	Description
Refresh button	Refreshes information.
Mouse Mode	RELATIVE Mode: A mode for manipulating the mouse of remote console using the mouse cursor on the system unit screen. For use of a non-Windows OS.
	ABSOLUTE Mode: A mode for manipulating the mouse of remote console using the mouse cursor of a console terminal. Use this mode when the OS of the system unit is Windows.
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.

Set mouse mode in accordance with the OS that you install. And then click **Modify**. The following Confirm window is displayed.

Hitachi Comput	e Rack far	nily martin Presidentia	rin: Thu Eab 16 10:05:14	2012	HITACHI
Server Operation S	erver Settings	Maintenance	Logs		Logout
Language Settings	Remote KV	M Settings			
Network Settings	Remote KV	M Settings (Confirm	n)		
Services Configuration	If "Confirm" button	is pressed, mouse mode wi	ll be modified as follows.		
User Accounts	Mouse Mode		RELATIVE Mode		Reals Canfirm
IPMI Over LAN Settings					Back Comm
BMC Date and Time					
Remote KVM					
SSH Server					
SSL Server					
DNS Client					
LDAP					
SNMP Setting					
SVP Settings					
Power Capping function setting					
Hitachi Compute Systems Manager Setting					
Hi-Track Setting					
Launch Remote Console					

Click **Confirm** to save the change settings of mouse mode.



When changing the mouse mode, terminate the remote console first. An attempt to change the mouse mode while the remote console is active, the mouse cursor may not work normally.



- If you want to return to the status before editing, click **Back**.
- For details on how to use the Remote Console application, see *Remote Console Application User's Guide*.

#### Setting BMC date and time

The setting of BMC date and time is required for time stamp of an error log.

Before operating the system unit, set the date and time of both Web console and system BIOS. For the setting of the system BIOS, see *Hitachi Compute Rack 220S BIOS Guide*.

Click **Server Setting** from the top tab, and then click **BMC Date and Time** in the left pane. The following window is displayed.

Hitachi Comput	e Rack family			HITACHI
Server Name: CR210-ESD0000	123456 Username: user01 Pre	vious Login: Thu Feb 16 10:05:1	4 2012	Logout
Server Operation S	server Settings Mininte	iance Logs		
Language Settings	BMC Time			GRefresh
Asset Information				
Network Settings	Time and Timezone Set	tings		
Services Configuration	This section is for setting time and t	imezone of BMC		
User Accounts	Time Synchronization Metho	đ	©Do Not Use NTP CUse NTP	
IPMI Over LAN Settings	Month/Day/Year		02 /16 /12	
BMC Date and Time	Time		10 :47 :07	
Remote KVM	NTB Saminan	NTP Server 1		
SSH Server	NTF Settings	NTP Server 2	[	
SSL Server	Timezone (from -12:00 to +14:00)		+ 💌 00 :00	
DNS Client	, , ,			Reset Modify
LDAP				
SNMP Setting				
SVP Settings				
Power Capping function setting				
Hitachi Compute Systems Manager Setting				
Hi-Track Setting				
Launch Remote Console				

The following table shows description of menu items in the window.

Menu items	Description
Refresh button	Refreshes information.
Time Synchronization Method	• <b>Do Not Use NTP</b> : BMC reads and synchronizes the system clock of the system unit periodically.
	• Use NTP: BMC time is synchronized with the time distributed by an external NTP server. Set an NTP server address according to NTP Settings.
Month/Day/Year Time	Enter a date and local time.
NTP Settings	When setting <b>Time Synchronization Method</b> to <b>Use NTP</b> , enter the IP address of NTP server.
Timezone (from -12:00 to +14:00)	Set the time zone of the local area where the system unit is installed, according to its OS.
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.

#### Table 5-8: BMC Time menu items

Set BMC date and time, and then click **Modify**. The following Confirm window is displayed.

Hitachi Compute Rack family						
Server Name: CR210-ESD0000	123456 Username: us	er01 Previous L	ogin: Thu Feb 16 10:	05:14 2012		Logout
Server Operation S	erver Settings	Maintenance	Logs			
Language Settings	BMC Time					
Asset Information						
Network Settings	Time and Time	zone Settings (	Confirm)			
Services Configuration	If "Confirm" button is	pressed, time and time	zone setting is modified	as follows.		
	Time Synchroniza	tion Method			Do Not Use NTP	
User Accounts	Month/Day/Year				02/16/12	
IPMI Over LAN Settings	Time				10:47:07	
BMC Date and Time	NTD Courses		NTP Server 1			
Remote KVM	NIP Settings		NTP Server 2			
SSH Server	Timezone (from -12:00 to +1	4:00)			+00:00	
SSL Server						Back Confirm
DNS Client						
LDAP						
SNMP Setting						
SVP Settings						
Power Capping function setting						
<u>Hitachi Compute Systems</u> <u>Manager Setting</u>						
Hi-Track Setting						
Launch Remote Console						

Click **Confirm** to save the change settings of BMC date and time.

#### **Setting BMC network**

You can change the BMC network setting of the system unit from the factory defaults in accordance with your system environment.

When the BMC network setting is changed, the network is shut off and restarts. After that, you can connect to the BMC network only in the environment changed in setting. Confirm that the settings are correct when changing the BMC network setting.

You can make setting to restrict the IP address of network device allowed connecting to the system unit. Up to four IP addresses of the network devices that permits connection to the system unit.

Click **Server Setting** from the top tab, and then click **Network Settings** in the left pane. The following window is displayed.

	е наск татшу		HITAC
Server Operation	123456 Username: user01 Prev Server Settings Mainten	rious Login: Thu Feb 16 10:05:14 2012 ance Logs	Logout
Language Settings	Network Setting		GRefresh
Asset Information	Sotting of Notwork Inter	face	
	This section is for the BMC network	interface settings.	
services Configuration	MAC Address	50:E5:49:A9:88:23	
Iser Accounts	IP Address	192.168.0.80	
MI Over LAN Settings	Netmask	255.255.255.0	
MC Date and Time	Default Gateway	0000	
emote KVM	DHCP	©Not Used CUsed	
H Server			Reset Modify
Server			
5 Client	IP Address Restriction		
AP MP Setting	This section is for IP address restricti "IP Address Allowed" field can accept Examples:	ion settings. I the formats shown in the examples below.	
VP Settings	IP address : 192.168.10.1 Subnet : 192.168.10.0/255.255.255.0	0 or 192.168.10.0/24	
wer Capping function setting	IP Address Restriction	ODeny all access but the ones from the following IP addresses	Accept all access
	IP Address Allowed1	192.168.48.129	
ushi Comenta Suntama			
chi Compute Systems azer Setting	IP Address Allowed2		
chi Compute Systems azer Setting rack Setting	IP Address Allowed2 IP Address Allowed3		
hi Compute Systems user Setting rack Setting	IP Address Allowed2 IP Address Allowed3 IP Address Allowed4		

The following table shows description of menu items in the window.

Menu items	Description
Refresh button	Refreshes information.
MAC Address IP Address Netmask Default Gateway	Sets the BMC network. For the factory defaults of BMC network settings which are IP address, subnet mask, and default gateway, see <u>Concidering BMC</u> <u>network setting</u> . For the DNS setting, see <u>DNS Client Settings menu</u> .
DHCP	Enables or disables the DHCP*.
IP Address Restriction	Enables or disables the connection IP address restriction function.
IP Address Allowed1 IP Address Allowed2 IP Address Allowed3 IP Address Allowed4	Enter an IP address to permit connection to the system unit. You can set a single IP address or subnet. (Example) Single IP address: 192.168.10.1 Subnet: 192.168.10.0/255.255.255.0 or 192.168.10.0/24
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.
* When you set <b>DHCP</b> to <b>Used</b> , disabled.	settings of IP Address, Netmask, and Default Gateway are

Table 5-9: Network Setting menu items



When you set **DHCP** to **Used**, an IP address of the BMC network may be changed depending on the DHCP server.

We recommend you use a DHCP only as temporary use to initialization of an IP address.

Set BMC network items and restriction IP address. And then click Modify. The following Confirm window is displayed.

• When changing **Setting of Network Interface** items:

Hitachi Compute Rack family Store Nume (R210/S5000012456 - Learning used) Previous Learning The FA 16 (1945/14/2012					
Server Operation Se	erver Settings Maintenance	Logs	Logour		
Language Settings	Network Setting				
Natural Satisan	Setting of Network Interface (	Confirm)			
Service Conferencies	If "confirm" button is pressed, Network Inter	face settings will bemodified as follows			
Services connectation	IP Address	192.168.0.80			
User Accounts	Netmask	255.255.255.0			
IPMI Over LAN Settings	Default Gateway	0.0.0.0			
BMC Date and Time	DHCP	Not Used			
Remote KVM			Back Confirm		
SSH Server					
SSL Server					
DNS Client					
LDAP					
SNMP Setting					
SVP Settings					
Power Capping function setting					
Hitachi Compute Systems Manager Setting					
Hi-Track Setting					
Launch Remote Console					

• When changing **IP Address Restriction** items:

Hitachi Compute Rack family						
Server Operation	Server Settings	Maintenance	Logs	Logout		
Language Settings	Network	Setting				
Network Settings	IP Addres	s Restriction				
Services Configuration	If "confirm" but	ton is pressed, IP address rest	riction settings will bemodified as follows			
User Accounts	IP Address F	lestriction	Accept all access			
IPMI Over LAN Settings	IP Address A	llowed1	192.168.48.129			
BMC Date and Time	IP Address A	illowed3				
Remote KVM	IP Address A	llowed4				
SSH Server				Back Confirm		
SSL Server						
DNS Client						
LDAP						
SNMP Setting						
SVP Settings						
Power Capping function setting						
Hitachi Compute Systems Manager Setting						
Hi-Track Setting						
Launch Remote Console						

Click **Confirm** to save the change settings of BMC network.

When you change **Setting of Network Interface** items, the BMC terminates the Web console, and shuts off the network to change the network settings.

After that, enter the changed IP address to the Web browser, and then log in to the Web console.

# Web console menu items

This section describes the Web console menus and setting items.

#### **Server Operation tab**

**Server Operation** tab enables you to refer to the system unit identification information and set remote power operations.

#### **Server Information menu**

Click **Server Operation** from the top tab, and then click **Server Information** in the left pane. The following window is displayed.

Hitachi Comput	e Rack fa	mily		HITACHI
Server Name: Username: usd	123456 Username	user01 Previous Lo	gin: Thu Feb 16 10:05:14 2012	Logout
Server Operation	erver Settings	Maintenance	Logs	
Server Information	Server Info	ormation		GRefresh
Power and LED	Server and	or meteron		
	Paula Inform			
temperature and power	This section shows	basic information of the se	erver.	
Laurah 1	Server Name		CR210-ESD0000123456	
Remote Console	BMC IP Addre	ss	192.168.0.80	
	BMC MAC Add	dress	50:E5:49:A9:88:23	
	UUID		mmmr-mm-mm-50e549a987d8	
	BMC F/W Ver	sion	09-05	
	EFI F/W Versie	on	00-00	
	Operational mo	ode of BMC	Normal Mode	
	Server FRU	Information		
	This section shows	the server FRU Informatio	n.	
	Product Name		Compute Rack 210H	
	Product Part/M	fodel Number	GQ-CR210HM-NDN-Y	
	Product Versio	n	0021R21500	
	Product Serial	Number	323aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	

The following table shows description of menu items in the window.

Menu items	Description		
Refresh button	Refreshes information.		
Server Name	Displays a server name set in Asset Information menu		
BMC IP Address	Displays a BMC's IP address for system unit. For BMC's IP address factory defaults, see <u>Concidering BMC</u> <u>network setting</u> . For the change of BMC's IP address, see <u>Setting BMC network</u> .		
BMC MAC Address	Displays a BMC's MAC address.		
UUID	Displays a UUID.		
BMC F/W Version	Displays a BMC's firmware version.		
EFI F/W Version	Displays an EFI's firmware version.		
Operational mode of BMC	Displays BMC's operating mode.		
Product Name*	Displays the product name of system unit.		
Product Part/Module Number*	Displays the model information of system unit.		
Product Version*	Displays the hardware version of system unit.		
Product Serial Number*	Displays the product serial number of system unit.		
* Those items are displayed about Field-Replaceable Unit information (FRU). When the information has not been set. "N/A" is displayed.			

Table 5-10: Server	<sup>·</sup> Information	menu items
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••••, Tip ... Types of BMC's operating modes are Normal Mode and Maintenance Mode. Maintenance Mode is used only by maintenance personnel during maintenance work. If **Maintenance Mode** is displayed in **Operational mode of BMC**, press the FUNCTION switch for at least 10 seconds with the tip of a ballpoint pen to cancel that mode.

#### Power and LED menu

Click **Server Operation** from the top tab, and then click **Power and LED** in the left pane. The following window is displayed.

Struct Name: Utersame: usion)23456 Utersame: sured) Provinces Legits: The Fe 16 10 00:511 2012 [Second Server Operation Server Settings Multitenance Legits Increase IED [Prover and Reset Operation This section for a second and reset operation can be does via the battens in the table. Power and Reset Operation OFF Prover and Reset Operation Prover OFF Hand Reset NMill [LED Operations] Use this section to operate LED. Learning DLang (LD) OF [LED Status] This section show LED states LED Learning DLang (LD) OF [LED Status] LED Status LED Learning DLang (LD) OF [LED Status] LED Status LED Learning DLang (LD) OF [LED Status] LED Status Learning DLang (LD) OF [LED Status] LED Status] LED Status Learning DLang (LD) OF [LED Status] LED Status] LED Status LED Learning DLang (LD) OF [LED Status] LED Stat	Hitachi Comput	e Rack family			HITACH
Barry Information     Power and LED     Control       Laurch     Power and Reset Operation     Control       Laurch     Power and Reset Operation     OFF       Perer status     OFF     Perer Status       Power and Reset Operation     Power OFF       Handchart     Power Status     OFF       Perer status     OFF     Perer Status       ILED Operations     Cash section to operate IEDs.       Leation D Lang (LD)     On Off       ILED Status     Castion D Lang (LD)       ILED Status     Leation D Lang (LD)       ILED Status     Leation D Lang (LD)       ILED Status     Castion D Lang (LD)       Off     Mode Lang       Mode Lang     Off	Server Name: Username: use	123456 Username: user01 Pre	vious Login: Thu Feb 16 10:05:14 2012		Logout
Lexic information         Power and LED         Control           Information scored advector         Improve and Reset Operation         Improve advector         Improvector         Improvector         <	Server Operation	Arren Settings Mainte	Logs		
Descent of LDD         Power and Reset Operation         The section shows power that of the saves. Power control and reset operation can be done via the holtons in the table.         Power 300 Control Co	Server Information	Power and LED			GRefresh
Image and a second part of the sec	Power and LED				
The section above: The section above: The section of the serve: Peer control and reset operation can be does via the bottoms in the stalk.       Peer Status     OFF       Peer Status     OFF       LED Operations     Eaction the section are set operated and reset operation can be does via the bottoms in the stalk.       LED Operations     OFF       Launch     Itel D Operations       LED Status     Eaction ID Lamp (LID)     Off       LED Status     Eaction ID Lamp (LID)     Off       LED Status     Eaction ID Lamp (LID)     Off       Model Lamp     Off       Model Lamp     Off	Information accumulated	Power and Reset Opera	ition		
Launch Remote Console         Power Status         OFF           Power and Reset Operation         Power ONI Force Power OFF Hard Reset NMI           LED Operations         Use this action to operate LEDs.           Leation D Lamp (JD)         Off Off           ILED Status         Leation D Lamp (JD)           LED Status         Leation D Lamp (JD)           Model Lamp         Off           Model Lamp         Off	temperature and power	This section shows power status of	the server. Power control and reset operation ca	in be done via the buttons in the table.	
Internation         Power ONF         Face Power ONF         Hard Ressel         MMM           LED Operations         Use this settion to operate LEDs.         International Control C	Launch	Power Status	OFF		
LED Operations       Use this section to operate LEDs.       Lessing D Lamp (LD)     On Off       LED Status       LED Status       LED Status       Model Lamp     Off       Model Lamp     Off	Remote Console	Power and Reset Operation	Power ON Force Power OF	F Hard Reset NMI	
LED Operations       Via this section to operate LED.       Location ID Lamp (LID)       ILED Status       LED Status       LED Status       LED Status       Model Lamp       Off					
Use this section to operate LEDs.  Lecation ID Lamp (LID)  ILED Status  LED Status  LED Status  LED Status  Lecation ID Lamp (LID)  Off  EKROR Lamp Off Medic Lamp Off		LED Operations			
Leadin D Lamp (LD)  This section shows LED status  LED Status  LED Status  LED Status  Model Lamp Off		Use this section to operate LEDs.			
LED Status         Off           This section shows LED status         ERROR Lamp (LD)         Off           LED Status         Off         Off           deed Lamp         Off         Off           Off         Off         Off		Location ID Lamp (LID)	On Off		
LED Status This section down LED status LED Status LED Status LED Status LED Status Off Off Off Off Off Off Off Off Off Of					
This section shows LED status           Lead on ID Lamp (LD)         Off           ERD Status         ERROR Lamp (ALT)         Off           Model Lamp         Off         Off		LED Status			
LED Status Location ID Lamp (LID) Off ERROR Lamp (LIT) Off Mode Lamp Off Mode Lamp Off		This section shows LED status.			
LED Status ERROR Lamp (ALT) Off Model Lamp Off Model Lamp Off			Location ID Lamp (LID)	Off	
ModeO Lamp O2f Model Lamp O2f		LED Status	ERROR Lamp (ALT)	Off	
Model Lamp Off			Mode0 Lamp	Off	
			Model Lamp	Off	

The following table shows description of menu items in the window.

Menu items	Description
Refresh button	Refreshes information.
Power Status	Displays the power supply status of the current system unit.
	OFF: Power-OFF status
	ON: Power-ON status
	<ul> <li>OFF (Power-ON suppressed): Power cannot be turned on due to a power failure.</li> </ul>
Power and Reset Operation	Operations the power to the system unit.
	• <b>Power ON</b> Turns on the power to system unit.
	• Force Power OFF Forcibly turns off the power to system unit. OS shutdown is not performed. To turn off the power normally, shut down the system in the OS window.
	• <b>Hard Reset</b> Applies a hardware reset to the system unit. This button is enabled with the power to system ON.
	<ul> <li>NMI         Issues an NMI interrupt signal.         A dump process is activated according to the OS setting. This button is enabled with the power to system unit ON.     </li> </ul>
Location ID Lamp (LID)	• <b>On</b> Turns on the ID LED. Clicking this button provides the same operation as pressing the SERVICE switch.
	• Off Turns off the ID LED. Clicking this button provides the same operation as pressing the SERVICE switch.
LED Status *	Displays following the LED status of the system unit.
	Location ID Lamp (LID)
	ERROR Lamp (ALT)
	Mode0 Lamp
	Mode1 Lamp
* The correspondence between t follows:	he LEDs displayed in <b>LED status</b> and the system unit's LEDs is as
Location ID Lamp (LID) SER	VICE LED
ERROR Lamp (ALT): ERROR	LED
Mode0 Lamp : MODE0 LED	
Mode1 Lamp : MODE1 LED	
For details on LEDs, see Hitach	i Compute Rack 220S Getting Started Guide.

#### Table 5-11: Power and LED menu items

#### Information accumulated temperature and power

Click **Server Operation** from the top tab, and then click **Information accumulated temperature and power** in the left pane. The following window is displayed.

Hitachi Compu	te Rack fa	amily							HITACH
Server Name: CR210-ESD00	00123456 Userna:	me: user01 Previou	s Login: Mon	Mar 26 18:28:33 2012					Logout
Server Operation	Server Settings	Maintenance	)	Logs					
Server Information	Informati	ion accumulat	ed tempe	rature and power	,				<b>O</b> Refresh
Information accumulated temperature and power	Sort of info	rmation storage							
Launch Remote Console	Type of sort	ion accontrates in the ser	OBy dat	e CBy power CBy tempe	rature				Execution
	storage of i	nformation							
	Displays informat	ion about the temperature a	ind the accumulat	ion of power.					
	Record	Date Time	S#	Sensor Name	Power	CUR	AVE	MAX	MIN
	0161	2012/03/26 19:20:09	09 92	INTAKE Temp PWR Cons_A	Off	26C 0W	25C 80W	26C 85W	25C 0W
	0158	2012/03/26 17:56:18	09 92	INTAKE Temp PWR Cons_A	On	29C 75W	28C 75W	29C 75W	28C 75W
	0154	2012/03/22 08:10:43	09 92	INTAKE Temp PWR Cons_A	On	29C 60W	29C 60W	30C 65W	29C 60W
	0153	2012/03/22 06:08:41	09 92	INTAKE Temp PWR Cons_A	On	29C 60W	29C 60W	30C 65W	29C 60W
	0152	2012/03/22 04:06:37	09 92	INTAKE Temp PWR Cons_A	On	30C 60W	30C 60W	31C 65W	30C 60W
	0151	2012/03/22 02:04:34	09 92	INTAKE Temp PWR Cons_A	On	30C 60W	30C 60W	30C 70W	30C 60W
	0150	2012/03/22 00:02:33	09 92	INTAKE Temp PWR Cons_A	On	30C 60W	30C 60W	30C 65W	30C 60W
	0149	2012/03/21 22:00:32	09 92	INTAKE Temp PWR Cons_A	On	30C 60W	29C 60W	30C 65W	28C 60W
	0148	2012/03/21 19:58:31	09 92	INTAKE Temp PWR Cons_A	On	28C 60W	27C 60W	28C 75W	25C 60W
	0147	2012/03/21 09:19:28	09 92	INTAKE Temp PWR Cons_A	On	27C 75W	27C 65W	27C 80W	27C 60W
	0146	2012/03/21 07:10:47	09 92	INTAKE Temp PWR Cons_A	On	27C 65W	27C 60W	28C 80W	27C 60W
	0145	2012/03/21 05:01:04	09 92	INTAKE Temp PWR Cons_A	On	28C 65W	28C 60W	28C 80W	28C 60W

The following table shows description of menu items in the window.

Table 5-12: Information	storage temperature	power menu items
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Menu items	Description
Refresh button	Refreshes information.
Type of sort	Sorts the information accumulated in the selected item (maximum twelve).
	• By date: Sorts the information by date.
	• By Power: Sorts the information by power consumption.
	• By Temperature: Sorts the information by temperature.
Execution	Perform the sort by selected item.
storage of information*	Displays the information of the system unit about intake temperature, power status and power consumption.
* The information is recorded aut	tomatically every two hours and is accumulated for up to two years.

#### **Server Settings**

**Server Settings** tab enables you to set the functions for managing the system unit.

#### Language Settings menu

Click **Server Settings** from the top tab, and then click **Language Settings** in the left pane. The following window is displayed.

Hitachi Comput	e Rack fam	ily	in: Thu Ech 16 10:05:14 201	HITACHI
Server Operation S	Server Settings	Maintenance	Logs	Logour
Lanzuage Settings	Language Se	ettings		GRefresh
Network Settings	Language Sett	ings		
Services Configuration	This section is for lang	puage settings.		
User Accounts	Language			<b>D</b> . [] <b>H K</b> []
IPMI Over LAN Settings				Keset Modify
BMC Date and Time				
Remote KVM				
SSH Server				
SSL Server				
DNS Client				
LDAP				
SNMP Setting				
SVP Settings				
Power Capping function setting				
<u>Hitachi Compute Systems</u> <u>Manazer Settinz</u>				
Hi-Track Setting				
Launch Remote Console				

The following table shows description of menu items in the window.

Table 5-13: Language Settings menu items

Menu items	Description		
Refresh button	Refreshes information.		
Language	• English Sets English as a Web console display language.		
	• Japanese Sets Japanese as a Web console display language.		
Reset button	Disables what you edited, and returns to the status before editing.		
Modify button	Enables what you edited, and goes to the confirming window.		

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.
## **Asset Information menu**

Click **Server Settings** from the top tab, and then click **Asset Information** in the left pane. The following window is displayed.

Hitachi Compu	Ite Rack fa 00123456 Usernar	amily ne: user01 Previous Lo	gin: Thu Feb 16 10:05:14 2012	HITACHI Logout
Server Operation	Server Settings	Maintenance	Logs	
Language Settings Asset Information	Asset Inf	ormation		GRefresh
Network Settings	Asset Info	ormation		
Services Configuration	This section is fo	or setting the asset informatic	m of the server.	
User Accounts	Server Name	8	CR210-ESD0000123456	
IPMI Over LAN Settings			ESD C3F 201	<u> </u>
BMC Date and Time				
Remote KVM				
SSH Server				
SSL Server	Server Asse	t Information		
DNS Client				
LDAP				
SNMP Setting				
SVP Settings				*
Power Capping function settin				Reset Modify
Hitachi Compute Systems Manager Setting				
Hi-Track Setting				
Launch Remote Console				

The following table shows description of menu items in the window.

 Table 5-14:
 Asset Information menu items

Menu items	Description
Refresh button	Refreshes information.
Server Name	Sets a system unit name. This setting is displayed in the <b>Server Name</b> column at top of the window, and in the <b>Server Information</b> window on the <b>Server</b> <b>Operation</b> tab.
Server Asset Information	Enables you to register sentences including information on the system unit installation site or administrators.
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

#### **Network Settings menu**

See <u>Setting BMC network</u> on page 5-18.

# Service Settings menu

Click **Server Settings** from the top tab, and then click **Service Configuration** in the left pane. The following window is displayed.

Hitachi Compute Rack family								
Server Name: CR210-ESD00001	123456 Username: user01 Previo	us Login: Tue Dec 11 14:03:53 2012	Logout					
Server Operation Se	erver Settings Maintenar	ice Logs						
Language Settings	Service Settings		GRefresh					
Asset Information								
Network Settings	Service Settings							
Services Configuration	This section is for enabling/disabling se	rvices and setting port numbers of the services .						
	7.1	Permission to use the port	©Allow ODisallow					
User Accounts	Teiner (CLI)	Port Number	23					
IPMI Over LAN Settings	SET (CI D	Permission to use the port	Allow ODisallow					
BMC Date and Time	55H (CLI)	Port Number	22					
Remote KVM	D ( 173)	Permission to use the port						
CCU Canada	Kemote KVM	Port Number	7578					
		Permission to use the port	CAllow CDisallow					
SSL Server	HIIP	Port Number	80					
DNS Client	IITTDO	Permission to use the port	©Allow ODisallow					
LDAP	niirs	Port Number	443					
SNMP Setting		Permission to use the port	⊙Allow ⊖Disallow					
017D 0	WS-MAN	Port Number(wsmans)	6986					
SVP Settings		Permission to use the port	©Allow ODisallow					
Power Capping function setting	IPMI Over LAN	Port Number	623					
Hitachi Compute Systems	eam	Permission to use the port	⊙Allow ⊖Disallow					
stanager setting	SVE	Port Number	21001					
Hi-Track Setting			Reset Modify					
t avait 1								
Remote Console								

The following table shows description of menu items in the window.

Menu items	Description			
Refresh button	Refreshes information.			
Telnet (CLI)	Sets a permission to use the port for the telnet (CLI) functions. And displays a port number used by the telnet (CLI) functions.			
SSH (CLI)	Sets a permission to use the port for the SSH (CLI) functions. And displays a port number used by the SSH (CLI) functions.			
Remote KVM	Sets a permission to use the port for the Remote Console application. And sets a port number used by the Remote Console application.			
HTTP HTTPS	Sets a permission to use the port for the HTTP and HTTPS. And displays the HTTP port number and HTTPS port number that are used by the Web console.			
WS-MAN <sup>1</sup>	Sets a permission to use the port for WS-MAN. And sets a port number used by WS-MAN.			
IPMI Over LAN <sup>2</sup>	Sets a permission to use the port for the IPMI Over LAN functions. And displays a port number used by the IPMI Over LAN functions.			
SVP	Sets a permission to use the port for the SVP functions. And displays a port number used by the SVP functions.			
Reset button	Disables what you edited, and returns to the status before editing.			
Modify button	Enables what you edited, and goes to the confirming window.			
<b>Notes:</b> 1 If HTTPS setting is set to "Disallow", WS-MAN setting cannot be set to "Allow". 2 The IBML Over LAN function is enabled only for part of commands.				

 Table 5-15: Service Settings menu items

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

# **Configure User Accounts menu**

See <u>Setting user account</u> on page 5-8.

#### **IPMI Over LAN Settings menu**

Click **Server Settings** from the top tab, and then click **IPMI Over LAN Settings** in the left pane. The following window is displayed.

achi Compute Rack family								
erver Operation	erver Settin	gs	Mainter	nance	Logs			Logout
anguage Settings	IPMI	Over	LAN Se	ttings				CRefresh
et Information				0				
erk: Settings	List o	of IPMI	Over LAN	User Accounts				
Configuration	To edit us	er account,	check the IPM	ff Over LAN user account	and press "Edit" but	on		
	Select	UserID	Status	Username			Privilege Level	
	0	1	Enable				Administrator	
AN Settings	0	2	Enable	root			Administrator	
and Time	۲	3	Enable	user03			Operator	
<u>u</u>	0	4	Disable					
	0	5	Disable					
	0	6	Disable					
	0	7	Disable					
	0	8	Disable					
	0	9	Disable					
	0	10	Disable					
								Edit
ping function setting	Auth	enticatio	n Type se	tting				
Compute Systems	I choose a	Authentic	ation type to v	alidate, and the Authentic	ation type that I cho	se when I push the "s	etting change" button becomes effective.	
Column .	Calibac	k Enable .	Authenticatio	on Type.	₩none	ZMD2, ZMD5,	traight Password OEM proprietary	
tting	User Er	nable Aut	hentication T	ype.	₩none	₩D2 🔽 MD5 🔽 St	traight Password <b>⊡</b> OEM proprietary	
ch [	Operate	or Enable	Authenticati	on Type.	none MD2 MD5 Straight Password OEM proprietary			
onsole	Admini	strator Er	able Authen	tication Type.	none	MD2 MD5 St	traight Password OEM proprietary	
	OEM E	nable Au	thentication 7	Гуре.	□none	MD2 MD5 St	traight Password∏OEM proprietary	
								Modify

The following table shows description of menu items in the window.

 Table 5-16: IPMI Over LAN Settings menu items

Menu items	Description		
Refresh button	Refreshes user account information.		
Select Radio button for user account selection			
User ID User account ID			
Status	Displays whether a user account is enabled or disabled.		
Username*	User account name		
Privilege Level*	Displays a privilege granted to a user account.		
Edit button	Goes to the <b>Edit IPMI Over LAN User Accounts</b> window, except when the radio button is checked.		
Authentication Type	Sets an authentication type on each privilege level.		
Modify button	Goes to the Authentication Type setting (Confirm) window.		
* N/A is displayed if the user account status is set to disabled.			

••••,, Tip ,, UserID 1 and 2 are enabled only for status change.

- UserID 1 and 2 are set to factory defaults as follows:
- UserID 1 Status is Enable, Username is (blank), password is (blank), and Privilege Level is Administrator.
   UserID 2 Status is Enable, Username is "root", password is "superuser", and Privilege Level is Administrator.

If you change **Authentication Type setting** items, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

If you change **List of IPMI Over LAN User Accounts** items, click **Edit** to go to following editing window.

Hitachi Compu	te Rack fa	amily			HITACHI
Server Name: CR210-ESD000	0123456 Usernan	ne: user01 Previous Log	zin: Thu Feb 16 10:05:1	4 2012	Logout
Server Operation	Server Settings	Maintenance	Logs		
Language Settings	IDMI Ow	an I AN Cottings			
Asset Information	IF MI OVO	er LAIV Settings			
Network Pattings	Edit IPMI	Over LAN User Acc	ounts		
	This section is fo	or modifying IPMI Over LAN	user account settings.		
Services Configuration	UserID		-	3	
User Accounts	Status			©Enable ODisable	
IPMI Over LAN Settings	Username			user03	
BMC Date and Time	Password			•••••	
Remote KVM	Password(Co	nfirm)		•••••	
SSH Server	Privilege Lev	rel		CCallback CUser @Operator CAdmi	nistrator
SSL Server					Back Reset Modify
DNS Client					
LDAP					
SNMP Setting					
SVP Settings					
Power Canning function setting					
Hitashi Comenta Sentama					
Manager Setting					
Hi-Track Setting					
Launch Remote Console					

#### Table 5-17: Edit IPMI Over LAN User Accounts menu items

Menu items	Description
UserID	Displays a user ID.
Status <sup>1</sup>	Enables or disables a user account.
Username <sup>2</sup>	User account name (up to 32 alphanumeric characters)
Password <sup>2 3 4</sup>	Entry of a password (up to 16 alphanumeric characters)
Password(Confirm) <sup>2 3 4</sup>	Re-entry of a password
Privilege Level <sup>2</sup>	Sets a privilege level.
Back button	Disables what you edited, and returns to the <b>IPMI Over LAN Settings</b> window.
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.

	Menu items	Description					
N	Notes:						
1	1 If this item is set to Disable, the user name and privilege level in the <b>IPMI Over LAN Settings</b> window are displayed as N/A.						
2	UserID 1 and 2 cannot be changed.						
3	For userID 8, 9, and 10, a blank cannot be set as a password.						
4	A 16-byte password compatible	e with IPMI1.5 can be set.					

If you change **Edit IPMI Over LAN User Accounts** items, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.



- IPMI Over LAN function setting information is retained even when the AC cables are disconnected.
- Setting information of the IPMI Over LAN is not included in Backup or restored the Management settings data with a Web console. When restore the Management settings, set an IPMI Over LAN again.

#### **BMC Date menu**

See <u>Setting BMC date and time</u> on page 5-16.

#### **Remote KVM Settings menu**

See Setting mouse mode of Remote Console on page 5-14.

#### **SSH Server menu**

Click **Server Settings** from the top tab, and then click **SSH Server** in the left pane. The following window is displayed.

<b>tachi</b> Compu	te Rack family				HITACI
rer Name: CR21-ESD00	00123456 Username: user01 Previ	ous Login: Mon Apr 9 15:01	:25 2012		Logout
erver Operation	Server Settings Minintenance	Logs			
Language Settings	SSH Server Settings				(PRefresh
Asset Information	Son Server Settings				<u>O Idadaa</u>
Network Settings	Renew SSH Host Keys				
Services Configuration	This section is for renewing SSH host keys.				
Taer Accounts		RSA Pubkey	1d:7f:0a:cb:85:	57:d1:f5:51:7e:67:f5:aa:a9:d2:23	
The Court AN Sections	Fingerprint of Host Keys	DSA Pubkey	b9:17:87:29:ad:	86:5a:e0:ed:64:5d:52:12:6f:b3:ec	
PAU OVER LAN SERIES					Renew SSH Host Keys
SMC Date and Time					
tenote KVM	SSH Settings				
<u>SH Server</u>	This section is for setting of the services that	use SSH.			
ISL Server	SSH User Authentication Method	Password Authentication	and Public Key Authentica	tion OPublic Key Authentication On	ly
DNS Client					Reset Modify
LDAP					
WP Settings Power Capping function setting Hitachi Compute Systems Manager Setting					
Hi-Track Setting					
Launch mote Console					

The following table shows description of menu items in the window.

Table	5-18:	SSH	Server	menu	items
-------	-------	-----	--------	------	-------

Menu items	Description
Refresh button	Refreshes user account information.
Fingerprints of Host Keys	Displays the fingerprint of a host key (public key) used by an SSH server.
Renew SSH Host Keys button	Renewal the SSH host keys.
SSH User Authentication Method	Selects an authentication method used by an SSH server.
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.

If you want to renew the SSH keys, click **Renew SSH Host Keys** to go to confirming window. And then, click **Confirm** to save the change settings.

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

#### **SSL Server menu**

Click **Server Settings** from the top tab, and then click **SSL Server** in the left pane. The following window is displayed.

Hitachi Compute Server Name: CR210-ESD00001	e Rack family 23456 Username: user0	/ 1 Previous Login	: Thu Feb 16 10:05	5:14 2012	
Server Operation Se	rver Settings	Maintenance	Logs		
Language Settings	SSL Server				<b>⊘</b> Refresh
Asset Information					
Network Settings	Server Certificate	Information			
Services Configuration	This section displays the sec	rver certificate current	tly used.		
User Accounts	Version				3
IPMI Over LAN Settings	Serial Number Public Key Algorithm	and Key Size			as:aff2:dlf2:ccf1:eb
BMC Date and Time	Validity (Not Before)	and hey once			Feb 16 11:00:06 2012 UTC
Remote KVM	Validity (Not After)	Not After)			Feb 16 11:00:06 2032 UTC
SSH Server	Issuer	Common Name (CN		1	Test
SSL Server		C	State or Province N		JP Vanagawa
DNS Client		L	ocality Name (L)	une (01)	Yokohama
IDAP		0	rganization Name	(0)	Organization Test
SND (D Sattion		0	rganizational Unit	Name (OU)	Organizational Unit Name Test
annue setting	Subject	с	ommon Name (CN)	1	Test
ovr oettings			Mail Address		test@test.co.jp
Power Capping function setting		S	urname		
Manager Setting		G	iven Name		
Hi-Track Setting		In	utials		
	SHA1 Fingerprint				5C:7D:FC:7E:26:39:D0:92:71:BB:54:13:BD:4B:C1:CD:A6:C4:AC:C8
Launch Remote Console	Create Solf-eigned	d Certificato			
	Use this section to create a	self-signed server certi	ificate. Creating a self	-signed server certifi	cate may take a few minutes.
	Public Key Algorithm	and Key Size		€RSA(2048bit	) CRSA(1024bit)
		Country Name (	(C)	JP	
		State or Provine	ce Name (ST)	Kanagawa	
		Locality Name (	L)	Yokohama	
Asset Information		Organization N	ame (O)	Organization	Test
Network Settings		Organizational	Unit Name (OU)	Tart	
Services Configuration	Subject	Common Name	(CN)	llest	
User Accounts		Email Address		rest@test.co.	JP
IPMI Over LAN Settings		DN Qualifier			
BMC Date and Time		Surname			
Remote KVM		Given Name			
SSH Server		Initials		1	Reset Create Self-signed Certificate
SSL Server					
DNS Client	Create CSR				
LDAP	Use this section to create a	CSR and download it.	Creating a CSR may t	ake a few minutes.	
SNMP Setting	Public Key Algorithm	and Key Size		€RSA(2048bit	) CRSA(1024bit)
SVP Settings	Format			©PEM CDER	
Power Capping function setting		Country Name (	(C)		
Hitachi Compute Systems Manager Setting		State or Province	ce Name (ST)	Kanagawa	
Hi-Track Setting		Locality Name (	L)	(Yokohama	
ALC: A DECK OFFICIAL		Organization N	ame (O)	Organization	lest
Launch		Organizational	Unit Name (OU)	Organizationa	al Unit Name Test
Remote Console	Subject	Common Name	Common Name (CN)		
		Email Address		test@test.co.jp	
		DN Qualifier			
		Surname			
		Given Name		1	
		Initials			
DivS Client	Unstructured Name				
LDAP	Challenge Password			, 	
arvMP Setting					Reset Create and Download CSR
SVP Settings					
Power Capping function setting	Import Server Cer	rtificate			
Hitachi Compute Systems Manager Setting	Use this section to import a	a server certificate crea	ated from a CSR down	loaded.	
Hi-Track Setting	Format	6	PEM ODER		
La Line Collins	Certificate to Import Browse				Browse
Launch Romoto Concolo					Import Server Certificate
Remote Console					
	Download Server	Certificate			
	Use this section to download	d the server certificate	e currently used.		
	Format	6	PEM CDER		
					Download Server Certificate

The following table shows description of menu items in the window.

Menu items		Description	
Ser	ver Certificate Information		
Ref	resh button	Refreshes user account information.	
Ver	sion	Displays the version of a server certificate.	
Ser	ial Number	Displays a serial number.	
Pub	lic key Algorithm and key Size	Displays information on public key.	
Vali	dity (Not Before)	Displays a start date of validity period.	
Vali	dity (Not After)	Displays an end date of validity period.	
Issu	ier		
	Common Name (CN)	Displays information on common names (CN).	
Sub	ject		
	Country Name (C)	Displays information on a target of issuance	
	State or Province Name (ST)		
	Locality Name (L)		
	Organization Name (O)		
	Organizational Unit Name (OU)		
	Common Name (CN)		
	Email Address		
	DN Qualifier		
	Surname		
Given Name			
	Initials		
SHA	A1 fingerprint	Displays SHA1 fingerprint information.	

# Table 5-19: SSL Server menu items

Menu items		Description				
Create Self-signed Certificate						
Public key Algorithm and key Size		Selects information on public key.				
Sub	Subject					
_	Country Name (C) <sup>1</sup>	Entry country name. You can enter upper-case 2 alphabets.				
	State or Province Name (ST) $^{\rm 1}$	Entry state or province name (ST), locality name (L),				
	Locality Name (L) $^1$	You can specify 1 to 60 alphanumeric characters and				
_	Organization Name (O) $^1$	symbols <sup>2</sup> .				
	Organizational Unit Name (OU) $^{\rm 1}$					
-	Common Name (CN)	Entry common name (CN). You can specify 1 to 60 alphanumeric characters including a hyphen (-) and a period (.).				
	Email Address <sup>1</sup>	Entry Email address. You can enter an ASCII character string of up to 60 characters.				
	DN Qualifier <sup>1</sup>	Entry DN qualifier, surname and given name.				
	Surname <sup>1</sup>	You can enter 1 to 60 alphanumeric characters and symbols <sup>-</sup> .				
	Given Name <sup>1</sup>					
	Initials <sup>1</sup>	Entry initials. You can enter 1 to 30 alphanumeric characters and symbols <sup>2</sup> .				
Rese	et button	Disables what you edited in <b>Server Certificate Information</b> column, and returns to the status before editing.				
Crea	ate Self-signed Certificate button	Enables what you edited in <b>Server Certificate Information</b> column, and goes to the confirming window.				
Crea	ate CSR					
Publ	ic key Algorithm and key Size	Selects information on public key.				
Forr	nat	Selects the format of CSR to be downloaded.				
_	Country Name (C) <sup>1</sup>	Entry country name. You can enter upper-case 2 alphabets.				
	State or Province Name (ST) $^{\rm 1}$	Entry state or province name (ST), locality name (L),				
	Locality Name (L) $^1$	You can specify 1 to 60 alphanumeric characters and				
	Organization Name (O) $^1$	symbols <sup>2</sup> .				
	Organizational Unit Name (OU) $^{\rm 1}$					
	Common Name (CN)	Entry common name (CN). You can specify 1 to 60 alphanumeric characters including a hyphen (-) and a period (.).				
	Email Address <sup>1</sup>	Entry Email address. You can enter an ASCII character string of up to 60 characters.				
Ī	DN Qualifier <sup>1</sup>	Entry DN qualifier, surname and given name.				
Ī	Surname <sup>1</sup>	You can enter 1 to 60 alphanumeric characters and symbols <sup>2</sup> .				
Ī	Given Name <sup>1</sup>					
	Initials <sup>1</sup>	Entry initials. You can enter 1 to 30 alphanumeric characters and symbols <sup>2</sup> .				

Menu items	Description			
Unstructured Name <sup>1</sup>	You can specify 1 to 60 alphanumeric characters and symbols <sup>2</sup> .			
Challenge Password <sup>1</sup>	You can specify 1 to 30 alphanumeric characters and symbols <sup>2</sup> .			
Reset button	Disables what you edited in <b>Create CSR</b> column, and returns to the status before editing.			
Create and Download CSR button	Enables what you edited in <b>Create CSR</b> column, and goes to the confirming window.			
Import Server Certificate				
Format	Selects the format of a server certificate to be imported.			
Certificate to Import	Specifies a server certificate file.			
Import Server Certificate button	Goes to the confirming window to imports the server certificate file specified in <b>Certificate to Import</b> .			
Download Server Certificate				
Format	Selects the format of a server certificate to be downloading.			
Download Server Certificate button	Downloads a registered server certificate in the format specified in <b>Format</b> .			
Notes:				
1 This Item is omissible.				
2 The following symbols can be used: Blank symbol, '(apostrophe), - (hyphen), , (comma), = (equal), / (slash), () (parentheses), . (period), : (colon), + (plus), and ? (question)				

If you change **Create Self-signed Certificate** items, click **Create Self-signed Certificate** to go to confirming window. And then, click **Confirm** to save the change settings.

If you change **Create CSR** items, click **Create and Download CSR** to go to confirming window. And then, click **Confirm** to save the change settings.

If you select an importing server certificate file, click **Import Server Certificate** to go to confirming window. And then, click **Confirm** to perform the file importation.

# **DNS Client Settings menu**

Click **Server Settings** from the top tab, and then click **DNS Client** in the left pane. The following window is displayed.

Hitachi Compute Rack family			
Server Name: CR210-ESD000	0123456 Username: user01 Previ	ous Login: Thu Feb 16 10:05:14 2012	Logout
Server Operation	Server Settings Maintena	nce Logs	
Language Settings	DNS Client Settings		@Refresh
Asset Information			
Network Settings	DNS Client Settings		
Services Configuration	This section is for DNS client settings		
User Accounts	DNS Server IP Address1	192.168.0.101	]
IPMI Ovar LAN Sattings	DNS Server IP Address2	0.0.0.0	
BMC Date and Time	DNS Server IP Address3	0.0.0.0	
Remote KVM			Reset Modify
SSH Server			
SSL Server			
DNS Client			
LDAP			
SNMP Setting			
SVP Settings			
Power Capping function setting	E Contraction of the second		
<u>Hitachi Compute Systems</u> <u>Manazer Setting</u>			
Hi-Track Setting			
Launch Remote Console			

The following table shows description of menu items in the window.

Menu items	Description		
Refresh button	Refreshes information.		
DNS Server IP Address1	Used to enter an IP address for DNS server.		
DNS Server IP Address2	Up to three IP addresses for DNS server can be set, each of which		
DNS Server IP Address3	is used beginning at the top. If you do not set second and third DNS servers, enter "0.0.0.0".		
	If you do not use DNS, set all of three IP addresses to "0.0.0.0".		
Reset button	Disables what you edited, and returns to the status before editing.		
Modify button	Enables what you edited, and goes to the confirming window.		

#### Table 5-20: DNS Client Settings menu items

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

# LDAP menu

Click **Server Settings** from the top tab, and then click **LDAP** in the left pane. The following window is displayed.

Hitachi Compute Rack family			HITACH	
Server Operation S	erver Settings	Maintenance	Logs	Logout
Language Settings	LDAP			GRefresh
Asset Information				
Network Settings	LDAP			
Services Configuration	Use this section to co	enfigure LDAP user authe	intication.	
User Accounts	User Authentica	tion Method	©Do not use LDAP user authentication. CWhen local user authentication fails, do LDAP user authentication.	
IPMI Over LAN Settings	LDAP Server 1		192.168.0.129	
BMC Date and Time	LDAP Server 2		192.168.0.130	
Remote KVM	LDAP Server 3		192.168.0.131	
SSH Server	Port Number		636	
SSL Server	Bind DN		1234	
DNS Client	Bind Password		•••••	
LDAP	Bind Password (	Confirm)	•••••	
SNMP Setting	Base DN		cn=Users,dc=example,dc=local	
SVP Settings	Attribute for Log	in ID	sAMAccountName	
Power Capping function setting	Attribute for Rol	e	test	
Hitachi Commta Systems	Attribute for Gro	up Member	member	
Manager Setting	Group DN 1		12345	
Hi-Track Setting	Group DN 2		12345	
Laugah	Group DN 3		12345	
Remote Console	Group DN 4		12345	
	Group DN 5		12345	
				Reset Modify

The following table shows description of menu items in the window.

Menu items	Description		
Refresh button	Refreshes information.		
User Authentication Method	Sets a user authentication method using LDAP.		
	• Do not use LDAP user authentication. A set user account is used for user authentication.		
	<ul> <li>When local user authentication fails, do LDAP user authentication.</li> <li>A set user account is used for user authentication. If the user authentication is not successful, a user account for LDAP server is used for user authentication.</li> </ul>		
LDAP Server 1 LDAP Server 2 LDAP Server 3	Specifies an LDAP server using an IP address or FQDN (up to 127 characters).		
Port Number	Specifies a destination port number as a decimal number (1 to 65535).		
Bind DN	Specifies DN used when binding to an LDAP server (up to 256 characters). If nothing is entered, Anonymous bind is specified.		
Bind Password	Specified a password used when binding to an LDAP server (up to 32 characters). If nothing is entered, no password is used.		
Bind Password (Confirm)	Used to enter confirmation of a bind password.		
Base DN	Specifies basic DN for user search (up to 256 characters).		
Attribute for Login ID	Specifies a user entry attribute used as a login ID (up to 64 characters).		
Attribute for Role	Specifies a user entry attribute in which a character string representing a role is embedded (up to 64 characters).		
Attribute for Group Member	Specifies a group entry attribute that represents user membership (up to 64 characters).		
Group DN 1 Group DN 2 Group DN 3 Group DN 4	Specifies DN of a group authorized for login (up to 256 characters). If no DN is entered, no group authentication is performed.		
Group DN 5			
Reset button	Disables what you edited, and returns to the status before editing.		
Modify button	Enables what you edited, and goes to the confirming window.		

#### Table 5-21: LDAP menu items

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

# **SNMP settings menu**

Click **Server Settings** from the top tab, and then click **SNMP Setting** in the left pane. The following window is displayed.

naem oompu	е наск татшу		HITACI
rver Name: CR210-ESD0000	0123456 Username: user01 F	revious Login: Thu Feb 16 10:05:14 2012	Logout
Server Operation	Server Settings Main	tenance Logs	
Language Settings	SNMP settings		Ledit Setting
Asset Information	-		
Network Settings	The settings of SNME	Agent	
Services Configuration	You can use this window to confi	gure SNMP agent.	
User Accounts	SNMP Agent Function	Valid	
	System Contact Name	192.168.48.192	
IPMI Over LAN Settings	System Location	SystemLocation	
BMC Date and Time	Port number	161	
Remote KVM	Trap level	All	
SSH Server	SNMP version	v1/v2c	
007 0			
dol: der ver	The settings of SNM	? Manager	
DNS Client	This window displays the SNMP	manager settings.	
LDAP	Manager 0		
SNMP Setting	SNMP version	v3	
SVP Settions	IP address/host name	192.168.48.193	
	Port number	162	
Power Capping function setting	User Name	TesrUserUI	
Hitachi Compute Systems Manager Satting	Access type Manager 1	noAuthnoPnv	
Manager Setting	SNMP version	23	
Hi-Track Setting	IP address/host name	192 168 48 194	
Launch	Port number	162	
emote Console	User Name	TestUser02	
	Access type	AuthnoPriv	
	Authentication type	MD5	
	Authentication password	(Hide)	
Services Configuration	Manager 2		
User Accounts	SNMP version	v3	
IPMI Over LAN Settings	IP address/host name	192.168.48.195	
PMC Data and Time	Port number	162	
DATE Date and Thine	User Name	TestUser03	
Remote KVM	Access type	AuthPriv	
SSH Server	Authentication type	MD5	
SSL Server	Authentication password	(Hide)	
DNS Client	Encryption type	DES	
and solution	Encryption password	(risde)	
LDAP	SNMP version	v1/v2c	
SNMP Setting	IP address/host name	192.168.48.196	
SVP Settings	Port number	162	
Power Canning function entring	Community Name	TestUser04	
	MIB Information		
Hitachi Compute Systems Manager Setting	MIB Information.		
Hi Teach Satting	Revision	00-00-01	
ANT A FACK OFTIME			
Launch	Operation		
Remote Console	Download MIB file		
	Downloads the MIB file.		
			Download
	Send SNMP trap		
	Send a SNMP test trap.		

The following table shows description of menu items in the window.

Menu items		Description			
Ref	resh button	Refreshes information.			
Edit Setting button		Goes to the edit settings window.			
The	The settings of SNMP Agent				
SNN	1P Agent Function	Displays enable or disable the SNMP agent.			
Sys	tem Contact Name	Displays system administrator's contact information.			
Sys	tem Location	Displays a system installation site.			
Por	number	Displays a port number that the SNMP uses.			
Tra	o level	<ul> <li>Displays a trap notification level.</li> <li>Disable: Disables every trap notification.</li> <li>Alert: Enables an alert trap notification.</li> <li>Information: Enables an information trap notification.</li> <li>All: Enables every trap notification</li> </ul>			
SNN	1P version	Displays an SNMP version that the SNMP agent uses. You can choose <b>v1/v2c</b> or <b>v1/v2c/v3</b> .			
Engine ID string <sup>1</sup>		Sets a character string for creating an engine ID that is used by the SNMP agent (1 to 27 lowercase alphanumeric characters and symbols).			
Eng	ine ID <sup>1</sup>	Represents an engine ID that is used by the SNMP agent and created from a character string for creating an engine ID.			
The	The settings of SNMP Manager				
Manager 0, Manager 1, Manager 2, Manager 3		2, Manager 3			
	SNMP version	Displays an SNMP version that the SNMP manager uses. You can choose <b>v1/v2c</b> or <b>v3</b> .			
	IP address/host name	Displays an IP address for the SNMP manager.			
	Port number	Displays a port number a trap notification destination for the SNMP manager.			
	Community Name <sup>2</sup>	Displays a community name for the SNMP manager.			
	User Name <sup>3</sup>	Displays a user name for the SNMP manager.			
	Access type <sup>3</sup>	Displays an access type for the SNMP manager. You can choose <b>noAuthnoPriv, AuthnoPriv</b> or <b>AuthPriv</b> .			
	Authentication type <sup>4</sup>	Displays an authentication type for the SNMP manager. You can choose <b>MD5</b> or <b>SHA</b> .			
	Authentication password <sup>4</sup>	Displays an authentication password for the SNMP manager.			
	Encryption type <sup>5</sup>	Displays an encryption type for the SNMP manager. You can choose <b>DES</b> or <b>AES</b> .			
	Encryption password <sup>5</sup>	Displays an encryption password for the SNMP manager.			
MIB	MIB Information				
	Revision	Displays a revision of the MIB file.			

# Table 5-22: SNMP settings menu items

Menu items	Description			
Operation				
Download button	Goes to the save window to downloads a MIB file.			
Send button	Sends a SNMP test file.			
Notes:				
1 This item is displayed when <b>SNMP version</b> in <b>The settings of SNMP Agent</b> is set <b>v1/v2c/v3</b> .				
2 This item is displayed and enabled when <b>SNMP version</b> in <b>The settings of SNMP Manager</b> is set <b>v1/v2c</b> .				

- 3 This item is displayed and enabled when **SNMP version** in **The settings of SNMP Manager** is set **v3**.
- 4 This item is displayed and enabled when SNMP version and Access type in The settings of SNMP Manager are each set v3 and Authnopriv or Authpriv.
- 5 This item is displayed and enabled when **SNMP version** and **Access type** in **The settings of SNMP Manager** are each set **v3** and **Authpriv**.

If you want to change settings, click **Edit Setting** to go to following editing window.

Itachi Compute	e Rack family		HITACH		
rver Name: CR210-ESD000012	23456 Username: user01 Previ	ous Login: Thu Feb 16 10:05:14 2012	Logout		
Server Operation Ser	rver Settings Maintena	ace Logs			
Language Settings	SNMP softings				
Asset Information	SINAL Settings				
Network Settings	The settings of SNMP Agent				
Services Configuration	You can use this window to configure !	NMP agent.			
User Accounts	SNMP Agent Function	Valid 💌			
IPMI Over LAN Settings	System Contact Name	192.168.48.192			
BMC Date and Time	System Location	SystemLocation			
Remote KVM	Port number	161			
SSH Server	Trap level	Ali			
SSL Server	SNMP version	v1/v2c 💌			
DNS Client					
DAP	The settings of SNMP M	anager			
NMP Setting	This window displays the SNMP mana Manager 0	ger settings.			
VP Settings	SNMP version	v3 <b>•</b>			
Power Capping function setting	IP address/host name	192.168.48.193			
Hitachi Compute Systems	Port number	162			
Aanager Setting	User Name	TesrUser01			
fi-Track Setting	Access type	noAuthnoPriv -			
Launch	To remove this setting.	·			
note Console	Manager 1				
	SNMP version	v3 <u>•</u>			
	IP address/host name	192.168.48.194			
	Port number	162			
	User Name	TestUser02			
	Assess tree	Authora Drive 💌			
BMC Date and Time	Autors type				
lemote KVM	Authentication type				
<u>SH Server</u>	Authentication password	•••••			
<u>ISL Server</u>	Manager 2				
DNS Client	SNMP version	V3 V			
<u>.DAP</u>	IP address/host name	192.168.48.195			
NMP Setting	Port number	162			
VP Settings	User Name	TestUser03			
ower Capping function setting	Access type	AuthPriv 💌			
stachi Compute Systems Ianager Setting	Authentication type	MD5 💌			
ii-Track Setting	Authentication password	•••••			
	Encryption type	DES •			
Launch mote Console	Encryption password	******			
2010010	To remove this setting.				
Contractor official	Manager 3				
Hi-Track Setting	SNMP version	v1/v2c •			
Launch	IP address/host name	192.168.48.196			
emote Console	Port number	162			
	Community Name	TestUser04			
	To remove this setting.				
			Back Modify		

Menu items		Description		
The settings of SNMP Agent				
SNN	1P Agent Function	Enables or disables the SNMP agent.		
Sys	tem Contact Name	Sets system administrator's contact information (up to 60 lower-case alphanumeric characters).		
Sys	tem Location	Sets a system installation site (up to 60 lower-case alphanumeric characters).		
Port	number	Sets a port number that the SNMP uses (1 to 65535).		
Tra	o level	<ul><li>Sets a trap notification level.</li><li>Disable: Disables every trap notification.</li></ul>		
		Alert: Enables an alert trap notification.		
		• Information: Enables an information trap notification.		
		All: Enables every trap notification.		
SNN	1P version	Sets an SNMP version that the SNMP agent uses. You can choose <b>v1/v2c</b> or <b>v1/v2c/v3</b> .		
Eng	ine ID string <sup>1</sup>	Sets a character string for creating an engine ID that is used by the SNMP agent (1 to 27 lowercase alphanumeric characters and symbols).		
Eng	ine ID <sup>1</sup>	Represents an engine ID that is used by the SNMP agent and created from a character string for creating an engine ID.		
The	settings of SNMP Manager			
Manager 0, Manager 1, Manager 2		2, Manager 3		
	SNMP version	Sets an SNMP version that the SNMP manager uses. You can choose <b>v1/v2c</b> or <b>v3</b> .		
	IP address/host name	Sets an IP address for the SNMP manager.		
	Port number	Sets a port number a trap notification destination for the SNMP manager (1 to 65535).		
	Community Name <sup>2</sup>	Sets a community name for the SNMP manager (up to 60 lowercase alphanumeric characters and symbols).		
	User Name <sup>3</sup>	Sets a user name for the SNMP manager (1 to 31 lowercase alphanumeric characters and symbols).		
	Access type <sup>3</sup>	Sets an access type for the SNMP manager. You can choose <b>noAuthnoPriv, AuthnoPriv</b> or <b>AuthPriv</b> .		
	Authentication type <sup>4</sup>	Sets an authentication type for the SNMP manager. You can choose <b>MD5</b> or <b>SHA</b> .		
	Authentication password <sup>4</sup>	Sets an authentication password for the SNMP manager (8 to 64 lowercase alphanumeric characters and symbols).		
	Encryption type <sup>5</sup>	Sets an encryption type for the SNMP manager. You can choose <b>DES</b> or <b>AES</b> .		
	Encryption password <sup>5</sup>	Sets an encryption password for the SNMP manager (8 to 64 lowercase alphanumeric characters and symbols).		

# Table 5-23: SNMP settings > Edit Setting menu items

	Menu items	Description				
N	Notes:					
1	This item is displayed when SN	IMP version in The settings of SNMP Agent is set v1/v2c/v3.				
2	This item is displayed and enabled when <b>SNMP version</b> in <b>The settings of SNMP Manager</b> is set <b>v1/v2c</b> .					
3	This item is displayed and enab <b>v3</b> .	led when SNMP version in The settings of SNMP Manager is set				
4	This item is displayed and enabled when SNMP version and Access type in The settings of SNMP Manager are each set v3 and Authnopriv or Authpriv.					
5	This item is displayed and enable <b>SNMP Manager</b> are each set	oled when SNMP version and Access type in The settings of v3 and Authpriv.				

If you change setting, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

# **SVP Settings menu**

Click **Server Settings** from the top tab, and then click **SVP Setting** in the left pane. The following window is displayed.

er Name: CR210-ESD0000	0123456 Username: user01 Previ	ous Login: Thu Feb 16 10:05:14 201	2	Log
erver Operation	Server Settings Maintena	nce Logs		
anguage Settings	SVP Settings			( Refre
aset Information				
letwork Settings	Set up SVP alert destinati	ion settings		
ervices Configuration	Set up the address that SVP alert is rep	orted to.		
ser Accounts		Destination Name	TestSVP01	
PMI Over LAN Settings	Destination address1	IP address	192.168.0.113	
MC Date and Time		Alert Port	5555	
amota KVM		Destination Name	TestSVP02	
	Destination address2	IP address	192.168.0.114	
in server		Alert Port	5556	
iL Server		Destination Name	TestSVP03	
<u>NS Client</u>	Destination address3	IP address	192.168.0.115	
DAP		Alert Port	5557	
MP Setting		Destination Name	TestSVP04	
/P Settings	Destination address4	IP address	192.168.0.116	
ower Capping function setting		Alert Port	5558	_
itachi Compute Systems Ianazer Setting				Reset Modify
Track Satting				
Parask second	SVP alert notification sett	ings		
Launch	This Section is for setting notification	of the SVP Alert.		
note Console	CVD Alors Node and an	⊙Alert CInformation CAll	Disable	
	SVF Alert Notification			Reset Modify

The following table shows description of menu items in the window.

Menu items		Description	
Refresh button		Refreshes information.	
Set	up SVP alert destination s	settings	
Des	tination address1, Destination	address2, Destination address3, Destination address4	
	Destination Name	Sets a name to SVP alert notification destination.	
	IP address	Sets an IP address to SVP alert notification destination.	
	Alert Port	Sets a port number to SVP alert notification destination.	
Reset button		Disables what you edited in <b>Set up SVP alert destination</b> <b>settings</b> column, and returns to the status before editing.	
Modify button		Enables what you edited in <b>Set up SVP alert destination</b> <b>settings</b> column, and goes to the confirming window.	
SVP	alert notification setting	gs	
SVF	Alert Notification	Sets an SVP alert notification level.	
		• Alert: Notifies an alert of caution, warning or failure level.	
		• Information: Notifies an alert of information level.	
		• All: Notifies an alert of every level.	
		• <b>Disable</b> : Notifies no alert.	
Reset button		Disables what you edited in <b>SVP alert notification settings</b> column, and returns to the status before editing.	
Modify button		Enables what you edited in <b>SVP alert notification settings</b> column, and goes to the confirming window.	

## Table 5-24: SVP Settings menu items

If you change settings, click each **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

# **Electric Power Setting**

Click **Server Settings** from the top tab, and then click **Power Capping function setting** in the left pane. The following window is displayed.

Hitachi Compute Rack family					
Server Name: CR210-ESD0000	123456 Usernam		Logout		
Server Operation S	erver Settings	Maintenance	Logs		
Language Settings	Electric P	ower Setting			CRefresh
Asset Information	-				
Network Settings	Electric Po	wer Setting			
Services Configuration	Mode Setting		ODCMI mode ODynamic capping mode	ODisable	
User Accounts	Intake Tempe	rature	Failed to retrieve the value.		
TPMI Over LAN Settings	Current elect	ricity	98 W		
D.(0.D.) (7)	Record-high e	lectricity	340 W		
DAIC Date and Time	Record-averag	ge electricity	129 W	1	
Remote KVM	Consumption	electricity upper limit set point	100	W	
SSH Server					Reset Modify
SSL Server					
DNS Client					
LDAP					
en an					
action setting					
SVP Settings					
Power Capping function setting					
<u>Hitachi Compute Systems</u> <u>Manager Setting</u>					
Hi-Track Setting					
Launch Remote Console					

The following table shows description of menu items in the window.

Menu items	Description
Refresh button	Refreshes information.
Mode setting	Sets a power saving mode.
	• <b>DCMI mode</b> : Electric power is controlled by the DCMI command. When sets DCMI mode, application software to use DCMI command is required.
	• <b>Dynamic capping mode</b> : Enables the dynamic power capping.
	• <b>Disable</b> : Disables the DCMI command and the dynamic power capping.
Intake Temperature	Displays an intake temperature.
Current electricity	Displays current power consumption.
Record-high electricity	Displays highest power consumption after <b>Mode setting</b> or <b>Consumption electricity upper limit set point</b> item is set (changed).
Record-Average electricity	Displays a mean power consumption after <b>Mode setting</b> or <b>Consumption electricity upper limit set point</b> item is set (changed).
Consumption electricity upper limit set point	Sets an upper limit of power consumption.
Reset button	Disables what you edited, and returns to the status before editing.
Modify button	Enables what you edited, and goes to the confirming window.

#### Table 5-25: Electric Power Setting menu items

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

## **Consumption electricity upper limit set point**

For the power capping function, when you set **Consumption electricity upper limit set point** to too low value, the CPU performance may be lowered constantly due to the state of being active for the power capping. In this state, it can not control the actual power consumption to less than or equal to the **Consumption electricity upper limit set point** setting value.

When you set a value equal to or greater than the maximum power consumption of the system unit for **Consumption electricity upper limit set point**, the power capping function will not work.

Therefore, you can use the power capping function effectively when set a **Consumption electricity upper limit set point** as follows:

Maximum power consumption of the system unit ≥
Setting value of **Consumption electricity upper limit set point** ≥
Maximum power consumption of the system unit Maximum value of the power consumption that can be suppressed by power capping

 Setting value of Consumption electricity upper limit set point ≥ Maximum power Consumption of the system unit -Maximum value of the power Consumption that can be suppressed by power capping

If this condition is not satisfied, the power saving function can work using the power capping, but the actual power consumption may exceed the setting of **Consumption electricity upper limit set point**.

Maximum power consumption of the system unit ≥
 Setting value of Consumption electricity upper limit set point

If this condition is not satisfied, the actual power consumption does not exceed the setting of **Consumption electricity upper limit set point**, but the power saving function does not have effect.

#### Maximum power consumption of the system unit

When estimating the system unit, refer to the specification of the system unit for the maximum power consumption of the system unit.

However, the power consumption of the system unit is dependent upon the operating environment (such as temperature) and running program on the system unit.

In order to make fine adjustments, we recommend you that check the maximum power consumption of system unit by trial operation in an environment that uses the system unit.

Maximum power consumption of the system unit can be found in the following procedure.

- 1. **Power Capping Function Setting > Mode setting** set to **Disable**.
- 2. Continuous operation under the maximum load condition in the system unit.
- 3. Check the value of **Power Capping Function Setting** > **Record-High** electricity.

The power consumption of the system unit may increase due to the rotational speed of FAN increased dependent upon the operating environment. You should check the value of **Power Capping Function Setting** in the environment that the temperature is near the actual temperature.

# Maximum value of the power consumption that can be suppressed by power capping

The degree of suppression of power consumption is different depends on the model of the system unit, the CPU type of the mounted on the system unit, and the load condition of the program running on the system unit.

Approximate of the maximum value of the power consumption that can be suppressed are as follows:

# Table 5-26: Approximate of the maximum value of the power consumptionthat can be suppressed

CPU type	CPU type Clock speed power consumption that can be supp (approximate of the maximum val		nat can be suppressed e maximum value)*
		1 CPU	2 CPU
Xeon processor E5-2470	2.30 GHz	60 W	120 W
Xeon processor E5-2440	2.40 GHz	50 W	100 W
Xeon processor E5-2420	1.90 GHz	20 W	40 W
Xeon processor E5-2403	1.80 GHz	10 W	20 W
Xeon processor E5-2430L	2 GHz	25 W	50 W

 $\ast~$  Power consumption that can be suppressed shows the values based on the measurement result of the model.

Power consumption that can be suppressed includes the effect that the power consumption of the peripheral circuit is reduced by reduced the power consumption of CPU.

# Hitachi Compute Systems Manager Setting menu

Click **Server Settings** from the top tab, and then click **Hitachi Compute Systems Manager Setting** in the left pane. The following window is displayed.

er Name: CR210-ESD0000	E HACK IAIIIIIY 123456 Username: user01 Previous	Login: Fri Dec 21 11:38:49 2012		
erver Operation	erver Settings Maintenance	Logs		
Language Settings	Hitachi Compute Syste	ms Manager Setting		GRefresh
Asset Information				
Vetwork Settings	Management Server Setting	<b>;</b>		
Services Configuration	Management Server Count	4		
User Accounts		Entry Number	0	
PMI Over LAN Settings		Server Name	TestServerA	
3MC Date and Time		IP Address	192.168.0.214	
lamota KVM		Alert Port Number	26119	
	Management Server1 Infomation	Notice of Alert Policy	Information, Warning and Failure	
on server		Alert Retry Interval(s)	120	
<u>SL Server</u>		Alert Retransmission Duration	10	
INS Client		(min) Connection Status	Unconnect	
DAP		Entry Number	1	
NMP Setting		Server Name	TestServerB	
SVP Settings	atting Management Server2 Infomation	IP Address	192 168 0 215	
Power Capping function setting		Alart Port Number	22611	
<u>Titachi Compute Systems</u> Managar Satting		Notice of Alert Policy	Information, Warning and Failure	
Teach Satting		Alert Retry Interval(s)	120	
II-ITACK OWITING		Alert Retransmission Duration	10	
Launch Remote Console		Connection Status	Unconnect	
		Entry Number		
Remote KVM		Server Name	TestServerC	
ISH Server		IP Address	192.168.0.172	
SSL Server		Alert Port Number	22611	
DNS Client	Management Server3 Infomation	Notice of Alert Policy	Information, Warning and Failure	
LDAP		Alert Retry Interval(s)	120	
SNMP Setting		Alert Retransmission Duration	10	
SVP Settings		(min) Connection Status	Unconnect	
Power Capping function setting		Entry Number		
Hitachi Compute Systems		Server Name	TestServerD	
Statiager Setting		IP Address	192.168.0.173	
		Alert Port Number	22611	
fi-Track Setting	Management Server4 Infomation		Information, Warning and Failure	
Launch	Management Server4 Infomation	Notice of Alert Policy		
Launch Remote Console	Management Server4 Infomation	Notice of Alert Policy Alert Retry Interval(s)	120	
He-Track Satting Launch Remote Console	Management Server4 Infomation	Notice of Alert Policy Alert Retry Interval(s) Alert Retransmission Duration	120	

The following table shows description of menu items in the window.

Menu items		Description
Ref	resh button	Refreshes information.
Management server Count		Displays the number of Hitachi Compute Systems Manager (HCSM) servers.
Mai Mai	nagement server1 Information nagement server3 Information	, Management server2 Information, , Management server4 Information
	Entry Number	Displays a registration number.
	Server Name	Sets a server name.
	IP Address*	Used to enter an IP address.
	Alert Port Number	Sets a port number to be used.
	Notice of Alert Policy	Sets an alert policy.
		• <b>Do not notify</b> : Issues no alert notification.
		Only Failure:     Notifies an alert of failure level
		<ul> <li>Warning and Failure: Notifies an alert of warning or failure level.</li> </ul>
		<ul> <li>Information, Warning and Failure: Notifies an alert of information, warning or failure level</li> </ul>
	Alert Retry Interval(s)	Sets an alert retry interval within an allowable range from 60 to 240 seconds.
	Alert Retransmission Duration(min)	Sets an alert retry duration time within an allowable range from 4 to 15 minutes.
	Connection Status	Displays the HCSM server connection status.
Reset button		Disables what you edited, and returns to the status before editing.
Мо	dify button	Enables what you edited, and goes to the confirming window.
<ul> <li>If you forcibly disconnect HCSM server because 0.0.0.0 to this IP address item. In this case, other information of the HCSM server</li> </ul>		A server because of HCSM connection problem reason, you set n. of the HCSM server is also cleared.

# Table 5-27: Hitachi Compute Systems Manager Setting menu items

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

Tip	•	Only when the Connection Status is "Unconnect", you can change Management server Information each setting.
	•	VMware vSphere ESXi regards system BIOS time as UTC time, but CR 220S's BIOS manages internal time as local time.
		So the time of BIOS is changed to the time a difference of local time and the UTC slipped off (it is not local time) when you set time by vSphere Client after installing VMware vSphere ESXi.
		You can confirm the difference of time on BIOS setup screen.
		HCSM's Alert time and BMC Web console time also refer System BIOS time, so these times also have difference of time from VMware vSphere ESXi set time.

# **Hi-Track Setting menu**

Click **Server Settings** from the top tab, and then click **Hi-Track Setting** in the left pane. The following window is displayed.

Hitachi Compute Rack family					
Server Name: CR210-ESD0000122456 Username: user01 Previous Login: Thu Feb 16 10:05:14 2012 Logout					
Server Operation	Server Settings	Maintenance	Logs		
Language Settings	Hi-Track	Setting			<b>C</b> ≁Refresh
Asset Information					
Network Settings	Manageme	ent server Setting			
Services Configuration	Management	server Count	2		
User Accounts			Entry Number		
IPMI Over LAN Settings			Server Name	TestServerE	
P) (C Data and Time	Management	server1 Infomation	Language	System 💌	
Provens VID (			IP Address	192.168.10.100	
Nemote K.V.M			Port Number	5565	
SSH Server			Entry Number		
SSL Server			Server Name	TestServerF	
DNS Client	Management	server2 Infomation	Language	System 💌	
LDAP	-		IP Address	192.168.10.101	
SNMP Setting			Port Number	5566	
SVP Settings					Reset Modify
Power Capping function setting	78				
<u>Hitachi Compute Systems</u> Manager Setting					
Hi-Track Setting					
Launch Remote Console					

The following table shows description of menu items in the window.

Menu items		Description
Refresh button		Refreshes information.
Mar	nagement server Count	Displays the number of Hi-Track servers.
Mar	nagement server1 Information	, Management server2 Information
	Entry Number	Displays a registration number.
	Server Name	Sets a server name.
	Language	Sets a langue to be used.
		• <b>System</b> : Uses a language configured by the system unit.
		• English: Uses English.
		• Japanese: Uses Japanese.
	IP Address	Used to enter an IP address.
	Port Number	Sets a port number to be used.
Res	et button	Disables what you edited, and returns to the status before editing.
Мос	lify button	Enables what you edited, and goes to the confirming window.

Table 5-28: Hi-Track Setting menu items

If you change settings, click **Modify** to go to confirming window. And then, click **Confirm** to save the change settings.

# Maintenance

**Maintenance** tab enables you to update the firmware, backs up and restores the data that is managed by the firmware, and restarts BMC.

#### **BMC Firmware Management menu**

Click **Maintenance** from the top tab, and then click **BMC Firmware Management** in the left pane. The following window is displayed.

Hitachi Compu	te Rack fam	ily		HITACHI
Server Operation	Server Settings	Maintenance	Logs	Logout
ourier operation		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	and Bo	
BMC Firmware Management	BMC Firmwa	re Manager	ment	CRefresh
Backup Server Management	Dire I mini	a e manage		
Settings	BMC Firmwar	e Information		
Restore Server Management	This section shows BM	C firmware informati	on.	
Sectores	Base F/W		01-08	
Restart BMC	SDR Version		210Nxxt22	
Launch	Bank F/W		09-05	
Remote Console	Remote Console F	w	01-00	
	Logical SVP		01-00-01	
	Press "Update BMC Fir Uploading image file ne	e Update mware" button to upl reds a few minutes. Do	oad a image file. 2 not start other operation until upload is finished.	
	BMC F/W Image H	ïle	C:\Users\Administrator\Desktop\画面キャブチャ用ROM\sshl	Browse
	Update BMC Firm	vare		Update BMC Firmware

The following table shows description of menu items in the window.

Table 5-29: BMC Firmware Management menu items

Menu items	Description
Refresh button	Refreshes information.
Base F/W	Displays the version of base firmware.
SDR Version	Displays the SDR version.
Bank F/W	Displays the version of firmware.
Remote Console F/W	Displays the version of a remote console function.
Logical SVP	Displays the version of the logical SVP function.
Browse button	Specifies a BMC firmware image file to be uploaded.
Update BMC Firmware button	Uploads a specified image file. It takes a few minutes to upload the file. After the end of uploading, the confirming window is displayed.

If you want to update the BMC firmware, click **Browse** to select an image file. And then, click **Update BMC Firmware** to go to following the confirming window.

	Ite Hack fai	HITACI		
rver Operation	Server Settings	Maintenance	Logs	Logou
Launch	BMC Firm	ware Manageme	ent	
ore console	BMC Firmw	vare Update (Confirm	)	
	If "Confirm" button Updating BMC firm	n is pressed, the alternate ban nware needs several minutes. I	k is updated to the following BMC F/W and BMC is restarted with the updated F/W. Do not start other operation until firmware update is finished.	
	Base F/W	0	11-08	
	Bank F/W	0	19-05	
	Remote Consol	le F/W 0	11-00	
	Logical SVP	0	11-00-01	
				Back Confirm

Note

Confirm the information of updating firmware version, and then click **Confirm** to update the firmware.

Do not start other operation until firmware update is finished. Otherwise, updating firmware may not finish properly.

While a BMC firmware is updating, communication with the BIOS is shut off. Therefore, you must turn off the system unit before updating a BMC firmware. If the system unit does not boot after updating a BMC firmware, turn off the system unit, shut down the AC power by disconnecting the AC cable, wait 30 seconds or more, and then reconnect AC power and turn on the system unit.

After the updating is completed, BMC is restarted. Therefore, the system unit is logged out of the Web console and disconnected.

When BMC is restarted, the SERVICE LED on the system unit blinks about 30 to 60 seconds.

Wait until the SERVICE LED stops blinking, and then turn off the system unit.

Tip	•	Restarting the BMC terminates both Web console and Remote Console application, also disconnects from these services. The above services cannot be restart until restarting the BMC is finished.
	•	If you specify a BMC firmware image file which is not supported by the system unit, the BMC will be restarted without updating the firmware.

#### **Backup Management Settings menu**

Click **Maintenance** from the top tab, and then click **Backup Management Settings** in the left pane. The following window is displayed.

Hitachi Compute Rack family Hitachi Compute Rack family							
Server Operation Se	erver Settings	Maintenance	Log	5			Logout
BMC Firmware Management Backup Server Management	Backup Ma	anagement Sett	ings				
Settings Restore Server Management Settings	Backup Ma	nagement Settings nload Backup Data" button	is pressed, backup da	ita is created and downle	oaded.		
Restart BMC	Backup Manag	ement Settings				Create and Downloa	d Backup Data
Launch Remote Console							

#### Table 5-30: Backup Management Settings menu item

Menu items	Description
Create and Download Backup Data	Creates and downloads a backup data file.

If you want to update the BMC firmware, click **Create and Download Backup Data**. Following the dialog box is displayed.



Click **Save**. Following the window is displayed.



Select a saving location and then click **Save**.

Backup data is saved. When The **Download Complete** window is displayed, click **Close**.

### **Restore Server Management Settings menu**

Click **Maintenance** from the top tab, and then click **Restore Server Management Settings** in the left pane. The following window is displayed.

Hitachi Compute Rack family						
Server Name: CR210-ESD000	0123456 Username: 1	iser01 Previous Lo	gin: Thu Feb 16 10:0	5:14 2012	Logout	
Server Operation	Server Settings	Maintenance	Logs			
BMC Firmware Management	Restore Ser	ver Managen	ent Settings			
Backup Server Management		0	0			
Settings	Restore Serv	er Management S	iettings			
Restore Server Management	This section for resto	ring server management	settions			
Settings	Backup Data File		C:\Users\Adminis	rator\Desktop\management_backup	GO Browse	
Restart BMC	Second Second		10.1000104 10111110	ator besittop management_bacitap		
Laurah 1					Restore Server Management Settings	
Remote Console						

#### Table 5-31: Restore Server Management Settings items

Menu items	Description
Browse button	Specifies a backup data file downloaded in the <u>Backup</u> <u>Management Settings menu</u> .
Restore Server Management Settings	Uploads a specified backup data file and goes to the confirming window.

If you want to restore the Management Settings, click **Browse** to select a backup data file. And then, click **Restore Server Management Settings** to go to following the confirming window.

itachi Compute Rack family					
Server Operation	Server Settings	Maintenance	Logs	Logou	
BMC Firmware Management	Restore Server	r Managen	nent Settings		
Settings	Restore Server M	Janagement S	Settings (Confirm)		
Restore Server Management Settings	If "Confirm" button is pres BMC will be restarted when	ssed, server manage 1 restore is done.	ment settings is restoredusing the specified backup file.		
Restart BMC	Backup Data File		$management\_backup\_GQ\text{-}CR210HM\text{-}NDN\text{-}Y\_323aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$		
Launch				Back Confirm	
Remote Console					

Confirm the file information, and then click **Confirm**. Following the window is displayed.

oose file					?
Look in:	🝚 Local Disk	(C:)	•	000	
My Recent Documents	Documents a Intel Program File WINDOWS wmpub	and Settings			
My Documents					
My Computer					
My Network	File <u>n</u> ame:	bmcBackup		-	<u>O</u> pen
EN4					

Confirm the selected file, and then click **Open** to start restoring.

Tip ...

While a management setting is restored, communication with the BIOS is shut off. Therefore, you must turn off the system unit before restoring a management setting.

If the system unit does not boot after restoring a management setting, turn off the system unit, shut down the AC power by disconnecting the AC cable, wait 30 seconds or more, and then reconnect AC power and turn on the system unit.

After the restoring is completed, BMC is restarted. Therefore, the system unit is logged out of the Web console and disconnected.

When BMC is restarted, the SERVICE LED on the system unit blinks about 30 to 60 seconds.

Wait until the SERVICE LED stops blinking, and then turn off the system unit.



Restarting the BMC terminates both Web console and Remote Console application, also disconnects from these services. The above services cannot be restart until restarting the BMC is finished.

### **Restart BMC menu**

This window is available only with "ceconsl" users (users for maintenance work), and inaccessible to unauthorized personnel.

Logs

Logs tab enables you to download log taken by BMC.

# **Download Logs menu**

Click **Logs** from the top tab, and then click **Download Logs** in the left pane. The following window is displayed.

Hitachi Comput	e Rack family 123456 Username: user01 Previous Log	gin: Thu Feb 16 10:05:14 2012	HITACHI Logout
Server Operation S	Server Settings Maintenance	Logs	
Download Logs	Download Logs		
Launch Remote Console	Download Logs		
	I his section is for downloading logs.		Download Loge
	Download Dogs		Download Logs

#### Table 5-32: Download Logs menu item

Menu items	Description
Download Logs button	Downloads a log taken by BMC.

This log is used to investigate a hardware failure. Under normal operation, you do not need to take a log.
# **Exiting Web console**

• • • .

Tip .

If you changed any settings, perform the backup of Management settings before exiting the Web console. See <u>Backup Management Settings menu</u> on page 5-57.

By pressing **Logout** on the right of the window, you can log out of the Web console.



If you close the Web browser without logging out, the user login state will continue until the automatic logout is performed in 30 minutes. Therefore, if you repeat this action of closing the Web browser without logging out, you cannot log in to the Web console again until a lapse of 30 minutes. Before closing the Web browser, be sure to press **Logout** and log out of the Web console.

How to use the Web console (BMC version: 09-79 or lower)

How to use the Web console (BMC version: 09-79 or lower)

# 6

# Notice for setting up BMC network

This chapter describes the notice for setup of a BMC network.

□ <u>Types and settings of BMC network setup methods</u>

Notice for setting up BMC network

# Types and settings of BMC network setup methods

This section describes the types and settings of BMC network setup methods.

## **Types of BMC network setup methods**

The following two types of BMC network setup methods are available when you use the remote management functions:

- Setup by the system BIOS setup menu
- Setup by the Web console (Setup from the client by connecting to a BMC network according to initial network setup)

The following table lists the relationship between the main items of remote management function and the tools used for setup. The thick frame displays the tools recommended setting the function.

Particularly, multiple BMC network setup methods are available but we recommend that you adopt the same setup method as other setting items.

Function	Main active items	Methods tha	at can be set
Function	Main setup items	Web console	System BIOS
SVP Emulation <sup>1</sup>	BMC network setup	$\checkmark$	$\checkmark$
	SVP alert connection destination setting	$\checkmark$	-
	SVP alert notification level	$\checkmark$	-
	Detailed setting of error monitoring	$\checkmark$	-
Web console	BMC network setup	$\checkmark$	$\checkmark$
	Restrictions on connection destination address	$\checkmark$	-
	User account setup	$\checkmark$	-
Remote console	BMC network setup	$\checkmark$	$\checkmark$
	Mouse mode setup	$\checkmark$	-
	Restrictions on connection destination address	$\checkmark$	-
	User account setup	$\checkmark$	-
IPMI Over LAN	BMC network setup	$\checkmark$	$\checkmark$
	Restrictions on connection destination address	$\checkmark$	-

#### Table 5-1: Types of BMC network setup methods

F	Main anton items	Methods that	nt can be set
Function	Main setup items	Web console	System BIOS
Setup recovery when	BMC network setup	-	$\checkmark$
network connections are disabled	Restrictions on connection destination address	_	$\checkmark$
	User account setup	-	$\checkmark$
Notes:			
√ Available			
- N/A			
1 The SVP emulation function is a function that supports emulating on the BMC firmware, such as remote power supply control, power supply control scheduling, and remote failure monitoring.			

#### **BMC network settings**

Properly configure the BMC network settings (IP addresses, subnet masks and default gateway) according to your network environment.

For setting items, the following values are specifiable: The IP address of each setting tool is noted as a decimal number of IPv4's IP address.

• IP address

An IP address can be set within the range from 1.0.0.0 to 223.255.255.255, except the following addresses:

- An address whose value becomes all "1" when the host part is expressed in a binary number (Because overlapping with a broadcast address)
- An address whose value becomes all "0" when the host part is expressed in a binary number (Because overlapping with the network address)
- Addresses ranging from 127.0.0.0 to 127.255.255.255

If Windows systems exist within the same network, **do not use** any address whose low-order 8 bites become all "1" in binary notation, such as "xxx.xxx.**255**".

For example, if an IP address is "192.168.0.0" and a subnet mask is "255.255.252.0", this address cannot be used because a broadcast address becomes "192.168.3.**255**". Similarly, do not use such addresses as "xxx.xxx.0.255", "xxx.xxx.1.255", and "xxx.xxx.2.255".

Subnet mask

You can set a value having continuous mask bits in binary notation within the range from "255.0.0.0" to "255.255.255.255".

For instance, you cannot set 255.255.255.64 (binary notation: 1111 1111 1111 1111 1111 1111 0100 0000) because its mask bits are not successive.

Also, you cannot set any value not having two or more IP addresses which can be set at a specified host part (in a subnet).

No IP address for specifying a host cannot be assigned because both of a network address and a broadcast address are used.

• Default gateway

You can set a value which can be specified as an IP address existing in a network (subnet) defined by an IP address and a subnet mask.

For example, the following combinations cannot be set:

- An address not existing in a network (subnet) defined by an IP address and a subnet mask.
  - IP address 192.168.0.1
  - Subnet mask 255.255.255.0
  - Default gateway **192.168.10.20**

Because addresses that can be set within a subnet must range from 192.168.0.1 to 192.168.0.254.

- An address that cannot be set as an IP address
  - IP address 192.168.0.1
  - Subnet mask 255.255.255.0
  - Default gateway **192.168.0.255**

Because 192.168.0.255 is a broadcast address. Also 192.168.0.0 cannot set because it is a network address.

The setup tool does not always determine whether any value other than the above can be set if specified. If a wrong value is specified, however, the setup tool accepts such a value normally but the value is judged abnormal when you attempt to set it on the BMC side. The value may not be set normally.

If a BMC network does not work normally after setup, reconfirm the network setup with the setup tool and try to specify normal values.

# 7

# Software license

This chapter describes the license information of the software embedded into components of the system unit.

□ <u>Software license information</u>

Software license

# **Software license information**

Software embedded in this product consists of independent multiple pieces of software. Each of them is copyrighted by Hitachi, Ltd. or third parties.

The property rights and the intellectual property rights of software embedded in this product, which Hitachi, Ltd. itself has developed or created, are owned by Hitachi, Ltd. The property rights and the intellectual property rights of documents related to the software are owned by Hitachi, Ltd. Those are protected by the copyright and other laws.

This product uses the following open source software in compliance with each software license agreement as well as software developed or created by Hitachi, Ltd.

Embedded software	Software license agreement
XML_RPC	BSD-style License Refer to the next URL: http://xmlrpc-c.svn.sourceforge.net/viewvc/xmlrpc-c/ trunk/doc/COPYING?view=markup
Net-SNMP	BSD License Refer to the next URL: <u>http://www.net-snmp.org/about/license.html</u>

#### Table 7-1: BSD license

#### Table 7-2: GNU General Public License (GPL)

Embedded software	Software license agreement
Linux kernel U-Boot busybox iptables mii-tool gawk rsync liblzo cron ethtool logrotate mtd-utils e2fsprogs	GNU General Public License version 2 Refer to the next URL: <u>http://www.gnu.org/licenses/gpl-2.0.html</u>
zlib	zlib license Refer to the next URL: <u>http://www.zlib.net/zlib_license.html</u>

Embedded software	Software license agreement
openssl	OpenSSL License Refer to the next URL: <u>http://www.openssl.org/source/license.html</u>
openssh	BSD License Refer to the next URL: http://www.openbsd.org/cgi-bin/cvsweb/src/usr.bin/ssh /LICENCE?rev=HEAD
openldap	The OpenLDAP Public License Refer to the next URL: <u>http://www.openIdap.org/software/release/license.html</u>
pam_ldap	GNU LESSER GENERAL PUBLIC LICENSE Refer to the next URL: http://www.gnu.org/copyleft/lesser.html
perl	GNU General Public License/Artistic License Refer to the next URL: <u>http://dev.perl.org/licenses/</u>
netkit-tftp syslogd	BSD License Refer to the next URL: <u>http://www.freebsd.org/copyright/license.html</u>
stunnel	stunnel license Refer to the next URL: <u>https://www.stunnel.org/sdf_copying.html</u>
ntp ntpdate	NTP License Refer to the next URL: http://opensource.org/licenses/NTP

We provide you with source code of software licensed under the terms of the license, such as GNU General Public License (GPL), which says that we must distribute the source code, on CD-ROM/DVD-ROM by your request. Please take note that you will be charged for the media, shipping fee, and commission then. When you need to have source code media, check the BMC firmware version, jot it down, and contact your reseller to give them the version.

For the above open source software, consult your reseller.

Software license

# **SMASH**

This Appendix-A describes the functions of SMASH.

- □ <u>Overview</u>
- □ <u>Setting up SMASH</u>
- □ <u>SMASH-CLP</u>
- □ <u>WS-Management</u>
- □ <u>SMASH operation</u>
- □ <u>CIM classes, properties and methods</u>
- □ <u>Troubleshooting</u>

# **Overview**

This section overviews what SMASH is and what you can do with SMASH functions.

## What SMASH is

SMASH is a management standard tool for server hardware provided by DMTF.

#### What you can do with SMASH

You can use SMASH to perform operations including powering on or off a server system and referring to FRU information. Both SMASH-CLP and WS-Management are supported. See DMTF web site shown below for details about SMASH-CLP and WS-Management.

http://dmtf.org/

#### Operations

The following operations are available for SMASH with CR 220S.

#	Operation
1	Server System operation (Retrieving status, powering on/off and rebooting)
2	Retrieving processor status
3	Retrieving memory status
4	Retrieving power supply module status
5	Retrieving fan module status
6	Retrieving sensor information
7	Retrieving FRU information
8	Changing boot device
9	Retrieving account information
10	Restarting BMC

#### **Table A-1: SMASH Operations**

#### **Profiles**

SMASH can perform many types of operations defined by CIM profiles. CR 220S support the profiles in the following table. For details, see the following DMTF web site:

http://dmtf.org/standards/profiles

DSP#	Profile	Organization	Version
DSP1004	Base Server	DMTF	1.0.0 or later
DSP1006	SMASH Collections	DMTF	1.0.0 or later
DSP1007	SM CLP Admin Domain	DMTF	1.0.0 or later
DSP1009	Sensors	DMTF	1.0.0 or later
DSP1011	Physical Asset	DMTF	1.0.0 or later
DSP1012	Boot Control	DMTF	1.0.0 or later
DSP1013	Fan	DMTF	1.0.0 or later
DSP1015	Power Supply	DMTF	1.0.0 or later
DSP1018	Service Processor	DMTF	1.0.0 or later
DSP1022	CPU	DMTF	1.0.0 or later
DSP1026	System Memory	DMTF	1.0.0 or later
DSP1033	Profile Registration	DMTF	1.0.0 or later
DSP1034	Simple Identity Management	DMTF	1.0.0 or later

#### Table A-2: Supported CIM Profiles

# Setting up SMASH

This section describes how to set up SMASH before starting to use it.

### **Setting user account**

Configure user accounts to operate the server system remotely. Privileges to operate the server system, validity, username and password can be configured for each user account.

Give the roles of "Login" and "SMASH CLP" to a user account that you wish to use the SMASH.

For details, see <u>Setting user account</u>.

# **Enabling ports for SMASH**

After setting up a user account, set up a port for SMASH. For details of how to enable ports.

Set the **WS-MAN** > **Use** > **Enable** on **Security and Service**". For details, see <u>Security and Service</u>.



WS-Management and SMASH-CLP default port number are as following.

- SMASH (WS-Management) to its default (5986).
- SMASH (CLP) to its default (Telnet (23)/SSH (22)).

# **Importing digital certificate**

Connection via WS-Management requires installing the digital certificate on the client PC prior to the connection. For details on the how to use the digital certificate, see <u>Certificate</u>.



To download the digital certificate from the BMC directly, run the web browser on the client PC, and then, enter "https://<BMC's IP address>"; for example, "https://192.168.0.1/". For details on how to download and how to install the digital certificate, see help for web browser.

# **SMASH-CLP**

This section describes how to use SMASH-CLP.

# **Connecting SMASH-CLP**

You can use SMASH-CLP (Command Line Protocol) using terminal software on a console terminal connected via Telnet or SSH. To connect SMASH-CLP, follow these steps:

- 1. Start the terminal software on a console terminal, and connect to a server system, on which you use SMASH-CLP, via Telnet or SSH.
- 2. Enter a user name and a password via Telnet or SSH to connect to SMASH-CLP. Successful authentication displays the following prompt.

🛤 Telnet 192.168.0.61	<u>- 🗆 ×</u>
>> SMASH-CLP <<	
-> _	

When using SMASH-CLP, check if there is SMASH-CLP role in the user account. If not, the terminal software directly connects to CLI.

If your user account includes either roles: "Administrator and SMASH-CLP" or "Service Setting and SMASH-CLP", the following console menu screen is displayed for selection.



## Using SMASH-CLP

With SMASH-CLP, you can operate "target" shown in a hierarchical structure using "verb". Type the following string in SMASH-CLP command line to operate an item shown in the table: SMASH Operations.

```
<verb> [<options>] [<target>] [<properties>]
```

For the SMASH-CLP, see Table A-3 Verbs and Their Options. For the targets corresponding to items in Table A-1 SMASH Operations, see Table A-4 Targets for Operations. To view verb option details, enter the following command.

help <verb>

Example:

```
->help show
Description:
   The show command is used to display information about Managed
   Elements. It can be used to view information about a single Managed
   Element, a tree of Managed Elements, or Managed Elements matching
   a property value filter.
Syntax:
   show [{options}] [{target}] [{properties}] [{propertyname}==
   {propertyvalue}]
Options:
-a, all
   The all option instructs the Command Processor to select all values
   :
   :
```

To view target properties, move to a target and enter the following.

```
cd <target>
show -display properties
```

Example:

```
-> cd /admin1/system1
-> show -display properties
Command Status: COMMAND COMPLETED
ufip=/admin1/system1
Properties:
HealthState=5
RequestedState=0
EnabledState=2
ElementName=IPMI BMC DeviceID.32
CreationClassName=CIM_ComputerSystem
Name=IPMI BMC DeviceID.32
Dedicated={0}
OperationalStatus={2}
```

OtherIdentifyingInfo={HITACHI::GQxT20xM-xxxxxx: 323aaaaaaaaaaaaaaaaaaaaxxxxxx} IdentifyingDescriptions={CIM:Model:SerialNumber}

Verb	Options	Description
cd	-default, -examine, -help, -output, -version	Changes the current default target.
show	-all, -default, -display, -examine, -help, -level, -output, -version	Views properties and verbs for a target.
exit	-help, -output, -version	Finishes SMASH-CLP.
help	-examine, -help, -output, -version	Shows help for a target.
version	-examine, -help, -output, -version	Shows a version of a target.
set	-examine, -help, -output, -version	Sets properties for a target.
start	-examine, -force, -help, -output, -version	Requests the target to start.
stop	<ul> <li>-examine, -force, -help, -output, -state,</li> <li>-version, -wait</li> </ul>	Requests the target to stop.
reset	-examine, -help, -output, -version	Requests the target to reset.

#### **Table A-3: Verbs and Their Options**

#### **Table A-4: Targets for Operations**

Target	Object	Operation
/admin1/system1	Server system	Displays the server system status, powers on/off, or reboots.
/admin1/hdwr1/mainchassis1	Server system	Displays FRU information.
/admin1/system1/cpu <n></n>	Processor	Displays the processor status.
/admin1/hdwr1/mainchassis1/card1/chip <n></n>		
/admin1/system1/capabilities1/cpucap <n></n>		
/admin1/system1/memory1 /admin1/hdwr1/mainchassis1/card1/pmem <n></n>	Memory	Displays the memory status.
/admin1/system1/pwrsupply <n></n>	Power supply module	Displays the power supply status.
/admin1/system1/fan <n></n>	Fan module	Displays the fan status.
/admin1/system1/sensors1/sensor <n> /admin1/system1/sensors1/currentsensor<n></n></n>	Sensor	Displays the sensor status.
/admin1/system1/sensors1/tachsensor <n></n>		
/admin1/system1/sensors1/tempsensor <n></n>		
/admin1/system1/sensors1/voltsensor <n></n>		
/admin1/system1/sp1	ВМС	Displays the BMC status or restarts BMC.
/admin1/system1/settings1/bootcfgsetting1/boo tsrcsetting <n></n>	Boot device	Changes the boot device.
/admin1/system1/sp1/account <n></n>	Account	Displays account information.

# **WS-Management**

This section describes how to use WS-Management.

## **Connecting WS-Management**

Use software which supports WS-Management protocol. In this chapter, WinRM is used as an example.



You can download Windows management framework including WinRM from Microsoft web site.

# **Using WinRM**

To perform operations shown in the table OPERATION below, enter the following command line at the command prompt on the WinRM-installed console terminal or in Windows PowerShell.

winrm <OPERATION> <RESOURCE URI> [-SWITCH:VALUE] [@{KEY=VALUE}]

For available WinRM operations, see the tables below: Table A-5 OPERATION, Table A-6 RESOURCE\_URI, and Table A-7 –SWITCH:VALUE. For WinRM details, see help for WinRM.

OPERATION	Description
g(et)	Retrieves management information.
s(et)	Sets management information.
c(reate)	Creates a new instance of management resources.
d(elete)	Deletes an instance of management resources.
e(numerate)	Enumerates all instances of management resources.
i(nvoke)	Invokes a method to management resources.
id(entify)	Identifies if WS-Management is executed on the server system connected.

#### **Table A-5: OPERATION**

#### Table A-6: RESOURCE\_URI

RESOURCE	Description
cimv2/CIM_ComputerSystem	Powers on/off, reboots server systems, or restarts the BMC.
cimv2/CIM_Processor	Retrieves the processor status.
cimv2/CIM_Chip	
cimv2/CIM_ProcessorCapabilities	

RESOURCE	Description
cimv2/CIM_Memory	Retrieves the memory status.
cimv2/CIM_PhysicalMemory	
cimv2/CIM_PowerSupply	Retrieves the power status.
cimv2/CIM_Fan	Retrieves the fan status.
cimv2/CIM_Sensor	Retrieves sensor information.
cimv2/CIM_NumericSensor	
cimv2/CIM_Chassis	Retrieves FRU information.
cimv2/CIM_BootConfigSetting	Switches boot device.
cimv2/CIM_Account	Retrieves account information.

#### Table A-7: -SWITCH:VALUE

-SWITCH	VALUE	Description	
-r(emote)	[TRANSPORT]	Sets a URI scheme: HTTP or HTTPS. The default value is HTTP but select HTTPS.	
	HOST	Sets a host address. Valid formats: DNS name, NetBIOS name or IP address.	
	[PORT]	By default, 5985 is used for HTTP; 5986 for HTTPS.	
	[PREFIX]	By default, wsman is set.	
-u(sername)	USERNAME	Specifies the user name for a server system connected.	
-p(assword)	PASSWORD	Specifies the user password for a server system connected.	
-a(uthentication)	VALUE	Specifies authentication mechanism used for server connection	
		- Basic	
		- Digest	
		- Negotiate	
-encoding	VALUE	Specifies the encoding for communication with a server system connected.	
-file	VALUE	Specifies an XML file read from a file when s(et), c(reate) and i(nvoke) operations are executed.	

The following shows an example of command for using WinRM. The example assumes that you have created an account with user name "user02" and password "pass02". Also assumes BMC's IP address is "192.168.0.1".

To view sensor information, start WinRM by a command like the following.

C:\>winrm e cimv2/CIM\_Sensor -r:https://192.168.0.1:5986/wsman -u:user02 -p:pass02 -a:basic -encoding:utf-8 Example:

```
C:\>winrm e cimv2/CIM Sensor -r:https://192.168.0.1:5986/wsman
-u:user01 -p:pass01 -a:basic -encoding:utf-8
CIM NumericSensor
   Accuracy = null
   Availability = null
   BaseUnits = 2
   Caption = Temperature (206.0.32)
   CommunicationStatus = null
   CreationClassName = CIM NumericSensor
   CurrentReading = 2800
   CurrentState = Normal
   Description = HDD PLT2 TEMP1(206.0.32):Temperature for Drive
Backplane 3
   DetailedStatus = null
   DeviceID = 1.206.0.32.1.99
   ElementName = HDD PLT2 TEMP1(206.0.32)
   EnabledDefault = null
   EnabledState = 1
   EnabledThresholds = 3, 1, 2, 0
   ErrorCleared = null
   ErrorDescription = null
   HealthState = 5
   Hysteresis = null
   InstallDate = null
   IsLinear = TRUE
   LastErrorCode = null
   LocationIndicator = null
   LowerThresholdCritical = 0
   LowerThresholdFatal = null
   LowerThresholdNonCritical = 300
   MaxQuiesceTime = null
   MaxReadable = 12700
   MinReadable = 12800
   Name = null
   NominalReading = 4500
   NormalMax = null
   NormalMin = null
   OperatingStatus = null
      :
      :
```

Tip a

When an error message saying that the envelope is too large is displayed, enter the following command to avoid troubles.

C:\>winrm s winrm/config @{MaxEnvelopeSizekb="4096"}

# **SMASH** operation

This section describes how to operate SMASH.

### **Retrieving server system information**

You can retrieve identification and status of server systems by SMASH.; for example, to know the product serial number .You can extract them from **OtherIdentifyingInfo** property in the instance of CIM\_ComputerSystem class.

#### **WS-Management**

By using WS-Management to retrieve server system information, you can find the information in the instance of which **Dedicated** property is 0 (Not dedicated) among the instances in the CIM\_ComputerSystem class.

#### SMASH-CLP

Enter the following command.

```
cd /admin1/system1
show
```

#### **Properties**

#### Table A-8: CIM\_ComputerSystem class properties for server system

Property	Description
EnabledState	Shows the power status of the server system.
	2 (Enabled) : Power is ON.
	3 (Disabled) : Power is OFF.
HealthState	Shows whether a failure occurred or not.
	5 (OK) : Normal
	10 (Degraded/Warning) : Warning
	25 (Critical error) : Failure
OperationalStatus	Shows whether a failure occurred or not.
	2 (OK) : Normal
	3 (Degraded) : Warning
	6 (Error) : Failure
IdentifyingDescriptions	Shows the character string that represents the <b>OtherIdentifyingInfo</b> property. The order of items corresponds to that of <b>OtherIdentifyingInfo</b> property.
OtherIdentifyingInfo	Shows the server identifying character string. The format corresponds to <b>IdentifyingDescriptions</b> "HITACHI::LocationID" is " <chassis number="" serial="">".</chassis>

# Powering on/off or rebooting server system

You can power on/off and reboot server system. Note that SMASH does NOT shut down the OS automatically in powering off or rebooting.

#### **WS-Management**

- 1. Find the instance of which **Dedicated** property is 0 (Not dedicated) among the instances in the CIM\_ComputerSystem class.
- 2. Invoke **RequestStateChange()** method of the instance with appropriate **RequestedState** parameter shown below.

#### **Table A-9: RequestedState parameters**

RequestedState parameter	Operation
2 (Enabled)	Powers on.
3 (Disabled)	Powers off.
11 (Reset)	Reboots.

#### **SMASH-CLP**

You can power on/off and reboot server systems by entering the following commands:

To power on

start /admin1/system1

To power off

stop /admin1/system1

To reboot

reset /admin1/system1

# **Retrieving processor status**

You can retrieve the processor status.

#### **WS-Management**

You can get the status by retrieving the CIM\_Processor class instances.

#### **SMASH-CLP**

You can get the status by entering the following command.

```
cd /admin1/system1/cpu<N>
show
```

### **Properties**

Table A-10: CIM	Processor	class	properties
-----------------	-----------	-------	------------

Property	Description
ElementName	Shows the name of the processor. If the value is "Unknown", the processor is not installed.
HealthState	Shows whether a failure occurred or not.
	5 (OK) : Normal
	10 (Degraded/Warning) : Warning
	25 (Critical error) : Failure
OperationalStatus	Shows whether a failure occurred or not.
	2 (OK) : Normal
	3 (Degraded) : Warning
	6 (Error) : Failure

# **Retrieving memory status**

You can retrieve the memory status.

#### **WS-Management**

You can get the status by retrieving the CIM\_PhysicalMemory class instances.

#### **SMASH-CLP**

You can get the status by entering the following command.

```
cd //admin1/hdwr1/mainchassis1/card1/pmem<N> show
```

#### **Properties**

#### Table A-11: CIM\_PhysicalMemory class properties

Property	Description
Capacity	Shows the memory capacity. If the value is $0^{\prime\prime}$ (zero), memory module is not installed.
HealthState	Shows whether a failure occurred or not.
	5 (OK) : Normal
	10 (Degraded/Warning) : Warning
	25 (Critical error) : Failure
OperationalStatus	Shows whether a failure occurred or not.
	2 (OK) : Normal
	3 (Degraded) : Warning
	6 (Error) : Failure

# **Retrieving power supply module status**

You can retrieve the power supply module status.

#### **WS-Management**

You can get the status by retrieving the CIM\_PowerSupply class instances.

#### **SMASH-CLP**

You can get the status by entering the following command.

```
cd /admin1/system1/pwrsupply<N>
show
```

#### **Properties**

Table A-12: CIM	_PowerSupply	class	properties
-----------------	--------------	-------	------------

Property	Description
HealthState	Shows whether a failure occurred or not.
	5 (OK) : Normal
	10 (Degraded/Warning) : Warning
	25 (Critical error) : Failure
OperationalStatus	Shows whether a failure occurred or not.
	2 (OK) : Normal
	3 (Degraded) : Warning
	6 (Error) : Failure

# **Retrieving fan module status**

You can retrieve the fan module status.

#### **WS-Management**

You can get the status by retrieving the CIM\_Fan class instances.

#### **SMASH-CLP**

You can get the status by entering the following command.

```
cd /admin1/system1/fan<N>
show
```

#### **Properties**

#### Table A-13: CIM\_Fan class properties

Property	Description
HealthState	Shows whether a failure occurred or not.
	5 (OK) : Normal
	10 (Degraded/Warning) : Warning
	25 (Critical error) : Failure
OperationalStatus	Shows whether a failure occurred or not.
	2 (OK) : Normal
	3 (Degraded) : Warning
	6 (Error) : Failure

# **Retrieving fan rotating speed**

You can retrieve the fan rotating speed.

#### **WS-Management**

You can get the information in the following steps:

- 1. Find the CIM\_Fan class instance.
- 2. Extract the sensor number (<SensorNumber>) from the **DeviceID** property in the instance.
- 3. Find the instance corresponding to the <SensorNumber> from among the CIM\_NumericSensor class instances.
- 4. The **CurrentReading** property in the instance found in the step 3 shows the rotating speed.

The format of the **DeviceID** property in the CIM\_Fan class is:

<EntityID> ":" <EntityInstance> ":" <SensorNumber> ":Fan"

<SensorNumber> is surrounded by second and third colons(":").

The format of the **DeviceID** property in the CIM\_NumericSensor class is:

<1 or 2>.<SensorNumber>.<OwnerLUN>.<OwnerID>.<Event/Reading Type Code>.<Sensor Specific Offset or 99>

<SensorNumber> is surrounded by first and second periods(".").

#### SMASH-CLP

You can get the rotating speed from the target /admin1/system1/sensors1/tachsensor<N> of which ElementName property begins with "FAN".

# **Retrieving FRU information**

You can retrieve FRU information.

#### **WS-Management**

You can get FRU information by retrieving the CIM\_Chassis class instance.

#### **SMASH-CLP**

You can get the status by entering the following command.

```
cd //admin1/hdwr1/mainchassis1
show
```

#### **Properties**

#### Table A-14: CIM\_Chassis class properties

Property	Description
Manufacturer	Shows manufacturer of the server system.
Model	Shows model name of the server system.
PartNumber	Shows part number of the server system.
SerialNumber	Shows serial number of the server system

# **Changing boot device**

You can change boot device for next single boot.

#### **WS-Management**

You can change the boot device in the following steps:

- 1. Find the CIM\_BootSourceSetting class instance that containing the **StructuredBootString** property for the boot device you want to use.
- Find the CIM\_BootConfigSetting class instance and invoke ChangeBootOrder() method, designating the CIM\_BootSourceSetting class instance found above as a parameter.

To use WinRM, execute the following command:

```
C:\>winrm i ChangeBootOrder cimv2/CIM_BootConfigSetting?InstanceID=
CIM:bcs1 -r:https://192.168.0.1:5968/wsman -a:basic -u:userA -p:pas
s01 -encoding:utf-8 -file:input-ChangeBootOrder.xml
```

The contents of the input-ChangeBootOrder.xml are shown below:

Replace **BootSource** in the file by **InstanceID** property value of the CIM\_BootSourceSetting instance which you want to use.

#### SMASH-CLP

You can change the boot device in the following steps:

- Find the target bootsrcsetting<N> under /admin1/system1/ settings1/bootcfgsetting1, which StructuredBootString property is the device you want to boot from.
- 2. Execute the following command.

```
cd /admin1/system1/settings1/bootcfgsetting1
set bootorder="/admin1/system1/settings1/bootcfgsetting1/bootsrcsetting
<N>"
```

The following table shows the relationship between **StructuredBootString** property values and the boot device.

#### Table A-15: StructuredBootString property values

StructuredBootString property	Boot device
HITACHI:None:1	None. Cancels the boot device designation.
CIM:Network:1	PXE boot
CIM:Hard-Disk:1	Hard disk
CIM:CD/DVD:1	CD/DVD ROM

# **Restarting BMC**

You can restart BMC. Note that this operation terminates current SMASH session immediately.

#### **WS-Management**

You can restart BMC in the following steps:

- 1. Find the instance of which **Dedicated** property is 28 (Management Controller) among the instances in the CIM\_ComputerSystem class.
- 2. Execute the **RequestStateChange()** method in the instance, designating 11 (Reset) as a **RequestedState** parameter.

#### **SMASH-CLP**

You can restart BMC by entering the following command.

reset /admin1/system1/sp1

# **CIM classes, properties and methods**

This section provides the list of CIM classes, properties and methods.

# List of CIM classes, properties and methods

The following tables show supported CIM classes, properties and methods. This list covers only major ones.

Profile	Class	Element Name
Base Server	CIM_ComputerSystem	Name
		CreationClassName
		EnabledState
		RequrestedState
		OperationalStatus
		HealthState
		ElementName
		Dedicated
		IdentifyingDescriptions
		OtherIdentifyingInfo
		RequestStateChange()
	CIM_ComputerSystemPackage	Dependent
		Antecedent
	CIM_ElementCapabilities	ManagedElement
		Capabilities
	CIM_EnabledLogicalElementCapabilities	RequestedStatesSupported
	CIM_PhysicalPackage	Tag
		CreationClassName
		PackageType
		ChassisPackageType
		Manufacturer
		Model
		SerialNumber
		PartNumber
		VendorCompatibilityStrings
		ElementName
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization

#### **Table A-16: Support Profiles Classes**

Profile	Class	Element Name
SMASH Collection	CIM_ConcreteCollection	InstanceID
		ElementName
	CIM_MemberOfCollection	Collection
		Member
	CIM_OwningCollectionElement	OwningElement
		OwnedElement
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
SM CLP Admin	CIM_AdminDomain	Name
Domain	CIM_ConcreteCollection	InstanceID
		ElementName
	CIM_MemberOfCollection	Collection
		Member
	CIM_OwningCollectionElement	OwningElement
		OwnedElement
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
	CIM_SystemComponent	GroupComponent
		PartComponent
Sensors	CIM_Sensor	SystemCreationClassName
		SystemName
		CreationClassName
		DeviceID
		SensorType
		PossibleStates
		CurrentStates
		ElementName
		OtherSensorTypeDescription
		EnabledState
		RequestedState
		OperationalStatus
		HealthState
		SystemCreationClassName
	CIM_NumericSensor	SystemCreationClassName
		SystemName
		CreationClassName

Profile	Class	Element Name
Sensors	CIM_NumericSensor	DeviceID
		BaseUnits
		UnitModifier
		RateUnits
		CurrentReading
		LowerThresholdNonCritical
		UpperThresholdNonCritical
		LowerThresholdCritical
		UpperThresholdCritical
		LowerThresholdFatal
		UpperThresholdFatal
		SupportedThresholds
		SettableThresholds
		SensorType
		PossibleStates
		CurrentStates
		ElementName
		OtherSensorTypeDescription
		EnabledState
		RequestedState
		OperationalStatus
		HealthState
	CIM_SystemDevice	GroupComponent
		PartComponent
	CIM_AssociatedSensor	Antecedent
		Dependent
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
Physical Asset	CIM_Chassis	Tag
		CreationClassName
		PackageType
		ChassisPackageType
		Manufacturer
		Model
		SerialNumber
		PartNumber
		VendorCompatibilityStrings

Profile	Class	Element Name
Physical Asset	CIM_Chassis	ElementName
	CIM_ComputerSystemPackage	PlatformGUID
	CIM_Container	GroupComponent
		PartComponent
	CIM_PhysicalMemory	Тад
		CreationClassName
		FormFactor
		MemoryType
		Speed
		Capacity
		BankLabel
		ElementName
		HealthState
		OperationalStatus
	CIM_PhysicalAssetCapabilities	InstanceID
		ElementName
		FRUInfoSupported
	CIM_PhysicalPackage	Тад
		CreationClassName
		PackageType
		ChassisPackageType
		Manufacturer
		Model
		SerialNumber
		PartNumber
		VendorCompatibilityStrings
		ElementName
	CIM_Realizes	Antecedent
		Dependent
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
Boot Control	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
	CIM_BootService	CreationClassName
		Name
		SystemCreationClassName

Profile	Class	Element Name
Boot Control	CIM_BootService	SystemName
		ElementName
	CIM_BootConfigSetting	InstanceID
		ElementName
		ChangeBootOrder()
	CIM_BootSourceSetting	InstanceID
		ElementName
		BootString
		BIOSBootString
		StructuredBootString
		FailThroughSupported
	CIM_ElementCapabilities	ManagedElement
		Capabilities
	CIM_ElementSettingData	
	CIM_HostedService	Antecedent
		Dependent
	CIM_OrderedComponent	GroupComponent
		PartComponent
		AssignedSequence
	CIM_ServiceAffectsElement	AffectingElement
		AffectedElement
		ElementEffects
Fan	CIM_Fan	SystemCreationClassName
		SystemName
		CreationClassName
		DeviceID
		OperationalStatus
		HealthState
		VariableSpeed
		DesiredSpeed
		ActiveCooling
		EnabledState
		RequestedState
		ElementName
	CIM_NumericSensor	SensorType
		BaseUnits
		RateUnits
	CIM_RegisteredProfile	RegisteredName
Profile	Class	Element Name
----------------------	---------------------------------------	--------------------------
Fan	CIM_RegisteredProfile	RegisteredVersion
		RegisteredOrganization
	CIM_Sensor	SensorType
	CIM_SystemDevice	GroupComponent
		PartComponent
Power Supply	CIM_PowerSupply	SystemCreationClassName
		SystemName
		CreationClassName
		DeviceID
		TotalOutputPower
		ElementName
		OperationalStatus
		HealthState
		EnabledState
		RequestedState
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
	CIM_SystemDevice	GroupComponent
		PartComponent
Service Processor	CIM_ComputerSystem	Dedicated
		Name
		CreationClassName
		OtherIdentifyingInfo
		IdentifyingDescriptions
		EnabledState
		RequrestedState
		OperationalStatus
		HealthState
		ElementName
		RequestStateChange()
	CIM_ElementCapabilities	ManagedElement
		Capabilities
	CIM_EnabledLogicalElementCapabilities	RequestedStatesSupported
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization
Profile Registration	CIM_RegisteredProfile	InstanceID

Profile	Class	Element Name
Profile Registration	CIM_RegisteredProfile	RegisteredOrganization
		RegisteredName
		RegisteredVersion
		AdvertiseTypes
	CIM_ElementConformsToProfile	ConformantStandard
		ManagedElement
	CIM_ReferencedProfile	Antecedent
		Dependent
Simple Identity	CIM_Account	SystemCreationClassName
Management		SystemName
		CreationClassName
		Name
		UserID
		UserPassword
		OrganizationName
		ElementName
		RequestedState
		EnabledState
	CIM_AccountManagementService	SystemCreationClassName
		CreationClassName
		SystemName
		Name
		RequestedState
		EnabledState
		ElementName
	CIM_AccountOnSystem	GroupComponent
		PartComponent
	CIM_AssignedIdentity	IdentityInfo
		ManagedElement
	CIM_ElementCapabilities	ManagedElement
	(CIM_AccountManagementService)	Capabilities
	CIM_HostedService	Antecedent
		Dependent
	CIM_Identity	InstanceId
		ElementName
	CIM_RegisteredProfile	RegisteredName
		RegisteredVersion
		RegisteredOrganization

Profile	Class	Element Name
Simple Identity Management	CIM_ServiceAffectsElement	AffectingElement
		AffectedElement
		ElementAffects
CPU	CIM_Processor	CPUStatus
		CreationClassName
		CurrentClockSpeed
		DeviceID
		ElementName
		EnabledState
		ExternalBusClockSpeed
		Family
		HealthState
		MaxClockSpeed
		OperationalStatus
		RequestedState
		SystemCreationClassName
		SystemName
	CIM_ProcessorCapabilities	InstanceID
		NumberOfHardwareThread
		NumberOfProcessorCores
System Memory	CIM_Memory	Access
		BlockSize
		ConsumableBlocks
		CreationClassName
		DeviceID
		ElementName
		EnabledState
		HealthState
		NumberOfBlocks
		OperationalStatus
		RequestdState
		SystemCreationClassName
		SystemName
		Volatile

# Troubleshooting

This section describes examples of basic troubleshooting with the SMASH.

Table	A-17:	Troub	leshooting
-------	-------	-------	------------

#	Problem	Description	
1	Cannot connect to BMC	<ul> <li>Check the following from web console.</li> <li>1) BMC's IP address and ports are properly configured.</li> <li>2) IPMI/SMASH user account is properly configured.</li> <li>3) Secure transport protocol (HTTPS or SSH) is used.</li> <li>4) Connection from your client PC's IP address is allowed.</li> </ul>	
2	An error message displayed when "show //admin1/hdwr1/mainchassis1" is executed in CLP.	The error message is below. cmdstat status : 2 status_tag : COMMAND PROCESSING FAILED error : 246 error_tag : INVALID TARGET	
		This message appears when asset tag contains non-ASCII characters. Compute Rack 210/220 series only support ASCII encoding for asset tag.	
		Set asset tag containing only ASCII characters from web console.	

# B

# **CLI Console**

This Appendix-B describes the functions of CLI Console.

- □ <u>Common function</u>
- □ <u>CLI command</u>

# **Common function**

# Login/logout

# Login

- 1. Start the terminal emulator as a system console (SSH or telnet).
- 2. Set the IP address of the BMC, and terminal emulator connect BMC IP address through SSH or telnet.
- 3. When you have successfully logged in, the login prompt window is displayed.
- 4. The following user account and password of the system administrator are set to the factory default settings. Enter the following values in the table.

### Table B-1: Factory default settings

Item	Factory default settings
User account	user01
Password	pass01



We strongly recommend that the password of the system administrator changed for security.

5. Enter the user account in the login prompt to connect the management module, and then press **Enter**.



6. Enter the password, and then press **Enter**.



7. The following initial window is displayed after logging in to the management module.



The following item appear on the initial window after logging in to the management module.

```
Example:

7PESE

ALL RIGHTS RESERVED, COPYRIGHT (C), 2011, 2012, HITACHI, LTD.

Chassis ID : 9 T999999999

Firmware Revision :

$
```

# Logout

Enter exit in the CLI prompt, and then press Enter.

\$ exit

# **Command input assistance**

The CLI console provides command input assistance which helps an operator to type a command line.

# **Characters available to input**

# **Deleting characters**

[BackSpace] key

Moves the cursor backward and deletes the character to the left of the cursor.

[Delete] key

Moves the cursor backward and deletes the character to the left of the cursor.



• If no command matches, the command line remains the same.

Auto-completion works only on command name, and doesn't on parameter.

# **CLI command**

This section describes CLI command.

# Chassis

# show chassis setting

# Command

show chassis setting

# Description

Shows the setting of chassis.

# Parameters

None

# Show items

-- chassis setting --Chassis ID Chassis ID Maximum of 21 characters

Maintenance classification Setting of long life support normal : standard service. long : long life support service.

-- chassis FRU setting --Part/model number Part/model number of the chassis Maximum of 32 characters

Serial number Serial number of the chassis Maximum of 27 characters

Model ID Chassis type

Midplane ID Midplane type

CLI Console

### First WWN

First additional WWN

The smallest WWN in 256 WWNs assigned the additional WWM chassis.

# Message

None

### Example

[Shows the setting of server chassis.] show chassis setting

# Comment

# set chassis id

# Command

set chassis id -c <cid> [-F]

# Description

Edits the Chassis ID.

# **Parameters**

-c <cid> Chassis ID Maximum of 21 characters

-F

Executes the command without inquiry.

# Show items

None

# Message

None

# Example

[Edits the Chassis ID into "SERVER1"] set chassis id -c SERVER1

# Comment

# **Front panel**

# show front-panel status

### Command

show front-panel status

# Description

Shows the status of front panel.

### Parameters

None

# Show items

-- Front panel status --Install Install status of a module Install : The module is installed. Not Install : The module is not installed.

-- LED status --LED type LED type

> Power Led Location Led: Location ID Error Led Mode Led Maintenance Led

Light Lighting status of LED. on : turn-on off : turn-off

# Message

None

# Example

[Show status of front panel.] show front-panel status

# Comment

# set front-panel led

### Command

set front-panel led -l <led type> -t <led on off> [-F]

# Description

Turns on or turn off the LID of chassis.

### **Parameters**

-I <led\_type> LED type lid : Location ID

-t <led\_on\_off> Turn on or turn off of LED. on : turn-on off : turn-off

-F

Executes the command without inquiry.

### Show items

None

# Message

None

# Example

[Turns on the LID of chassis.] set front-panel led -l lid -t on

[Turns off the LID of chassis.]
set front-panel led -l lid -t off

# Comment

# Server

### show server status

### Command

show server status [<server\_no>]

# Description

Shows the status of server.

### Parameters

<server\_no> Slot number is always 0.

# Show items

-- Server status --Slot Slot number is always 0.

Initialize Initialize status.

Init comp : Server is completed to initialize.

Power detail Power status of server. off : Server is powered off. On : Server is powered on.

Power Status of power off : Powered off on : Powered on

Fail Status of Fail. normal : Not fail fail : Fail

Mass(kg) Mass of module(kg)

CLI Console

-- LED status --LED type lid : Shows Location ID. Light

Lighting status of LED on : turned on off : turned off

### Message

None

# Example

[Shows the status of server 0.] show server status 0

### Comment

### show server mgmt-lan

### Command

show server mgmt-lan [<server no>]

### Description

Shows the management LAN of BMC in the server.

### Parameters

<server\_no>

Slot number of server in the server chassis.

Range is fixed value 0 .

Multiple selection is available.

If 'all' is specified for this parameter or this parameter is omitted, the command shows all servers.

### Show items

-- Server LAN interface setting --Slot Slot number of server in the server chassis. Range is fixed value 0.

IP address IP address

Subnetmask Subnet mask

Default gateway Default gateway of the module

DHCP Show current DHCP setting

### Message

None

# Example

[Show management LAN of BMC in the server 0.] show server mgmt-lan 0

# Comment

None

CLI Console

### set server mgmt-lan

### Command

```
set server mgmt-lan <server_no> [-i <ip_addr>] [-s <subnet_mask>] [-g
<default_gateway>] [-F]
```

### Description

Edits the management LAN of BMC in the server.

### **Parameters**

<server\_no> Slot number of server in the server chassis Range is fixed value 0 . Multiple selection is not available.

-i <ip\_addr> IP address

-s <subnet\_mask> Subnet mask

-g <default\_gateway> Default gateway of module

-d <DHCP setting> Set DHCP setteing Enabled : enabled DHCP Disabled : disabled DHCP

-F

Executes the command without inquiry.

### Show items

None

### Message

# Example

[Set IP address, subnet mask, and default gateway of the management LAN of BMC in the server  $0.] \end{tabular}$ 

```
set server mgmt-lan 0 -i 192.168.0.50 -s 255.255.255.0 -g 192.168.0.1
```

[Edit IP address of management LAN of BMC on server 0.] set server mgmt-lan 0 -i 192.168.0.60

# Comment

### poweron server

### Command

poweron server [<server\_no>][-F]

# Description

Power on the server.

### Parameters

<server\_no>
Slot number of server in the server chassis
Range is fixed value 0 .
Multiple selection is available.
If 'all' is specified for this parameter or this parameter is omitted,
the command shows all servers.

### -F

Executes the command without inquiry.

### Show items

None

### Message

None

# Example

```
[Power on server 0.] poweron server 0
```

# Comment

The server will not power on when the chassis is in silent mode and the server is not supporting silent mode.

### poweroff server

# Command

poweroff server [<server no>] [-h|-s] [-F]

# Description

Power off the server.

# Parameters

<server\_no>

Slot number of the server in the server chassis Range is fixed value 0. Multiple selection is available. If 'all' is specified for this parameter or this parameter is omitted, the command shows all servers.

### -h

Force power off the server.

-s

Shutdown the server. If omitted -h and -s parameter, this parameter is applied.

-F

Executes the command without inquiry.

# Show items

None

# Message

None

# Example

[Shuts down the OS which is operated by the server 0.]  $_{\rm poweroff\ server\ 0}$ 

[Force power off server 0.]
 poweroff server all -h

# Comment

### bmc-reset server

### Command

bmc-reset server [<server no>] [-h|-s] [-F]

### Description

Resets BMC on the server.

### **Parameters**

<server\_no>
Slot number of the server in the server chassis
Range is from 0 .
Multiple selection is available.
If 'all' is specified for this parameter or this parameter is omitted,
the command shows all servers.

### -s

Restart the BMC.

-F

Executes the command without inquiry.

### Show items

None

### Message

None

# Example

[The sub power supply of the server 0 is turned off / on.]

[BMC of all the servers are rebooted.] bmc-reset server all -s

# Comment

### reset server

### Command

reset server [<server\_no>] [-h|-s] [-F]

# Description

Resets the server.

### **Parameters**

<server\_no>

Slot number of the server in the server chassis Range is fixed value 0. Multiple selection is available. If 'all' is specified for this parameter or this parameter is omitted, the command shows all servers.

### -h

Hard reset the server. If omitted -h and -s parameter, this parameter is applied.

-s

Issues NMI (Non-Maskable Interrupt).

-F

Executes the command without inquiry.

# Show items

None

# Message

None

# Example

[Reset server 0.] reset server 0

[NMI is sent to all the servers.] reset server all -s

# Comment

### show server firmware

### Command

show server firmware [<server no>]

### Description

Shows the firmware version of server.

### **Parameters**

<server\_no>
Slot number of server in the server chassis.
Range is fixed value 0
Multiple selection is available.
If 'all' is specified for this parameter or this parameter is omitted,
the command shows all servers.

### Show items

-- Server firmware version --Slot Slot number of the server in the server chassis. Range is fixed value 0.

-- BMC version --Current version Current BMC firmware version

Next version Next BMC firmware version

-- EFI version --Current version Current EFI firmware version

Next version Next EFI firmware version

### Message

None

### Example

[Shows the firmware version of server 0.] show server firmware 0

# Comment

# Fan module

### show fan-module status

### Command

show fan-module status [<fan\_no>]

# Description

Show status of the fan module.

### Parameters

<fan\_no>

Slot number of cooling fan module in the server chassis

Multiple selection is available.

If 'all' is specified for this parameter or this parameter is omitted, the command shows all servers.

### Show items

-- Fan module status --Slot Slot number of cooling fan module in the server chassis Range is fixed value 0 .

### Install

Install status of a module installed : Module is installed. not installed : Module is not installed.

### Power

Status of power	
off	: Power-off
on	: Power-on

### Fail

Status of Fail. normal : Not fail fail : Fail

Tachometer (rpm) Revolution of cooling fan

# Message

None

# Example

[Shows the status of cooling fan module 0.] show fan-module status 0

### Comment

# Time

# show time local

### Command

show time local

# Description

Shows the local time of management module.

### **Parameters**

None

# Show items

-- Local time --

Date

Date uses 'YYYY-MM-DD' format.

'YYYY' is from '1970' to '2037'. 'MM' is from '01' to '12'. 'DD' is from '01' to '31'.

### Time

Time uses 'hh:mm:ss' format.

'hh' is from '00' to '23'. 'mm' is from '00' to '59'. 'ss' is from '00' to '59'.

# Message

None

# Example

[Shows the local time of management module. ] show time local

# Comment

# set time local

### Command

```
set time local -d <date time> [-F]
```

# Description

Edits the local time of management module.

# **Parameters**

-d <date\_time>

Date and time.

Format is "YYYY-MM-DD hh:mm:ss". Date and time is divided with a space. Input string must be enclosed in double quotes because including a space.

-F

Executes the command without inquiry.

# Show items

None

### Message

None

# Example

[Edits the local time of management module.] set time local -d "2013-05-01 15:00:00"

# Comment

# show time timezone

### Command

show time timezone

# Description

Shows the time zone of management module.

### **Parameters**

None

# Show items

-- Timezone --Timezone Range is from '-24:59' to '+24:59'.

# Message

None

# Example

[Shows the time timezone of management module.] show time timezone

# Comment

### set time timezone

# Command

set time timezone -z <timezone> [-F]

# Description

Edits the time zone of management module.

# **Parameters**

```
-z <timezone>
Range is from '-24:59' to '+24:59'.
```

Enclose the value within double quotation marks to input a minus value.

-F

Executes the command without inquiry.

# Show items

None

### Message

None

# Example

[Edits the time zone of management module.] set time timezone -z +09:00

# Comment

# Language

# show language system

### Command

show language system

### Description

Shows the language mode of management module.

### **Parameters**

None

### Show items

-- System language --Language Language mode english : English japanese : Japanese

# Message

None

# Example

[Shows the language mode of management module.] show language system

# Comment

# set language system

### Command

set language system [-l <language>] [-F]

# Description

Edits the language mode of management module.

# **Parameters**

-l <langua< th=""><th>ge&gt;</th><th></th></langua<>	ge>	
Languag	e mode	
	english	: English
	japanese	: Japanese

-F

Executes the command without inquiry.

# Show items

None

# Message

None

# Example

[Sets the language mode of management module to Japanese.] set language system -l japanese

# Comment

# **Remote access**

### show remote-access protocol http

### Command

show remote-access protocol http

# Description

Shows the setting of connection allowance of http

### Parameters

None

### Show items

-- HTTP setting --Port number Port number of protocol. Range is from 1 to 65535.

### Allow

Allowance or denial allow : Allowance deny : Denial

Network address Network address.

Subnetmask Subnet mask.

### Message

None

# Example

[Shows the setting of connection allowance of http.] show remote-access protocol http

# Comment

### set remote-access protocol http

### Command

```
set remote-access protocol http [-a <allow>] [-p <protocol_port>] [-n
<network_addr>] [-s <subnet_mask>] [-F]
```

# Description

Edits the setting of connection allowance of http.

### **Parameters**

- -a <allow> Allowance or denial allow : Allowance deny : Denial
- -p <protocol\_port> Port number of protocol. Range is from 1 to 65535.
- -n <network\_addr> Network address.
- -s <subnet\_mask> Subnet mask.
- -F

Executes the command without inquiry.

# Show items

None

# Message

None

# Example

[Allows the HTTP connection of IP address from 192.168.0.0 to 192.168.0.255.] set remote-access protocol http -p 80 -a allow -n 192.168.0.0 -s 255.255.255.0

[Deny all the HTTP connection.] set remote-access protocol http -a deny

# Comment
#### show remote-access protocol https

## Command

show remote-access protocol https

## Description

Shows the setting of connection allowance of https.

## **Parameters**

None

## Show items

-- HTTPS setting --Port number Port number of protocol. Range is from 1 to 65535.

#### Allow

Allowance or denial allow : Allowance deny : Denial

Network address Network address.

Subnetmask Subnet mask.

## Message

None

## Example

[Shows the setting of connection allowance of https] show remote-access protocol https

## Comment

None

CLI Console

#### set remote-access protocol https

#### Command

```
set remote-access protocol https [-a <allow>] [-p <protocol_port>] [-n
<network_addr>] [-s <subnet_mask>] [-F]
```

#### Description

Edits the setting of connection allowance of https.

#### **Parameters**

-a <allow> Allowance or denial allow : Allowance deny : Denial

-p <protocol\_port> Port number of protocol. Range is from 1 to 65535.

-n <network\_addr> Network address.

-s <subnet\_mask> Subnet mask.

-F

Executes the command without inquiry.

#### Show items

None

#### Message

None

#### Example

[Sets the HTTPS port number to 443 and allows the HTTP connection of IP address from 192.168.0.0 to 192.168.0.255.]

```
set remote-access protocol https -p 443 -a allow -n 192.168.0.0
-s 255.255.255.0
```

#### [Deny all the HTTPS connection.]

set remote-access protocol https -a deny

## Comment

#### show remote-access protocol ssh

#### Command

show remote-access protocol ssh

#### Description

Shows the setting of connection allowance of SSH.

#### **Parameters**

None

#### Show items

-- SSH setting --Allow Allowance or denial allow : Allowance deny : Denial

Network address Network address.

Subnetmask Subnet mask.

#### Message

None

## Example

[Shows the setting of connection allowance of SSH.] show remote-access protocol ssh

## Comment

#### set remote-access protocol ssh

#### Command

```
set remote-access protocol ssh [-a <allow>] [-n <network_addr>] [-s
<subnet_mask>] [-F]
```

## Description

Edit the setting of connection allowance of SSH.

## **Parameters**

-a <allow> Allowance or denial allow : Allowance deny : Denial

-n <network\_addr> Network address.

-s <subnet\_mask> Subnet mask.

-F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

```
[Allows the SSH connection of IP address from 192.168.0.0 to 192.168.0.255.] set remote-access protocol ssh -a allow -n 192.168.0.0 -s 255.255.255.0
```

[Deny all the SSH connection.] set remote-access protocol ssh -a deny

## Comment

None

CLI Console

## show remote-access protocol telnet

#### Command

show remote-access protocol telnet

## Description

Shows the setting of connection allowance of TELNET.

#### Parameters

None

#### Show items

-- TELNET setting --Allow Allowance or denial allow : Allowance deny : Denial

Network address Network address

Subnetmask Subnet mask

#### Message

None

## Example

[Shows the setting of connection allowance of TELNET.] show remote-access protocol telnet

## Comment

#### set remote-access protocol telnet

### Command

```
set remote-access protocol telnet [-a <allow>] [-n <network_addr>] [-s
<subnet_mask>] [-F]
```

## Description

Edits the setting of connection allowance of TELNET.

## **Parameters**

-a <allow> Allowance or denial allow : Allowance deny : Denial

-n <network\_addr> Network address

-s <subnet\_mask> Subnet mask

-F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

[Allows the TELNET connection of IP address from 192.168.0.0 to
192.168.0.255.]
 set remote-access protocol telnet -a allow -n 192.168.0.0 -s
 255.255.255.0

[Deny all the TELNET connection.] set remote-access protocol telnet -a deny

## Comment

None

CLI Console

## show hitrack setting

#### Command

show hitrack setting

## Description

Shows the setting of HiTrack setting.

#### Parameters

None

## Show items

 HiTrack agent setting --Server cooperation HiTrack Enable or Disable enable : HiTrack enable disable : HiTrack disable
 HiTrack management server setting --IP address

IP address of HiTrack management server.

## Message

None

## Example

[Shows the setting of HiTrack] show hitrack setting

## Comment

## set hitrack agent

## Command

set hitrack agent -c <hitrack\_permit\_con> [-F]

## Description

Sets the HiTrack agent.

#### **Parameters**

-c <hitrack\_permit\_con> HiTrack Enable or Disable enable : HiTrack enable disable : HiTrack disable

-F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

[Sets the HiTrack agent.] set hitrack agent -c enable

## Comment

## set hitrack manager

#### Command

set hitrack manager -i <hitrack ip addr> [-F]

### Description

Sets the HiTrack management server. Adds server when IP address is not registered and updates the setting when registered.

#### **Parameters**

-i <hitrack\_ip\_addr>
 IP address of HiTrack management server

-F

Executes the command without inquiry.

#### Show items

None

#### Message

None

## Example

```
[Sets the HiTrack management server.]
set hitrack manager -i 192.168.0.20
```

## Comment

## delete hitrack manager

## Command

delete hitrack manager -i <hitrack\_ip\_addr> [-F]

## Description

Deletes the HiTrack management server.

## Parameters

-i <hitrack\_ip\_addr> IP address of HiTrack management server.

-F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

```
[Deletes the HiTrack management server.]
delete hitrack manager -i 192.168.0.20
```

## Comment

## **SNMP**

#### show snmp agent

#### Command

show snmp agent

#### Description

Shows the setting of SNMP agent.

#### **Parameters**

None

#### Show items

-- SNMP agent setting --Agent Enabled or disabled of SNMP agent. Enable : Enabled Disable : Disabled

Contact name Contact name of SNMP agent. Maximum of 60 characters.

#### Location

Location of SNMP agent. Maximum of 60 characters.

Port number

Port number of SNMP agent which should be different from the one SNMP agent uses

Range is from 1 to 65535.

#### Trap level

Trap level of SNMP agent.

Disable : Not send any reports.Alert: Send only level "non-recoverable" and "serious".Information: Send only level "information" .ALL: Send all levels.

#### SNMP version

Version of SNMP agent.

Engine ID string

Engine ID string of SNMP manager. Available when SNMP version is v3. From 1 to 27 characters.

Engine ID

Engine ID of SNMP manager. Available when SNMP version is v3. From 12 to 64 characters.

#### Message

None

## Example

[Shows the setting of SNMP agent.] show snmp agent

## Comment

#### set snmp agent

#### Command

```
set snmp agent [-v <snmp_valid>] [-c <snmp_contact>] [-l <snmp_loc>] [-p
<snmp_port>] [-t <snmp_trap>] [-s <snmp_version>] [-e <snmp_engine_str>]
[-F]
```

#### Description

Edits the setting of SNMP agent.

#### **Parameters**

- -v <snmp\_valid>
  Enabled or disabled of SNMP agent.
  enable : Enabled
  disable : Disabled
- -c <snmp\_contact>
   Contact name of SNMP agent.
   Maximum of 60 characters.
- -l <snmp\_loc> Location of SNMP agent. Maximum of 60 characters.
- -p <snmp\_port> Port number of SNMP agent. Range is from 1 to 65535.
- -t <snmp\_trap>
  - Trap level of SNMP agent.
    - disable : Not send any reports.

alert	:	Send level "non-recoverable" and "serious".
information	:	Send only level "information".
all	:	Send all levels.

- -s <snmp\_version> Version of SNMP agent.
- -e <snmp\_engine\_str>
   Engine ID string of SNMP manager.
   Available when SNMP version is v3.
   From 1 to 27 characters.
- -F

Executes the command without inquiry.

### Show items

None

### Message

None

## Example

```
[Edit SNMP agent setting.]
   set snmp agent -v enable -c contact_name -l location -p 161 -t
   information -s v1/v2c
```

## Comment

#### show snmp manager

#### Command

show snmp manager [-n <snmp mgr num>]

### Description

Shows the setting of SNMP manager.

#### Parameters

-n <snmp\_mgr\_num> Number of SNMP manager. Up to 8 SNMP managers can be set. Range is fixed value 0.

#### Show items

-- SNMP Manager setting --SNMP version Version of SNMP agent.

Host name

Domain name (FQDN) or IP address of SNMP manager. Maximum of 255 characters.

Port number

Port number of SNMP manager. Port number must be different from SNMP agent. Range is from 1 to 65535.

Community name Community name of SNMP manager. Maximum of 60 characters. Available when SNMP version is v1/v2c.

#### User name

User name of SNMP manager. From 1 to 32 characters.

Available when SNMP version is v3.

#### Access type

Access type of SNMP manager.

noauth-nopriv: without authentication, without encryption.auth-nopriv: with authentication, without encryption.auth-priv: with authentication, with encryption.Available when SNMP version is v3.

Authentication type Type of authentication. md5 : MD5. sha : SHA. Available when access type is auth-nopriv or auth-priv.

#### Encrypt type

Type of encryption. des : DES. aes : AES. Available when access type is auth-priv.

## Message

None

## Example

[Shows the setting of SNMP manager.] show snmp manager -n 0

## Comment

#### set snmp manager

#### Command

```
set snmp manager -n <snmp_mgr_num> [-s <snmp_version>] [-h
<snmp_mgr_host_name>] [-p <snmp_mgr_port>] [-c
<snmp_mgr_community_name>] [-u <snmp_mgr_user_name>] [-a
<snmp_mgr_access_type>] [-at <snmp_mgr_auth_type>] [-ap
<snmp_mgr_auth_password>] [-et <snmp_mgr_encrypt_type>] [-ep
<snmp_mgr_encrypt_password>] [-F]
```

#### Description

Edits the setting of SNMP manager.

#### **Parameters**

- -n <snmp\_mgr\_num> Number of SNMP manager. Up to 8 SNMP managers can be set. Range is fixed value 0.
- -s <snmp\_version> Version of SNMP agent.
- -h <snmp\_mgr\_host\_name> Domain name (FQDN) or IP address of SNMP manager. Maximum of 255 characters.

-p <snmp\_mgr\_port> Port number of SNMP manager.

Range is from 1 to 65535.

 -c <snmp\_mgr\_community\_name> Community name of SNMP manager. Maximum of 60 characters. Available when SNMP version is v1/v2c.

-u <snmp\_mgr\_user\_name> User name of SNMP manager. From 1 to 32 characters. Available when SNMP version is v3.

-a <snmp\_mgr\_access\_type>

Access type of SNMP manager.

noauth-nopriv : without authentication, without encryption. auth-nopriv : with authentication, without encryption. auth-priv : with authentication, with encryption. Available when SNMP version is v3.

-at <snmp\_mgr\_auth\_type> Type of authentication. vmd5 : MD5. sha : SHA. Available when SNMP version is v3 -ap <snmp\_mgr\_auth\_password> Password for authentication. Available when SNMP version is v3 -et <snmp\_mgr\_encrypt\_type> Type of encryption. des : DES. : AES. aes Available when SNMP version is v3. -ep <snmp\_mgr\_encrypt\_password> Password for encryption. Available when SNMP version is v3. -F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

```
[Edits the setting of SNMP manager.(v1/v2)]
   set snmp manager -n 0 -s v3 -h 0.0.0.0 -p 162 -c community name
[Edits the setting of SNMP manager. (v3)]
```

```
set snmp manager -n 0 -s v3 -h 0.0.0.0 -p 162 -u user name
-a auth-priv -at md5-ap password -et des -ep password
```

## Comment

## show snmp mib

#### Command

show snmp mib

## Description

Shows the SNMP MIB file version.

#### **Parameters**

None

## Show items

-- MIB information --Version Version of MIB.

#### Message

None

## Example

[Shows the SNMP MIB file version.] show snmp mib

## Comment

## test snmp trap

#### Command

test snmp trap [-F]

## Description

Sends the SNMP test trap.

#### **Parameters**

-F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

[Send the SNMP test trap.] test snmp trap

## Comment

## Log

## show log sel

### Command

show log sel [-f <filter>] [-l <level>]

## Description

Shows the system event log(SEL).

## Parameters

f <filter></filter>	
Filter to select rows to show.	
M, M0 ~ M1, B, B0, FAN, FAN0 ~ FAN5	5,
PS, PS0 ~ PS3	

#### -l <level>

Level of system event log.

0	: all level
1	: caution, warning, fail level only
2	: warning, fail level only
3	: fail level only

#### Show items

-- System event log --Seq Sequence number of system event log.

Timestamp

Timestamp of system event log.

Level

Level of system event log. Info : information level. Caution : caution level. WARNING : warning level. FAIL : fail level.

#### Module

Symbol name and slot number of module which generates the system event log.

: Server , 'n' is fixed value 0.
: fan module, 'n' is 0 to 5.
: power supply module, 'n' is 0 to 3.
: front panel.
: chassis.

XID

XID of system event log.

System event log Code of system event log.

#### Message

Message of system event log. Maximum of 255 characters.

#### Message

None

## Example

```
[Shows the system event log (SEL).] show log sel
```

- [Shows the system event log (SEL) of server.] show log sel -f B0
- [Shows the system event log (SEL) of all server.] show log sel -f B
- [Shows the system event log (SEL) of fail level.] show log sel -1 3

## Comment

## Backup

## backup server bmc

#### Command

backup server bmc <server\_no>

## Description

Backup data of BMC.

#### Parameters

<server\_no> Range is always 0.

## Show items

None

#### Message

None

## Example

[Backups the BMC setting of the server 0 with backup file.] backup server bmc 0 -n 0

## Comment

#### restore server bmc

#### Command

restore server bmc <server\_no> -n <bank\_no> [-F]

## Description

Restores the BMC setting of the server with backup file.

## **Parameters**

<server\_no>

Slot number of server in the server chassis. Range is fixed value 0. Only one server can be selected.

-n <bank\_no> Bank number of backup. Range is from 0 to 4.

-F

Executes the command without inquiry.

## Show items

None

## Message

None

## Example

[Restores the BMC setting of the server 0 with backup file.]  $_{\rm restore\ server\ bmc\ 0\ -n\ 0}$ 

## Comment

## Console

exit

### Command

exit

## Description

Exit CLI console.

#### Parameters

None

## Show items

None

## Message

None

## Example

[Exit CLI console.] exit

## Comment



# MIB

This Appendix-C describes the method and items of MIB.

- □ <u>Overview</u>
- □ Standard MIB
- □ Private MIB

## **Overview**

This section describes the method of MIB description.

## **MIB structure**

The following figure describes the MIB tree structure.



**Figure C-1: MIB tree structure** 

(2)

## **Method of MIB description**

This section describes the symbolic convention that is used in this guide.

## **Object identifier**

The object identifier displays the name of MIB object identifier.

## OID

The OID displays the OID that is corresponded to the MIB object identifier.

## **SYNTAX**

The following table describes the syntax that is used in the private MIB.

No.	SYNTAX	Description
1	Not-Accessible	Access is disabled.
2	Display String	0 to 255 characters are enabled.
3	INTEGER	Integer value range: -2147483648 to 2147483647 are enabled.
4	Integer32	Integer value range: -2147483648 to 2147483647 are enabled.
5	OBJECT IDENTIFIER	Object identifier

Table C-1: Syntax of MIB

## Access

- RO: Displays MIB access is read-only.
- RW: Displays MIB access is read-write.
- NA: Displays MIB access is not-accessible.

## **Standard MIB**

This section describes the items of standard MIB.

## **Support items**

The following table describes the nine supported groups by the standard MIB.

No.	Object identifier	OID	Description		
1	system	.1.3.6.1.2.1.1*	Device information		
2	interfaces	.1.3.6.1.2.1.2	Interface information		
3	at	.1.3.6.1.2.1.3	ARP information		
4	ip	.1.3.6.1.2.1.4	IP information		
5	icmp	.1.3.6.1.2.1.5	ICMP information		
6	tcp	.1.3.6.1.2.1.6	TCP information		
7	udp	.1.3.6.1.2.1.7	UDP information		
8	snmp	.1.3.6.1.2.1.11	SNMP information		
9	snmpModules	.1.3.6.1.6.3	SNMPv3 information		
* "1.3.6.1.2.1.1.8" and "1.3.6.1.2.1.1.9" are not contained.					

Table C-2: Supported standard MIB objects

Tip .	•	The attribute access that in the standard of SNMP is read-write (RW) displays read-only (RO) in this guide.
$\bigcirc$	•	The contents of object are according to the regulation of RFC1213 RFC1285, and RFC1398.

For details of contents, see the website or the manual of SNMP manager.

## **Private MIB**

This section describes the private MIB.

## **Specification of SNMP Trap**

The following table describes the notification of SNMP trap.

	Item	Description		
Content of messaging	Binding of the first variable	Time of alert transmission		
	Binding of the second variable	Chassis ID		
	Binding of the third variable Alert level			
	Binding of the fourth variable	Alert ID		
	Binding of the fifth variable	Alert message		
	Binding of the sixth variable*	Alert outbreak part		
	Binding of the seventh variable	Alert module type		
	Binding of the eighth variable	Alert module location		
	Binding of the ninth variable	Alert module model name		
	Binding of the tenth variable	Alert module serial number		
	Binding of the eleventh variable	Alert event code		
* This is not bound in HCSM alert.				

## Table C-3: Specification of SNMP Trap

## **Event contents of SNMP Trap**

The following table describes the event contents of SNMP trap.

Table C-4: Co	ntents of	SNMP	Trap
---------------	-----------	------	------

SNMP trap event name	OID	Description	
hcsmAlertTrapMonitoringError	1.3.6.1.4.1.116.5.52.10.2. 1.1.1	The event of the fault level was encountered as monitoring alert.	
hcsmAlertTrapMonitoringWarning	1.3.6.1.4.1.116.5.52.10.2. 1.1.2	The event of the warning level was encountered as monitoring alert.	
hcsmAlertTrapMonitoringInformation	1.3.6.1.4.1.116.5.52.10.2. 1.1.3	The event of the information level was encountered as monitoring alert.	
hcsmAlertTrapEventError	1.3.6.1.4.1.116.5.52.10.2. 1.2.1	The event of the fault level was encountered as event alert.	
hcsmAlertTrapEventWarning	1.3.6.1.4.1.116.5.52.10.2. 1.2.2	The event of the warning level was encountered as event alert.	
hcsmAlertTrapEventInformation	1.3.6.1.4.1.116.5.52.10.2. 1.2.3	The event of the information level was encountered as event alert.	
hcsmAlertTrapStatusChangeError	1.3.6.1.4.1.116.5.52.10.2. 1.3.1	The event of the fault level was encountered as state change alert.	
hcsmAlertTrapStatusChangeWarning	1.3.6.1.4.1.116.5.52.10.2. 1.3.2	The event of the warning level was encountered as state change alert.	
hcsmAlertTrapStatusChangeInformation	1.3.6.1.4.1.116.5.52.10.2. 1.3.3	The event of the information level was encountered as state change alert.	

## **Support Groups**

The following table describes the support groups of private MIB.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5	systemExMib	Not-Acces sible	NA	-	This shows the information of inside system.
1.3.6.1.4.1.116.5. 52	compute	Not-Acces sible	NA	-	This shows the information of "compute".
1.3.6.1.4.1.116.5. 52.2	computeRack	Not-Acces sible	NA	-	This shows the information of "Compute Rack".

Table C-5: Information of System

1.3.6.1.4.1.116. 5.52.2.1	chassis(1)	NA	NA	NA	This shows the information of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1	chassisBasicInf o(1)	NA	NA	NA	This shows the basic information of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.1	chassisInfoTyp e(1)	INTEGER	RO	Rackmount(1)/Blade (2)/Tower(3)/unkno wn(4)	This shows the chassis type of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.2	chassisInfoPro ductName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.3	chassisInfoMod el(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.4	chassisInfoSeri alNum(4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.5	chassisInfoPro ductVersion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the model version of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.6	chassisInfoPro ductManufactu rer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.7	chassisInfoCha ssisID(7)	DisplayStr ing	RO	(SIZE(040))	This shows the chassis ID of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.8	chassisInfoBoa rdProductName (8)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of board.
1.3.6.1.4.1.116.5. 52.2.1.1.9	chassisInfoBoa rdSerialNum(9 )	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of board.
1.3.6.1.4.1.116.5. 52.2.1.1.10	chassisInfoBoa rdManufacturer (10)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of board.
1.3.6.1.4.1.116.5. 52.2.1.1.11	chassisInfoUUI D(11)	DisplayStr ing	RO	(SIZE(040))	This shows UUID(universal Unique ID) of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.12	chassisInfoLogi calPartitionSup port(12)	INTEGER	RO	not-support(1)/ support(2)/unknown (3)	This shows whether the chassis supports HVM or not.
1.3.6.1.4.1.116.5. 52.2.1.1.13	chassisInfoRe moteKVMSupp ort(13)	INTEGER	RO	not-support(1)/ support(2)/unknown (3)	This shows whether the server chassis supports remote KVM or not of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.20	chassisInfoSpe c(20)	NA	NA	NA	This shows the specification of server chassis.
1.3.6.1.4.1.116.5.	chassisSpecInp	INTEGER	RO	ac(1)/dc(2)/unknow	This shows the currency type

#### Table C-6: Basic Information of Server Chassis

Syntax

Access

Value

Description

Object

identifier

OID

52.2.1.1.20.1

52.2.1.1.20.2

1.3.6.1.4.1.116.5.

utCurrentType(

chassisSpecRat

eVoltage(2)

Integer32

1)

RO

n(3)

0.1 V

of server chassis.

server chassis.

This shows the voltage of

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.1.20.3	chassisSpecTe mpUpperLimit( 3)	Integer32	RO	0.1 degrees C	This shows the upper temperature of sensor in server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.20.4	chassisSpecTe mpLowerLimit( 4)	Integer32	RO	0.1 degrees C	This shows the lower temperature of sensor in server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.20.5	chassisSpecCo nsumptionCurr ent(5)	Integer32	RO	0.1 A	This shows the maximum currency of server chassis in current configuration.
1.3.6.1.4.1.116.5. 52.2.1.1.20.6	chassisSpecPo werConsumpti on(6)	Integer32	RO	0.1 kW	This shows the maximum power consumption of server chassis in current configuration.
1.3.6.1.4.1.116.5. 52.2.1.1.20.7	chassisSpecCo nsumptionCurr entMaxConfig( 7)	Integer32	RO	0.1 A	This shows the maximum currency of server chassis in largest configuration.
1.3.6.1.4.1.116.5. 52.2.1.1.20.8	chassisSpecPo werConsumpti onMaxConfig(8 )	Integer32	RO	0.1 kW	This shows the maximum power consumption of server chassis in largest configuration.
1.3.6.1.4.1.116.5. 52.2.1.1.20.9	chassisSpecMa xAirVolume(9)	Integer32	RO	0.1 m^3/min	This shows the current air volume of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.20.10	chassisSpecHei ght(10)	Integer32	RO	U	This shows the height of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.20.11	chassisSpecTot alMass(11)	Integer32	RO	0.1 kg	This shows the total mass of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.1.20.12	chassisSpecSiz e(12)	DisplayStr ing	RO	(SIZE(040))	This shows the size of server chassis.

## Table C-7: Capacity Information of Server Chassis

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.2	chassisCapacit y(2)	NA	NA	NA	This shows the capacity of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.1	chassisCapacit yCPUSocket(1)	Integer32	RO		This shows the capacity of CPU sockets of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.2	chassisCapacit yDIMMSlot(2)	Integer32	R0		This shows the capacity of DIMM slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.3	chassisCapacit yPCISlot(3)	Integer32	R0		This shows the capacity of PCI slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.4	chassisCapacit yLOM(4)	Integer32	RO		This shows the capacity of onboard LAN ports of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.5	chassisCapacit yFan(5)	Integer32	RO		This shows the capacity of onboard fans of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.2.6	chassisCapacit yHDDSlot(6)	Integer32	R0		This shows the capacity of HDDs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.7	chassisCapacit yMediaDriveSlo t(7)	Integer32	RO		This shows the capacity of Peripheral drives of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.8	chassisCapacit yFanModuleSlo t(8)	Integer32	RO		It shows the maximum number of slots for Fan modules.
1.3.6.1.4.1.116.5. 52.2.1.2.9	chassisCapacit yPowerSupplyS lot(9)	Integer32	RO		It shows the maximum number of slots for Power Supply modules.
1.3.6.1.4.1.116.5. 52.2.1.2.10	chassisCapacit yVoltageSenso r(10)	Integer32	RO		This shows the capacity of voltage sensors of chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.11	chassisCapacit yTempSensor (11)	Integer32	RO		This shows the capacity of temperature sensors of chassis.
1.3.6.1.4.1.116.5. 52.2.1.2.12	chassisCapacit yPhysicalPartiti on(12)	Integer32	RO		This shows the capacity of physical partition of server chassis.

## Table C-8: Setting Information of Server Chassis

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.3	chassisSettings (3)	NA	NA	NA	This shows the setting of chassis.
1.3.6.1.4.1.116.5. 52.2.1.3.1	chassisSettings BelongPartition Num(1)	Integer32	RO		This shows the partition number of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.3.2	chassisSettings DetailHVMLicen ce(2)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license of detailed server chassis.
1.3.6.1.4.1.116.5. 52.2.1.3.3	chassisSettings ManagementPo rtIPAddress(3)	DisplayStr ing	RO	(SIZE(040))	This shows the IP address of management port of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.3.4	chassisSettings PowerCapping (4)	INTEGER	RO	invalid(1)/ PCAP(2)/DCMI(3)/u nknown(4)	This shows the power cap setting server chassis.
1.3.6.1.4.1.116.5. 52.2.1.3.5	chassisSettings AddMAC(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.1.3.6	chassisSettings AddWWN(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.1.3.7	chassisSettings RackInfo(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.1.3.8	chassisSettings AssetTag(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.

Table C-9: State	Information	of Server	Chassis
------------------	-------------	-----------	---------

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4	chassisState (4)	NA	NA	NA	This shows the state of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.1	chassisStatePo wer(1)	INTEGER	RO	Poweroff(1)/ standby(2)/ PowerOn(3)/ unknown(4)/ Power-on-executing( 5)/ Power-off-executing (6)	This shows the power supply state of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.2	chassisStateHe alth(2)	DisplayStr ing	RO	(SIZE(040))	This shows the state of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.3	chassisStateCu rrentVoltage (3)	Integer32	RO	0.1 V	This shows the current voltage of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.4	chassisStateCo nsumptionCurr ent(4)	Integer32	RO	0.1 A	This shows the consumption current of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.5	chassisStatePo werConsumpti on(5)	Integer32	RO	0.1 kW	This shows the power consumption of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.6	chassisStateInt akeTemp(6)	Integer32	RO	0.1 degrees C	This shows the state of intake temperature of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.7	chassisStateFa nAirVolume(7)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module1.
1.3.6.1.4.1.116.5. 52.2.1.4.8	chassisRedund ancy(8)	NA	NA	NA	This shows the redundancy of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.8.1	chassisRedund ancyFan(1)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.8.2	chassisRedund ancyPowerSup ply(2)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of power supply module of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.9	chassisFrontPa nelLEDTable(9)	NA	NA	NA	This shows the table of front panel LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.9.1	chassisFrontPa nelLEDEntry(1)	NA	NA	NA	This shows the entry of front panel LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.9.1.1	chassisFrontPa nelLEDIndex (1)	Integer32	RO		This shows the index of front panel LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.9.1.2	chassisFrontPa nelLEDName (2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of front panel LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.9.1.3	chassisFrontPa nelLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
OID	Object identifier	Syntax	Access	Value	Description
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1.3.6.1.4.1.116.5. 52.2.1.4.9.1.4	chassisFrontPa nelLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of front panel LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.9.1.5	chassisFrontPa nelLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of front panel LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.10	chassisPostCod eLED(10)	Integer32	RO		This shows the post code of front panel seven segment LED of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.20	chassisStateOt her(20)	NA	NA	NA	This shows the other state of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.20.1	chassisMaintMo de(1)	INTEGER	RO	Normal(1)/ CE-Maint-mode(2)/ User-Maint-mode(3) / unknown(4)	This shows the maintenance mode of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.30	chassisLatestH WLogInfo(30)	DisplayStr ing	RO	(SIZE(040))	This shows the information on the newest HW logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31	chassisHWLogT able(31)	NA	NA	NA	This shows the table on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1	chassisHWLogE ntry(1)	NA	NA	NA	This shows the table on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.1	chassisHWLogI ndex(1)	Integer32	RO		This shows the index on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.2	chassisHWLogE xist(2)	INTEGER	RO	not-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.3	chassisHWLog GenerateID(3)	DisplayStr ing	RO	(SIZE(040))	This shows the occurred part on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.4	chassisHWLog RecordID(4)	DisplayStr ing	RO	(SIZE(040))	This shows the recorded ID on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.5	chassisHWLog Date(5)	DisplayStr ing	RO	(SIZE(040))	This shows the occurred date and time on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.6	chassisHWLog Code(6)	DisplayStr ing	RO	(SIZE(040))	This shows the occurred event code on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.31.1.7	chassisHWLog Detail(7)	DisplayStr ing	RO	(SIZE(040))	This shows the occurred event detail on the hardware logs of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40	chassisInstall (40)	NA	NA	NA	This shows the installed state of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4.40.1	chassisInsFron tPanel(1)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the installed state of front panel of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2	chassisInsCPU SocketTable(2)	NA	NA	NA	This shows the table of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1	chassisInsCPU SocketEntry(1)	NA	NA	NA	This shows the entry of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.1	chassisInsCPU SocketIndex (1)	Integer32	RO		This shows the index of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.2	chassisInsCPU SocketNum(2)	Integer32	RO		This shows the number of CPU sockets of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.3	chassisInsCPU SocketExist(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.4	chassisInsCPU SocketCPUNam e(4)	DisplayStr ing	RO	(SIZE(040))	This shows the CPU name of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.5	chassisInsCPU SocketCPUFreq uency(5)	Integer32	RO	MHz	This shows the CPU frequency of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.6	chassisInsCPU SocketCPUStep ping(6)	DisplayStr ing	RO		This shows the CPU stepping of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.7	chassisInsCPU SocketCPUCore Num(7)	Integer32	RO		This shows the CPU core number of CPU socket of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.8	chassisInsCPU SocketCPUUpp erLimitTemp (8)	Integer32	RO	0.1 degrees C	This shows the highest temperature threshold of CPU0 sensor in server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.2.1.9	chassisInsCPU SocketCPULow erLimitTemp (9)	Integer32	RO	0.1 degrees C	This shows the lowest temperature threshold of CPU0 sensor in server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.3	chassisInsDIM MCapacity(3)	Integer32	RO	GB	This shows the total amount of DIMM capacity of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4	chassisInsDIM MSlotTable(4)	NA	NA	NA	This shows the table of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1	chassisInsDIM MSlotEntry(1)	NA	NA	NA	This shows the entry of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.1	chassisInsDIM MSlotIndex(1)	Integer32	RO		This shows the index of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.2	chassisInsDIM MSlotNum(2)	Integer32	RO		This shows the registrated state of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.3	chassisInsDIM MSlotExist(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the capacity of DIMM slots of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.4	chassisInsDIM MSlotDIMMCap acity(4)	Integer32	RO	GB	This shows the DIMM type of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.5	chassisInsDIM MSlotDIMMTyp e(5)	DisplayStr ing	RO	(SIZE(040))	This shows the DIMM frequency of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.6	chassisInsDIM MSlotDIMMFre quency(6)	Integer32	RO	MHz	This shows the DIMM cas latency of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.7	chassisInsDIM MSlotDIMMCas Latency(7)	INTEGER	RO	normal(1)/unknown( 2)/degenerated(3)/p lanned-degenerated (4)	This shows the DIMM state of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.4.1.8	chassisInsDIM MSlotDIMMStat us(8)	INTEGER	RO	normal(1)/unknown( 2)/degenerated(3)/p lanned-degenerated (4)	This shows the DIMM state of DIMM slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5	chassisInsPCIS lotTable(5)	NA	NA	NA	This shows the table of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1	chassisInsPCIS lotEntry(1)	NA	NA	NA	This shows the entry of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.1	chassisInsPCIS lotIndex(1)	Integer32	RO		This shows the index of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.2	chassisInsPCIS lotNum(2)	Integer32	RO		This shows the slot number of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.3	chassisInsPCIS lotType(3)	DisplayStr ing	RO	(SIZE(040))	This shows the type of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.4	chassisInsPCIS lotExist(4)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.5	chassisInsPCIS lotPCIType(5)	DisplayStr ing	RO	(SIZE(040))	This shows the PCI type of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.6	chassisInsPCIS lotPCIProductN ame(6)	DisplayStr ing	RO	(SIZE(040))	This shows the PCI product name of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.7	chassisInsPCIS lotPCISerial(7)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.5.1.8	chassisInsPCIS lotPCIManufact urer(8)	DisplayStr ing	RO	(SIZE(040))	This shows the manufacturer of PCI slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6	chassisInsLOM Table(6)	NA	NA	NA	This shows the table of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1	chassisInsLOM Entry(1)	NA	NA	NA	This shows the entry of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.1	chassisInsLOMI ndex(1)	Integer32	RO		This shows the index of onboard LAN of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.2	chassisInsLOM Type(2)	DisplayStr ing	RO	(SIZE(040))	This shows the type of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.3	chassisInsLOM LinkSpeed(3)	Integer32	RO		This shows the link speed of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.4	chassisInsLOM MAC(4)	DisplayStr ing	RO	(SIZE(040))	This shows the MAC address of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.5	chassisInsLOM LinkStatus(5)	INTEGER	RO	up(1)/down(2)/unkn own(3)	This shows the link state of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.6	chassisInsLOM PortDivide(6)	INTEGER	RO	possible(1)/Impossi ble(2)/unknown(3)	This shows the port divide propriety of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.6.1.7	chassisInsLOM PortDivideNum (7)	Integer32	RO		This shows the port divide number of onboard LAN of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7	chassisInsFanT able(7)	NA	NA	NA	This shows the table of fan of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1	chassisInsFanE ntry(1)	NA	NA	NA	This shows the entry of fan of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.1	chassisInsFanI ndex(1)	Integer32	RO		This shows the index of fan of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.2	chassisInsFanL ocation(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.3	chassisInsFanE xist(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.4	chassisInsFan MaxRPM(4)	Integer32	RO	rpm	This shows the maximum rpm of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.5	chassisInsFan MaxAirVolume (5)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.6	chassisInsFanR PM(6)	Integer32	RO	rpm	This shows the rpm value of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.7	chassisInsFanA irVolume(7)	Integer32	RO	0.1 m^3/min	This shows the air volume of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.8	chassisInsFanR PMValid(8)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.7.1.9	chassisInsFanS tateHealth(9)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8	chassisHDDSlo tTable(8)	NA	NA	NA	This shows the table of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1	chassisHDDSlo tEntry(1)	NA	NA	NA	This shows the entry of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.1	chassisHDDSlo tIndex(1)	Integer32	RO		This shows the index of HDD slot of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.2	chassisHDDSlo t1Num(2)	Integer32	RO		This shows the number of HDD slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.3	chassisHDDSlo t1Exist(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.4	chassisHDDSlo t1HDDType(4)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD type of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.5	chassisHDDSlo t1HDDProduct Name(5)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD product name of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.6	chassisHDDSlo t1HDDModel(6 )	DisplayStr ing	RO	(SIZE(040))	This shows the HDD model of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.7	chassisHDDSlo t1HDDSerialNu m(7)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD serial number of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.8	chassisHDDSlo t1HDDCapacity (8)	Integer32	RO	GB	This shows the HDD capacity of HDD slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.9	chassisHDDSlo t1HDDRPM(9)	Integer32	RO	rpm	This shows the HDD drive speed of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.1 0	chassisHDDSlo t1HDDStatePo wer(10)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the HDD power supply state of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.1 1	chassisHDDSlo t1HDDStateHe alth(11)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the HDD health state of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.1 2	chassisHDDSlo t1HDDStateLE DACT(12)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the LED state of HDD slot of server chassis(activity).
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.1 3	chassisHDDSlo t1HDDStateLE DSTS(13)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the LED state of HDD slot of server chassis(status).
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.2 0	chassisHDDSlo t1HDDFWInfo1 Name(20)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD firmware name of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.2 1	chassisHDDSlo t1HDDFWInfo1 CurrentVer(21)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD firmware current version of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.8.1.2 2	chassisHDDSlo t1HDDFWInfo1 NextVer(22)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD firmware next version of HDD slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9	chassisMediaDr iveSlotTable(9)	NA	NA	NA	This shows the table of Peripheral drive slot of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1	chassisMediaDr iveSlotEntry(1)	NA	NA	NA	This shows the entry of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.1	chassisMediaDr iveSlotIndex (1)	Integer32	RO		This shows the index of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.2	chassisMediaDr iveSlotNum(2)	Integer32	RO		This shows the number of Peripheral drive slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.3	chassisMediaDr iveSlotExist(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.4	chassisMediaDr iveSlotDriveTy pe(4)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD type of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.5	chassisMediaDr iveSlotDrivePro ductName(5)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD product name of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.6	chassisMediaDr iveSlotDriveMo del(6)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD model of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.7	chassisMediaDr iveSlotDriveSer ialNum(7)	DisplayStr ing	RO	(SIZE(040))	This shows the HDD serial number of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.1 0	chassisMediaDr iveSlotDriveSta tePower(10)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the Peripheral drive power supply state of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.9.1.1 1	chassisMediaDr iveSlotDriveSta teHealth(11)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the Peripheral drive health state of Peripheral drive slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.10	chassisInsFanS lotTable(10)	NA	NA	NA	This shows the table of fan module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.10.1	chassisInsFanS lotEntry(1)	NA	NA	NA	This shows the entry of fan module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.10.1. 1	chassisInsFanS lotIndex(1)	Integer32	RO		This shows the index of fan module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.10.1. 2	chassisInsFanS lotNum(2)	Integer32	RO		This shows the number of fan module slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.10.1. 3	chassisInsFanS lotExist(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of fan module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.10.1. 4	chassisInsFanS lotObjectID(4)	OBJECT IDENTIFIE R	RO		This shows the object ID of fan module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.11	chassisInsPowe rSupplySlotTab le(11)	NA	NA	NA	This shows the table of power supply module slot of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.4.40.11.1	chassisInsPowe rSupplySlotEnt ry(1)	NA	NA	NA	This shows the entry of power supply module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.11.1. 1	chassisInsPowe rSupplySlotInd ex(1)	Integer32	RO		This shows the index of power supply module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.11.1. 2	chassisInsPowe rSupplySlotNu m(2)	Integer32	RO		This shows the number of power supply module slots of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.11.1. 3	chassisInsPowe rSupplySlotExi st(3)	INTEGER	RO	non-exist(1)/ exist(2)/ unknown(3)	This shows the registrated state of power supply module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.40.11.1. 4	chassisInsPowe rSupplySlotObj ectID(4)	OBJECT IDENTIFIE R	RO		This shows the object ID of power supply module slot of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.50	chassisVoltage SensorTable (50)	NA	NA	NA	This shows the table of voltage sensor of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.50.1	chassisVoltage SensorEntry(1)	NA	NA	NA	This shows the entry of voltage sensor of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.50.1.1	chassisVoltage SensorIndex (1)	Integer32	RO		This shows the index of voltage sensor of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.50.1.2	chassisVoltage SensorName (2)	DisplayStr ing	RO	(SIZE(040))	This shows the voltage sensor name of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.50.1.3	chassisVoltage SensorValue (3)	Integer32	RO	0.1 V	This shows the voltage sensor value of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.50.1.4	chassisVoltage SensorValid(4)	INTEGER	RO	invalid(1)/valid(2)/u nknown(3)	This shows the validity of voltage sensor value of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.51	chassisTempSe nsorTable(51)	NA	NA	NA	This shows the table of temperature sensor of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.51.1	chassisTempSe nsorEntry(1)	NA	NA	NA	This shows the entry of temperature sensor of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.51.1.1	chassisTempSe nsorIndex(1)	Integer32	RO		This shows the index of temperature sensor of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.51.1.2	chassisTempSe nsorName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the temperature sensor name of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.51.1.3	chassisTempSe nsorValue(3)	Integer32	RO	0.1 degrees C	This shows the temperature sensor value of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.4.51.1.4	chassisTempSe nsorValid(4)	INTEGER	RO	invalid(1)/valid(2)/u nknown(3)	This shows the validity of temperature sensor value of server chassis.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.1.5	chassisFWInfo (5)	NA	NA	NA	This shows the firmware information of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.1	chassisFWInfoT otalVer(1)	DisplayStr ing	RO	(SIZE(040))	This shows the total current version of firmware of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.2	chassisFWInfoT able(2)	NA	NA	NA	This shows the table of firmware information of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.2.1	chassisFWInfoF WInfoEntry(1)	NA	NA	NA	This shows the entry of firmware information of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.2.1.1	chassisFWInfoI ndex(1)	Integer32	RO		This shows the index of firmware information of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.2.1.2	chassisFWInfo Name(2)	DisplayStr ing	RO	(SIZE(040))	This shows the firmware name of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.2.1.3	chassisFWInfo CurrentVer(3)	DisplayStr ing	RO	(SIZE(040))	This shows the firmware current version of server chassis.
1.3.6.1.4.1.116.5. 52.2.1.5.2.1.4	chassisFWInfo NextVer(4)	DisplayStr ing	RO	(SIZE(040))	This shows the firmware next version of server chassis.

Table C-10: Firmware Information of Server Chassis

## Table C-11: Information of Component

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2	component(2)	NA	NA	NA	This shows the information of component.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1	fanModule(1)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.1	fanModule1(1)	NA	NA	NA	This shows the information of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1	fanModule1Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.1	fanModule1Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.2	fanModule1Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.3	fanModule1Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.4	fanModule1Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.5	fanModule1Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.6	fanModule1Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.7	fanModule1Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.8	fanModule1Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.9	fanModule1Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.20	fanModule1Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.20.1	fanModule1Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.20.2	fanModule1Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.20.3	fanModule1Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.1.20.4	fanModule1Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.2	fanModule1Cap acity(2)	NA	NA	NA	This shows the capacity of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.2.1	fanModule1Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.3	fanModule1Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4	fanModule1Sta te(4)	NA	NA	NA	This shows the state of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.1	fanModule1Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.2	fanModule1Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.3	fanModule1Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module1.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.4	fanModule1Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.5	fanModule1Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6	fanModule1Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6.1	fanModule1Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6.1.1	fanModule1Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6.1.2	fanModule1Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6.1.3	fanModule1Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6.1.4	fanModule1Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.6.1.5	fanModule1Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.10	fanModule1Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.10.1	fanModule1Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.10.1. 1	fanModule1Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.10.1. 2	fanModule1Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.10.1. 3	fanModule1Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.1.4.10.1. 4	fanModule1Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module1.
1.3.6.1.4.1.116.5. 52.2.2.1.2	fanModule2(2)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1	fanModule2Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.1	fanModule2Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.2	fanModule2Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.3	fanModule2Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.4	fanModule2Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.5	fanModule2Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.6	fanModule2Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.7	fanModule2Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.8	fanModule2Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.9	fanModule2Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.20	fanModule2Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.20.1	fanModule2Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.20.2	fanModule2Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.20.3	fanModule2Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.1.20.4	fanModule2Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.2	fanModule2Cap acity(2)	NA	NA	NA	This shows the capacity of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.2.1	fanModule2Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.3	fanModule2Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4	fanModule2Sta te(4)	NA	NA	NA	This shows the state of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.1	fanModule2Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.2	fanModule2Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.3	fanModule2Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module2.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.4	fanModule2Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.5	fanModule2Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6	fanModule2Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6.1	fanModule2Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6.1.1	fanModule2Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6.1.2	fanModule2Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6.1.3	fanModule2Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6.1.4	fanModule2Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.6.1.5	fanModule2Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.10	fanModule2Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.10.1	fanModule2Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.10.1. 1	fanModule2Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.10.1. 2	fanModule2Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.10.1. 3	fanModule2Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.2.4.10.1. 4	fanModule2Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module2.
1.3.6.1.4.1.116.5. 52.2.2.1.3	fanModule3(3)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1	fanModule3Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.1	fanModule3Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.2	fanModule3Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.3	fanModule3Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.4	fanModule3Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.5	fanModule3Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.6	fanModule3Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.7	fanModule3Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.8	fanModule3Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.9	fanModule3Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.20	fanModule3Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.20.1	fanModule3Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.20.2	fanModule3Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.20.3	fanModule3Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.1.20.4	fanModule3Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.2	fanModule3Cap acity(2)	NA	NA	NA	This shows the capacity of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.2.1	fanModule3Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.3	fanModule3Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4	fanModule3Sta te(4)	NA	NA	NA	This shows the state of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.1	fanModule3Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.2	fanModule3Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.3	fanModule3Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module3.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.4	fanModule3Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.5	fanModule3Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6	fanModule3Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6.1	fanModule3Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6.1.1	fanModule3Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6.1.2	fanModule3Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6.1.3	fanModule3Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6.1.4	fanModule3Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.6.1.5	fanModule3Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.10	fanModule3Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.10.1	fanModule3Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.10.1. 1	fanModule3Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.10.1. 2	fanModule3Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.10.1. 3	fanModule3Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.3.4.10.1. 4	fanModule3Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module3.
1.3.6.1.4.1.116.5. 52.2.2.1.4	fanModule4(4)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1	fanModule4Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.1	fanModule4Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.2	fanModule4Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.3	fanModule4Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.4	fanModule4Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.5	fanModule4Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.6	fanModule4Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.7	fanModule4Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.8	fanModule4Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.9	fanModule4Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.20	fanModule4Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.20.1	fanModule4Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.20.2	fanModule4Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.20.3	fanModule4Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.1.20.4	fanModule4Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.2	fanModule4Cap acity(2)	NA	NA	NA	This shows the capacity of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.2.1	fanModule4Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.3	fanModule4Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4	fanModule4Sta te(4)	NA	NA	NA	This shows the state of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.1	fanModule4Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.2	fanModule4Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.3	fanModule4Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module4.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.4	fanModule4Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.5	fanModule4Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6	fanModule4Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6.1	fanModule4Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6.1.1	fanModule4Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6.1.2	fanModule4Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6.1.3	fanModule4Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6.1.4	fanModule4Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.6.1.5	fanModule4Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.10	fanModule4Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.10.1	fanModule4Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.10.1. 1	fanModule4Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.10.1. 2	fanModule4Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.10.1. 3	fanModule4Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.4.4.10.1. 4	fanModule4Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module4.
1.3.6.1.4.1.116.5. 52.2.2.1.5	fanModule5(5)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1	fanModule5Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.1	fanModule5Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.2	fanModule5Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.3	fanModule5Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.4	fanModule5Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.5	fanModule5Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.6	fanModule5Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.7	fanModule5Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.8	fanModule5Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.9	fanModule5Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.20	fanModule5Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.20.1	fanModule5Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.20.2	fanModule5Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.20.3	fanModule5Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.1.20.4	fanModule5Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.2	fanModule5Cap acity(2)	NA	NA	NA	This shows the capacity of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.2.1	fanModule5Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.3	fanModule5Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4	fanModule5Sta te(4)	NA	NA	NA	This shows the state of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.1	fanModule5Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.2	fanModule5Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.3	fanModule5Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module5.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.4	fanModule5Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.5	fanModule5Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6	fanModule5Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6.1	fanModule5Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6.1.1	fanModule5Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6.1.2	fanModule5Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6.1.3	fanModule5Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6.1.4	fanModule5Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.6.1.5	fanModule5Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.10	fanModule5Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.10.1	fanModule5Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.10.1. 1	fanModule5Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.10.1. 2	fanModule5Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.10.1. 3	fanModule5Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.5.4.10.1. 4	fanModule5Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module5.
1.3.6.1.4.1.116.5. 52.2.2.1.6	fanModule6(6)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1	fanModule6Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.1	fanModule6Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.2	fanModule6Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.3	fanModule6Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.4	fanModule6Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.5	fanModule6Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.6	fanModule6Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.7	fanModule6Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.8	fanModule6Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.9	fanModule6Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.20	fanModule6Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.20.1	fanModule6Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.20.2	fanModule6Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.20.3	fanModule6Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.1.20.4	fanModule6Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.2	fanModule6Cap acity(2)	NA	NA	NA	This shows the capacity of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.2.1	fanModule6Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.3	fanModule6Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4	fanModule6Sta te(4)	NA	NA	NA	This shows the state of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.1	fanModule6Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.2	fanModule6Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.3	fanModule6Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module6.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.4	fanModule6Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.5	fanModule6Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6	fanModule6Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6.1	fanModule6Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6.1.1	fanModule6Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6.1.2	fanModule6Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6.1.3	fanModule6Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6.1.4	fanModule6Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.6.1.5	fanModule6Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.10	fanModule6Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.10.1	fanModule6Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.10.1. 1	fanModule6Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.10.1. 2	fanModule6Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.10.1. 3	fanModule6Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.6.4.10.1. 4	fanModule6Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module6.
1.3.6.1.4.1.116.5. 52.2.2.1.7	fanModule7(7)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1	fanModule7Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.1	fanModule7Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.2	fanModule7Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.3	fanModule7Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.4	fanModule7Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.5	fanModule7Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.6	fanModule7Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.7	fanModule7Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.8	fanModule7Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.9	fanModule7Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.20	fanModule7Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.20.1	fanModule7Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.20.2	fanModule7Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.20.3	fanModule7Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.1.20.4	fanModule7Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.2	fanModule7Cap acity(2)	NA	NA	NA	This shows the capacity of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.2.1	fanModule7Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.3	fanModule7Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4	fanModule7Sta te(4)	NA	NA	NA	This shows the state of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.1	fanModule7Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.2	fanModule7Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.3	fanModule7Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module7.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.4	fanModule7Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.5	fanModule7Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6	fanModule7Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6.1	fanModule7Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6.1.1	fanModule7Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6.1.2	fanModule7Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6.1.3	fanModule7Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6.1.4	fanModule7Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.6.1.5	fanModule7Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.10	fanModule7Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.10.1	fanModule7Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.10.1. 1	fanModule7Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.10.1. 2	fanModule7Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.10.1. 3	fanModule7Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.7.4.10.1. 4	fanModule7Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module7.
1.3.6.1.4.1.116.5. 52.2.2.1.8	fanModule8(8)	NA	NA	NA	This shows the information of fan module.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1	fanModule8Bas icInfo(1)	NA	NA	NA	This shows the basic information of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.1	fanModule8Inf oType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the type of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.2	fanModule8Inf oProductName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.3	fanModule8Inf oModel(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.4	fanModule8Inf oSerialNum(4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.5	fanModule8Inf oProductVersio n(5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.6	fanModule8Inf oProductManuf acturer(6)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.7	fanModule8Inf oBoardProduct Name(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.8	fanModule8Inf oBoardSerialNu m(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.9	fanModule8Inf oBoardManufac turer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.20	fanModule8Inf oSpec(20)	NA	NA	NA	This shows the specification of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.20.1	fanModule8Spe cMaxRPM(1)	Integer32	RO	rpm	This shows the maximum rpm of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.20.2	fanModule8Spe cMaxAirVolume (2)	Integer32	RO	0.1 m^3/min	This shows the maximum air volume of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.20.3	fanModule8Spe cMinRPM(3)	Integer32	RO	rpm	This shows the minimum rpm of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.1.20.4	fanModule8Spe cMinAirVolume (4)	Integer32	RO	0.1 m^3/min	This shows the minimum air volume of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.2	fanModule8Cap acity(2)	NA	NA	NA	This shows the capacity of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.2.1	fanModule8Cap acityFan(1)	Integer32	RO		This shows the capacity of fans of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.3	fanModule8Set tings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4	fanModule8Sta te(4)	NA	NA	NA	This shows the state of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.1	fanModule8Sta teSlotNum(1)	Integer32	RO		This shows the number of installed slots of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.2	fanModule8Sta tePower(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.3	fanModule8Sta teHealth(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of fan module8.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.4	fanModule8Sta teRedundancy (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the redundancy of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.5	fanModule8Sta teAirVolume(5)	Integer32	RO	0.1 m^3/min	This shows the current air volume of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6	fanModule8Sta teLEDTable(6)	NA	NA	NA	This shows the table of LED of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6.1	fanModule8Sta teLEDEntry(1)	NA	NA	NA	This shows the entry of LED of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6.1.1	fanModule8Sta teLEDIndex(1)	Integer32	RO		This shows the index of LED of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6.1.2	fanModule8Sta teLEDName(2)	DisplayStr ing	RO	(SIZE(040))	This shows the name of LED of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6.1.3	fanModule8Sta teLEDType(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6.1.4	fanModule8Sta teLEDState(4)	INTEGER	RO	turn-off(1)/ turn-on(2)/ unknown(3)/ blink(4)/ blink-fast(5)/ blink-slow(6)	This shows the state of LED of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.6.1.5	fanModule8Sta teLEDColor(5)	INTEGER	RO	blue(1)/green(2)/re d(3)/amber(4)/unkn own(5)	This shows the color of LED of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.10	fanModule8Sta teFanTable(10)	NA	NA	NA	This shows the table of fan of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.10.1	fanModule8Sta teFanEntry(1)	NA	NA	NA	This shows the entry of fan of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.10.1. 1	fanModule8Sta teFanIndex(1)	Integer32	RO		This shows the index of fan of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.10.1. 2	fanModule8Sta teFanLocation (2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of fan of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.10.1. 3	fanModule8Sta teFanRPM(3)	Integer32	RO	rpm	This shows the rpm value of fan module8.
1.3.6.1.4.1.116.5. 52.2.2.1.8.4.10.1. 4	fanModule8Sta teFanRPMValid (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of fan rpm value of fan module8.

## Table C-13: Information of Power Supply Module

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2	powerSupply (2)	NA	NA	NA	This shows the information of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1	powerSupply1 (1)	NA	NA	NA	This shows the information of power supply module1.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.1.1	powerSupply1 BasicInfo(1)	NA	NA	NA	This shows the basic information of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.1	powerSupply1I nfoType(1)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.2	powerSupply1I nfoProductNam e(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.3	powerSupply1I nfoModel(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model name of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.4	powerSupply1I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.5	powerSupply1I nfoProductVers ion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the product version of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.6	powerSupply1I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.7	powerSupply1I nfoBoardProdu ctName(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.8	powerSupply1I nfoBoardSerial Num(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.9	powerSupply1I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20	powerSupply1I nfoSpec(20)	NA	NA	NA	This shows the specification of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.1	powerSupply1 SpecRateVolta geMain(1)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module1.(main)
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.2	powerSupply1 SpecRateVolta geSub(2)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module1.(sub)
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.3	powerSupply1 SpecAmbientT empUpperLimit (3)	Integer32	RO	0.1 degrees C	This shows the highest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.4	powerSupply1 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.5	powerSupply1 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	0.1 degrees C	This shows the highest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.6	powerSupply1 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of hot spot in power supply module.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.7	powerSupply1 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 degrees C	This shows the highest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.8	powerSupply1 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1.2	powerSupply1 Capacity(2)	NA	NA	NA	This shows the capacity of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.2.1	powerSupply1 CapacityFan(1)	Integer32	RO		This shows the capacity fans of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.3	powerSupply1 Settings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4	powerSupply1 State(4)	NA	NA	NA	This shows the state of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.1	powerSupply1 StateSlotNum (1)	Integer32	RO		This shows the number of installed slots of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.2	powerSupply1 StatePower(2)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the power supply state of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.3	powerSupply1 StateHealth(3)	INTEGER	RO	normal(1)/ fail(2) / unknown(3)	This shows the health state of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.4	powerSupply1 StateAmbientT emp(4)	Integer32	RO	0.1 degrees C	This shows the temperature value of ambient sensor of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.5	powerSupply1 StateHotSpotT emp(5)	Integer32	RO	0.1 degrees C	This shows the temperature value of hot spot sensor of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.6	powerSupply1 StateExhaustT emp(6)	Integer32	RO	0.1 degrees C	This shows the temperature value of exhaust sensor of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.7	powerSupply1 StateMainVolta ge(7)	Integer32	RO	0.1 V	This shows the main voltage of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.8	powerSupply1 StateSubVoltag e(8)	Integer32	RO	0.1 V	This shows the sub voltage of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.9	powerSupply1 StateInputVolt age(9)	Integer32	RO	0.1 V	This shows the input voltage of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.10	powerSupply1 StateMainCurr ent(10)	Integer32	RO	0.1 A	This shows the main current of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.11	powerSupply1 StateSubCurre nt(11)	Integer32	RO	0.1 A	This shows the sub current of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.12	powerSupply1 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the input current of power supply module1.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13	powerSupply1 StateLEDTable (13)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1	powerSupply1 StateLEDEntry (1)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 1	powerSupply1 StateLEDIndex (1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 2	powerSupply1 StateLEDName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 3	powerSupply1 StateLEDType (3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 4	powerSupply1 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 5	powerSupply1 StateLEDColor (5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14	powerSupply1 StateFanTable (14)	NA	NA	NA	This shows the table of fan of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1	powerSupply1 StateFanEntry (1)	NA	NA	NA	This shows the entry of fan of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1. 1	powerSupply1 StateFanIndex (1)	Integer32	RO		This shows the index of fan of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1. 2	powerSupply1 StateFanLocati on(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1. 3	powerSupply1 StateFanRPM (3)	Integer32	RO	rpm	This shows the rpm value of power supply module1.
1.3.6.1.4.1.116.5. 52.2.2.2.2	powerSupply2 (2)	NA	NA	NA	This shows the information of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1	powerSupply2 BasicInfo(1)	NA	NA	NA	This shows the basic information of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.1	powerSupply2I nfoType(1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.2	powerSupply2I nfoProductNam e(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.3	powerSupply2I nfoModel(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model name of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.4	powerSupply2I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of power supply module2.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.5	powerSupply2I nfoProductVers ion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the product version of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.6	powerSupply2I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.7	powerSupply2I nfoBoardProdu ctName(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.8	powerSupply2I nfoBoardSerial Num(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.9	powerSupply2I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20	powerSupply2I nfoSpec(20)	NA	NA	NA	This shows the specification of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.1	powerSupply2 SpecRateVolta geMain(1)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module2.(main)
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.2	powerSupply2 SpecRateVolta geSub(2)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module2.(sub)
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.3	powerSupply2 SpecAmbientT empUpperLimit (3)	Integer32	RO	0.1 degrees C	This shows the highest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.4	powerSupply2 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.5	powerSupply2 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	0.1 degrees C	This shows the highest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.6	powerSupply2 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.7	powerSupply2 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 degrees C	This shows the highest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.8	powerSupply2 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2	powerSupply2 Capacity(2)	NA	NA	NA	This shows the capacity of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.2.1	powerSupply2 CapacityFan(1)	Integer32	RO		This shows the capacity fans of power supply module2.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.3	powerSupply2 Settings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4	powerSupply2 State(4)	NA	NA	NA	This shows the state of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.1	powerSupply2 StateSlotNum (1)	Integer32	RO		This shows the number of installed slots of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.2	powerSupply2 StatePower(2)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the power supply state of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.3	powerSupply2 StateHealth(3)	INTEGER	RO	normal(1)/ fail(2) / unknown(3)	This shows the health state of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.4	powerSupply2 StateAmbientT emp(4)	Integer32	RO	0.1 degrees C	This shows the temperature value of ambient sensor of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.5	powerSupply2 StateHotSpotT emp(5)	Integer32	RO	0.1 degrees C	This shows the temperature value of hot spot sensor of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.6	powerSupply2 StateExhaustT emp(6)	Integer32	RO	0.1 degrees C	This shows the temperature value of exhaust sensor of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.7	powerSupply2 StateMainVolta ge(7)	Integer32	RO	0.1 V	This shows the main voltage of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.8	powerSupply2 StateSubVoltag e(8)	Integer32	RO	0.1 V	This shows the sub voltage of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.9	powerSupply2 StateInputVolt age(9)	Integer32	RO	0.1 V	This shows the input voltage of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.10	powerSupply2 StateMainCurr ent(10)	Integer32	RO	0.1 A	This shows the main current of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.11	powerSupply2 StateSubCurre nt(11)	Integer32	RO	0.1 A	This shows the sub current of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.12	powerSupply2 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the input current of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13	powerSupply2 StateLEDTable (13)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1	powerSupply2 StateLEDEntry (1)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 1	powerSupply2 StateLEDIndex (1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 2	powerSupply2 StateLEDName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 3	powerSupply2 StateLEDType (3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 4	powerSupply2 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 5	powerSupply2 StateLEDColor (5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14	powerSupply2 StateFanTable (14)	NA	NA	NA	This shows the table of fan of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1	powerSupply2 StateFanEntry (1)	NA	NA	NA	This shows the entry of fan of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1. 1	powerSupply2 StateFanIndex (1)	Integer32	RO		This shows the index of fan of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1. 2	powerSupply2 StateFanLocati on(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1. 3	powerSupply2 StateFanRPM (3)	Integer32	RO	rpm	This shows the rpm value of power supply module2.
1.3.6.1.4.1.116.5. 52.2.2.2.3	powerSupply3 (3)	NA	NA	NA	This shows the information of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1	powerSupply3 BasicInfo(1)	NA	NA	NA	This shows the basic information of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.1	powerSupply3I nfoType(1)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.2	powerSupply3I nfoProductNam e(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.3	powerSupply3I nfoModel(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model name of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.4	powerSupply3I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.5	powerSupply3I nfoProductVers ion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the product version of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.6	powerSupply3I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.7	powerSupply3I nfoBoardProdu ctName(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.8	powerSupply3I nfoBoardSerial Num(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.

C-40

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.9	powerSupply3I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.3.1.20	powerSupply3I nfoSpec(20)	NA	NA	NA	This shows the specification of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.1	powerSupply3 SpecRateVolta geMain(1)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module3.(main)
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.2	powerSupply3 SpecRateVolta geSub(2)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module3.(sub)
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.3	powerSupply3 SpecAmbientT empUpperLimit (3)	Integer32	RO	0.1 degrees C	This shows the highest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.4	powerSupply3 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.5	powerSupply3 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	0.1 degrees C	This shows the highest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.6	powerSupply3 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.7	powerSupply3 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 degrees C	This shows the highest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.8	powerSupply3 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.2	powerSupply3 Capacity(2)	NA	NA	NA	This shows the capacity of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.2.1	powerSupply3 CapacityFan(1)	Integer32	RO		This shows the capacity fans of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.3.3	powerSupply3 Settings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.3.4	powerSupply3 State(4)	NA	NA	NA	This shows the state of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.1	powerSupply3 StateSlotNum (1)	Integer32	RO		This shows the number of installed slots of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.2	powerSupply3 StatePower(2)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the power supply state of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.3	powerSupply3 StateHealth(3)	INTEGER	RO	normal(1)/ fail(2) / unknown(3)	This shows the health state of power supply module3.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.4	powerSupply3 StateAmbientT emp(4)	Integer32	RO	0.1 degrees C	This shows the temperature value of ambient sensor of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.5	powerSupply3 StateHotSpotT emp(5)	Integer32	RO	0.1 degrees C	This shows the temperature value of hot spot sensor of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.6	powerSupply3 StateExhaustT emp(6)	Integer32	RO	0.1 degrees C	This shows the temperature value of exhaust sensor of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.7	powerSupply3 StateMainVolta ge(7)	Integer32	RO	0.1 V	This shows the main voltage of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.8	powerSupply3 StateSubVoltag e(8)	Integer32	RO	0.1 V	This shows the sub voltage of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.9	powerSupply3 StateInputVolt age(9)	Integer32	RO	0.1 V	This shows the input voltage of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.10	powerSupply3 StateMainCurr ent(10)	Integer32	RO	0.1 A	This shows the main current of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.11	powerSupply3 StateSubCurre nt(11)	Integer32	RO	0.1 A	This shows the sub current of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.12	powerSupply3 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the input current of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13	powerSupply3 StateLEDTable (13)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1	powerSupply3 StateLEDEntry (1)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 1	powerSupply3 StateLEDIndex (1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 2	powerSupply3 StateLEDName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 3	powerSupply3 StateLEDType (3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 4	powerSupply3 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 5	powerSupply3 StateLEDColor (5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14	powerSupply3 StateFanTable (14)	NA	NA	NA	This shows the table of fan of power supply module3.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1	powerSupply3 StateFanEntry (1)	NA	NA	NA	This shows the entry of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1. 1	powerSupply3 StateFanIndex (1)	Integer32	RO		This shows the index of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1. 2	powerSupply3 StateFanLocati on(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1. 3	powerSupply3 StateFanRPM (3)	Integer32	RO	rpm	This shows the rpm value of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4	powerSupply4 (4)	NA	NA	NA	This shows the information of power supply module4.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1	powerSupply4 BasicInfo(1)	NA	NA	NA	This shows the basic information of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.1	powerSupply4I nfoType(1)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.2	powerSupply4I nfoProductNam e(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.3	powerSupply4I nfoModel(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model name of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.4	powerSupply4I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.5	powerSupply4I nfoProductVers ion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the product version of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.6	powerSupply4I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.7	powerSupply4I nfoBoardProdu ctName(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.8	powerSupply4I nfoBoardSerial Num(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.9	powerSupply4I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20	powerSupply4I nfoSpec(20)	NA	NA	NA	This shows the specification of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.1	powerSupply4 SpecRateVolta geMain(1)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module3.(main)
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.2	powerSupply4 SpecRateVolta geSub(2)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module3.(sub)

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.3	powerSupply4 SpecAmbientT empUpperLimit (3)	Integer32	RO	0.1 degrees C	This shows the highest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.4	powerSupply4 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.5	powerSupply4 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	0.1 degrees C	This shows the highest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.6	powerSupply4 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.7	powerSupply4 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 degrees C	This shows the highest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.8	powerSupply4 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.2	powerSupply4 Capacity(2)	NA	NA	NA	This shows the capacity of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.2.1	powerSupply4 CapacityFan(1)	Integer32	RO		This shows the capacity fans of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.3	powerSupply4 Settings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4	powerSupply4 State(4)	NA	NA	NA	This shows the state of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.1	powerSupply4 StateSlotNum (1)	Integer32	RO		This shows the number of installed slots of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.2	powerSupply4 StatePower(2)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the power supply state of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.3	powerSupply4 StateHealth(3)	INTEGER	RO	normal(1)/ fail(2) / unknown(3)	This shows the health state of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.4	powerSupply4 StateAmbientT emp(4)	Integer32	RO	0.1 degrees C	This shows the temperature value of ambient sensor of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.5	powerSupply4 StateHotSpotT emp(5)	Integer32	RO	0.1 degrees C	This shows the temperature value of hot spot sensor of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.6	powerSupply4 StateExhaustT emp(6)	Integer32	RO	0.1 degrees C	This shows the temperature value of exhaust sensor of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.7	powerSupply4 StateMainVolta ge(7)	Integer32	RO	0.1 V	This shows the main voltage of power supply module3.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.8	powerSupply4 StateSubVoltag e(8)	Integer32	RO	0.1 V	This shows the sub voltage of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.9	powerSupply4 StateInputVolt age(9)	Integer32	RO	0.1 V	This shows the input voltage of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.10	powerSupply4 StateMainCurr ent(10)	Integer32	RO	0.1 A	This shows the main current of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.11	powerSupply4 StateSubCurre nt(11)	Integer32	RO	0.1 A	This shows the sub current of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.12	powerSupply4 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the input current of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13	powerSupply4 StateLEDTable (13)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1	powerSupply4 StateLEDEntry (1)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 1	powerSupply4 StateLEDIndex (1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 2	powerSupply4 StateLEDName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 3	powerSupply4 StateLEDType (3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 4	powerSupply4 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 5	powerSupply4 StateLEDColor (5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14	powerSupply4 StateFanTable (14)	NA	NA	NA	This shows the table of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1	powerSupply4 StateFanEntry (1)	NA	NA	NA	This shows the entry of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1. 1	powerSupply4 StateFanIndex (1)	Integer32	RO		This shows the index of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1. 2	powerSupply4 StateFanLocati on(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of power supply module3.
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1. 3	powerSupply4 StateFanRPM (3)	Integer32	RO	rpm	This shows the rpm value of power supply module3.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.5	powerSupply5 (5)	NA	NA	NA	This shows the information of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1	powerSupply5 BasicInfo(1)	NA	NA	NA	This shows the basic information of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.1	powerSupply5I nfoType(1)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.2	powerSupply5I nfoProductNam e(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.3	powerSupply5I nfoModel(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model name of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.4	powerSupply5I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.5	powerSupply5I nfoProductVers ion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the product version of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.6	powerSupply5I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.7	powerSupply5I nfoBoardProdu ctName(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.8	powerSupply5I nfoBoardSerial Num(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.9	powerSupply5I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20	powerSupply5I nfoSpec(20)	NA	NA	NA	This shows the specification of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.1	powerSupply5 SpecRateVolta geMain(1)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module5.(main)
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.2	powerSupply5 SpecRateVolta geSub(2)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module5.(sub)
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.3	powerSupply5 SpecAmbientT empUpperLimit (3)	Integer32	RO	0.1 degrees C	This shows the highest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.4	powerSupply5 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.5	powerSupply5 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	0.1 degrees C	This shows the highest temperature of hot spot in power supply module.
OID	Object identifier	Syntax	Access	Value	Description
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1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.6	powerSupply5 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.7	powerSupply5 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 degrees C	This shows the highest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.8	powerSupply5 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.5.2	powerSupply5 Capacity(2)	NA	NA	NA	This shows the capacity of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.2.1	powerSupply5 CapacityFan(1)	Integer32	RO		This shows the capacity fans of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.3	powerSupply5 Settings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4	powerSupply5 State(4)	NA	NA	NA	This shows the state of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.1	powerSupply5 StateSlotNum (1)	Integer32	RO		This shows the number of installed slots of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.2	powerSupply5 StatePower(2)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the power supply state of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.3	powerSupply5 StateHealth(3)	INTEGER	RO	normal(1)/ fail(2) / unknown(3)	This shows the health state of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.4	powerSupply5 StateAmbientT emp(4)	Integer32	RO	0.1 degrees C	This shows the temperature value of ambient sensor of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.5	powerSupply5 StateHotSpotT emp(5)	Integer32	RO	0.1 degrees C	This shows the temperature value of hot spot sensor of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.6	powerSupply5 StateExhaustT emp(6)	Integer32	RO	0.1 degrees C	This shows the temperature value of exhaust sensor of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.7	powerSupply5 StateMainVolta ge(7)	Integer32	RO	0.1 V	This shows the main voltage of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.8	powerSupply5 StateSubVoltag e(8)	Integer32	RO	0.1 V	This shows the sub voltage of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.9	powerSupply5 StateInputVolt age(9)	Integer32	RO	0.1 V	This shows the input voltage of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.10	powerSupply5 StateMainCurr ent(10)	Integer32	RO	0.1 A	This shows the main current of power supply module5.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.11	powerSupply5 StateSubCurre nt(11)	Integer32	RO	0.1 A	This shows the sub current of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.12	powerSupply5 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the input current of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13	powerSupply5 StateLEDTable (13)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1	powerSupply5 StateLEDEntry (1)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 1	powerSupply5 StateLEDIndex (1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 2	powerSupply5 StateLEDName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 3	powerSupply5 StateLEDType (3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 4	powerSupply5 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 5	powerSupply5 StateLEDColor (5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14	powerSupply5 StateFanTable (14)	NA	NA	NA	This shows the table of fan of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1	powerSupply5 StateFanEntry (1)	NA	NA	NA	This shows the entry of fan of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1. 1	powerSupply5 StateFanIndex (1)	Integer32	RO		This shows the index of fan of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1. 2	powerSupply5 StateFanLocati on(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1. 3	powerSupply5 StateFanRPM (3)	Integer32	RO	rpm	This shows the rpm value of power supply module5.
1.3.6.1.4.1.116.5. 52.2.2.2.6	powerSupply6 (6)	NA	NA	NA	This shows the information of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1	powerSupply6 BasicInfo(1)	NA	NA	NA	This shows the basic information of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.1	powerSupply6I nfoType(1)	DisplayStr ing	RO	(SIZE(040))	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.2	powerSupply6I nfoProductNam e(2)	DisplayStr ing	RO	(SIZE(040))	This shows the product name of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.3	powerSupply6I nfoModel(3)	DisplayStr ing	RO	(SIZE(040))	This shows the model name of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.4	powerSupply6I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the serial number of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.5	powerSupply6I nfoProductVers ion(5)	DisplayStr ing	RO	(SIZE(040))	This shows the product version of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.6	powerSupply6I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the product manufacturer of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.7	powerSupply6I nfoBoardProdu ctName(7)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.8	powerSupply6I nfoBoardSerial Num(8)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.9	powerSupply6I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20	powerSupply6I nfoSpec(20)	NA	NA	NA	This shows the specification of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.1	powerSupply6 SpecRateVolta geMain(1)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module6.(main)
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.2	powerSupply6 SpecRateVolta geSub(2)	Integer32	RO	0.1 V	This shows the rated voltage of power supply module6.(sub)
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.3	powerSupply6 SpecAmbientT empUpperLimit (3)	Integer32	RO	0.1 degrees C	This shows the highest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.4	powerSupply6 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of ambient in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.5	powerSupply6 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	0.1 degrees C	This shows the highest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.6	powerSupply6 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of hot spot in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.7	powerSupply6 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 degrees C	This shows the highest temperature of exhaust in power supply module.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.8	powerSupply6 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	0.1 degrees C	This shows the lowest temperature of exhaust in power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.6.2	powerSupply6 Capacity(2)	NA	NA	NA	This shows the capacity of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.2.1	powerSupply6 CapacityFan(1)	Integer32	RO		This shows the capacity fans of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.3	powerSupply6 Settings(3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4	powerSupply6 State(4)	NA	NA	NA	This shows the state of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.1	powerSupply6 StateSlotNum (1)	Integer32	RO		This shows the number of installed slots of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.2	powerSupply6 StatePower(2)	INTEGER	RO	poweroff(1)/ poweron(2)/ unknown(3)	This shows the power supply state of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.3	powerSupply6 StateHealth(3)	INTEGER	RO	normal(1)/ fail(2) / unknown(3)	This shows the health state of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.4	powerSupply6 StateAmbientT emp(4)	Integer32	RO	0.1 degrees C	This shows the temperature value of ambient sensor of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.5	powerSupply6 StateHotSpotT emp(5)	Integer32	RO	0.1 degrees C	This shows the temperature value of hot spot sensor of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.6	powerSupply6 StateExhaustT emp(6)	Integer32	RO	0.1 degrees C	This shows the temperature value of exhaust sensor of power supply module.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.7	powerSupply6 StateMainVolta ge(7)	Integer32	RO	0.1 V	This shows the main voltage of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.8	powerSupply6 StateSubVoltag e(8)	Integer32	RO	0.1 V	This shows the sub voltage of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.9	powerSupply6 StateInputVolt age(9)	Integer32	RO	0.1 V	This shows the input voltage of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.10	powerSupply6 StateMainCurr ent(10)	Integer32	RO	0.1 A	This shows the main current of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.11	powerSupply6 StateSubCurre nt(11)	Integer32	RO	0.1 A	This shows the sub current of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.12	powerSupply6 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the input current of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13	powerSupply6 StateLEDTable (13)	NA	NA	NA	Reserved.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13.1	powerSupply6 StateLEDEntry (1)	NA	NA	NA	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13.1. 1	powerSupply6 StateLEDIndex (1)	Integer32	RO		Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13.1. 2	powerSupply6 StateLEDName (2)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13.1. 3	powerSupply6 StateLEDType (3)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13.1. 4	powerSupply6 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.13.1. 5	powerSupply6 StateLEDColor (5)	DisplayStr ing	RO	(SIZE(040))	Reserved.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.14	powerSupply6 StateFanTable (14)	NA	NA	NA	This shows the table of fan of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.14.1	powerSupply6 StateFanEntry (1)	NA	NA	NA	This shows the entry of fan of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.14.1. 1	powerSupply6 StateFanIndex (1)	Integer32	RO		This shows the index of fan of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.14.1. 2	powerSupply6 StateFanLocati on(2)	DisplayStr ing	RO	(SIZE(040))	This shows the location of fan of power supply module6.
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.14.1. 3	powerSupply6 StateFanRPM (3)	Integer32	RO	rpm	This shows the rpm value of power supply module6.

## Table C-14: Information of Partition

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2	powerSupply (2)	NA	NA	NA	This shows the information of partition.
1.3.6.1.4.1.116.5. 52.2.2.2.1	powerSupply1 (1)	NA	NA	NA	This shows the information of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1	powerSupply1 BasicInfo(1)	NA	NA	NA	This shows the basic information of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.1	powerSupply1I nfoType(1)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.2	powerSupply1I nfoProductNam e(2)	Integer32	RO	0.1 A	This shows the maximum current of partition1.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.3	powerSupply1I nfoModel(3)	Integer32	RO	W	This shows the maximum power of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.4	powerSupply1I nfoSerialNum (4)	Integer32	RO		This shows the total number of CPU core of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.5	powerSupply1I nfoProductVers ion(5)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.6	powerSupply1I nfoProductMan ufacturer(6)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.7	powerSupply1I nfoBoardProdu ctName(7)	NA	NA	NA	This shows the setting of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.8	powerSupply1I nfoBoardSerial Num(8)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.9	powerSupply1I nfoBoardManuf acturer(9)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20	powerSupply1I nfoSpec(20)	NA	NA	NA	This shows the state of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.1	powerSupply1 SpecRateVolta geMain(1)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.2	powerSupply1 SpecRateVolta geSub(2)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.3	powerSupply1 SpecAmbientT empUpperLimit (3)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.4	powerSupply1 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 A	This shows the consumption current of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.5	powerSupply1 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	w	This shows the current power consumption of partition1.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.6	powerSupply1 SpecHotSpotTe mpLowerLimit (6)	NA	NA	NA	This shows the information of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.7	powerSupply1 SpecExhaustTe mpUpperLimit (7)	NA	NA	NA	This shows the basic information of partition2.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.1.1.20.8	powerSupply1 SpecExhaustTe mpLowerLimit (8)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.2	powerSupply1 Capacity(2)	Integer32	RO	0.1 A	This shows the maximum current of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.2.1	powerSupply1 CapacityFan(1)	Integer32	RO	W	This shows the maximum power of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.3	powerSupply1 Settings(3)	Integer32	RO		This shows the total number of CPU core of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4	powerSupply1 State(4)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.1	powerSupply1 StateSlotNum (1)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.2	powerSupply1 StatePower(2)	NA	NA	NA	This shows the setting of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.3	powerSupply1 StateHealth(3)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.4	powerSupply1 StateAmbientT emp(4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.5	powerSupply1 StateHotSpotT emp(5)	NA	NA	NA	This shows the state of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.6	powerSupply1 StateExhaustT emp(6)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.7	powerSupply1 StateMainVolta ge(7)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.8	powerSupply1 StateSubVoltag e(8)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.9	powerSupply1 StateInputVolt age(9)	Integer32	RO	0.1 A	This shows the consumption current of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.10	powerSupply1 StateMainCurr ent(10)	Integer32	RO	w	This shows the current power consumption of partition2.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.11	powerSupply1 StateSubCurre nt(11)	NA	NA	NA	This shows the information of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.12	powerSupply1 StateInputCurr ent(12)	NA	NA	NA	This shows the basic information of partition3.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13	powerSupply1 StateLEDTable (13)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1	powerSupply1 StateLEDEntry (1)	Integer32	RO	0.1 A	This shows the maximum current of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 1	powerSupply1 StateLEDIndex (1)	Integer32	RO	w	This shows the maximum power of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 2	powerSupply1 StateLEDName (2)	Integer32	RO		This shows the total number of CPU core of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 3	powerSupply1 StateLEDType (3)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 4	powerSupply1 StateLEDState (4)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.13.1. 5	powerSupply1 StateLEDColor (5)	NA	NA	NA	This shows the setting of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14	powerSupply1 StateFanTable (14)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1	powerSupply1 StateFanEntry (1)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1. 1	powerSupply1 StateFanIndex (1)	NA	NA	NA	This shows the state of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1. 2	powerSupply1 StateFanLocati on(2)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.1.4.14.1. 3	powerSupply1 StateFanRPM (3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.2	powerSupply2 (2)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1	powerSupply2 BasicInfo(1)	Integer32	RO	0.1 A	This shows the consumption current of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.1	powerSupply2I nfoType(1)	Integer32	RO	W	This shows the current power consumption of partition3.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.2	powerSupply2I nfoProductNam e(2)	NA	NA	NA	This shows the information of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.3	powerSupply2I nfoModel(3)	NA	NA	NA	This shows the basic information of partition4.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.4	powerSupply2I nfoSerialNum (4)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.5	powerSupply2I nfoProductVers ion(5)	Integer32	RO	0.1 A	This shows the maximum current of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.6	powerSupply2I nfoProductMan ufacturer(6)	Integer32	RO	w	This shows the maximum power of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.7	powerSupply2I nfoBoardProdu ctName(7)	Integer32	RO		This shows the total number of CPU core of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.8	powerSupply2I nfoBoardSerial Num(8)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.9	powerSupply2I nfoBoardManuf acturer(9)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20	powerSupply2I nfoSpec(20)	NA	NA	NA	This shows the setting of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.1	powerSupply2 SpecRateVolta geMain(1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.2	powerSupply2 SpecRateVolta geSub(2)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.3	powerSupply2 SpecAmbientT empUpperLimit (3)	NA	NA	NA	This shows the state of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.4	powerSupply2 SpecAmbientT empLowerLimit (4)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.5	powerSupply2 SpecHotSpotTe mpUpperLimit (5)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.6	powerSupply2 SpecHotSpotTe mpLowerLimit (6)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.7	powerSupply2 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 A	This shows the consumption current of partition4.
1.3.6.1.4.1.116.5. 52.2.2.2.2.1.20.8	powerSupply2 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	w	This shows the current power consumption of partition4.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.2.2	powerSupply2 Capacity(2)	NA	NA	NA	This shows the information of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.2.1	powerSupply2 CapacityFan(1)	NA	NA	NA	This shows the basic information of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.3	powerSupply2 Settings(3)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4	powerSupply2 State(4)	Integer32	RO	0.1 A	This shows the maximum current of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.1	powerSupply2 StateSlotNum (1)	Integer32	RO	w	This shows the maximum power of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.2	powerSupply2 StatePower(2)	Integer32	RO		This shows the total number of CPU core of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.3	powerSupply2 StateHealth(3)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.4	powerSupply2 StateAmbientT emp(4)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.5	powerSupply2 StateHotSpotT emp(5)	NA	NA	NA	This shows the setting of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.6	powerSupply2 StateExhaustT emp(6)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.7	powerSupply2 StateMainVolta ge(7)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.8	powerSupply2 StateSubVoltag e(8)	NA	NA	NA	This shows the state of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.9	powerSupply2 StateInputVolt age(9)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.10	powerSupply2 StateMainCurr ent(10)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.11	powerSupply2 StateSubCurre nt(11)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.12	powerSupply2 StateInputCurr ent(12)	Integer32	RO	0.1 A	This shows the consumption current of partition5.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13	powerSupply2 StateLEDTable (13)	Integer32	RO	W	This shows the current power consumption of partition5.

OID	Object identifier	Syntax	Access	Value	Description
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1	powerSupply2 StateLEDEntry (1)	NA	NA	NA	This shows the information of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 1	powerSupply2 StateLEDIndex (1)	NA	NA	NA	This shows the basic information of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 2	powerSupply2 StateLEDName (2)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 3	powerSupply2 StateLEDType (3)	Integer32	RO	0.1 A	This shows the maximum current of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 4	powerSupply2 StateLEDState (4)	Integer32	RO	w	This shows the maximum power of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.13.1. 5	powerSupply2 StateLEDColor (5)	Integer32	RO		This shows the total number of CPU core of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14	powerSupply2 StateFanTable (14)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1	powerSupply2 StateFanEntry (1)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1. 1	powerSupply2 StateFanIndex (1)	NA	NA	NA	This shows the setting of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1. 2	powerSupply2 StateFanLocati on(2)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.2.4.14.1. 3	powerSupply2 StateFanRPM (3)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.3	powerSupply3 (3)	NA	NA	NA	This shows the state of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1	powerSupply3 BasicInfo(1)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition6.
1.3.6.1.4.1.116.5. 52.2.2.3.1.1	powerSupply3I nfoType(1)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition6.
1.3.6.1.4.1.116.5. 52.2.2.3.1.2	powerSupply3I nfoProductNam e(2)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.3	powerSupply3I nfoModel(3)	Integer32	RO	0.1 A	This shows the consumption current of partition6.
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.4	powerSupply3I nfoSerialNum (4)	Integer32	RO	w	This shows the current power consumption of partition6.

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.5	powerSupply3I nfoProductVers ion(5)	NA	NA	NA	This shows the information of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.6	powerSupply3I nfoProductMan ufacturer(6)	NA	NA	NA	This shows the basic information of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.7	powerSupply3I nfoBoardProdu ctName(7)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.8	powerSupply3I nfoBoardSerial Num(8)	Integer32	RO	0.1 A	This shows the maximum current of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.9	powerSupply3I nfoBoardManuf acturer(9)	Integer32	RO	w	This shows the maximum power of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20	powerSupply3I nfoSpec(20)	Integer32	RO		This shows the total number of CPU core of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.1	powerSupply3 SpecRateVolta geMain(1)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.2	powerSupply3 SpecRateVolta geSub(2)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.3	powerSupply3 SpecAmbientT empUpperLimit (3)	NA	NA	NA	This shows the setting of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.4	powerSupply3 SpecAmbientT empLowerLimit (4)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.5	powerSupply3 SpecHotSpotTe mpUpperLimit (5)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.6	powerSupply3 SpecHotSpotTe mpLowerLimit (6)	NA	NA	NA	This shows the state of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.7	powerSupply3 SpecExhaustTe mpUpperLimit (7)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.1.20.8	powerSupply3 SpecExhaustTe mpLowerLimit (8)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.2	powerSupply3 Capacity(2)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.2.1	powerSupply3 CapacityFan(1)	Integer32	RO	0.1 A	This shows the consumption current of partition7.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.3.3	powerSupply3 Settings(3)	Integer32	RO	w	This shows the current power consumption of partition7.	
1.3.6.1.4.1.116.5. 52.2.2.3.4	powerSupply3 State(4)	NA	NA	NA	This shows the information of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.1	powerSupply3 StateSlotNum (1)	NA	NA	NA	This shows the basic information of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.3.4.2	powerSupply3 StatePower(2)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.3.4.3	powerSupply3 StateHealth(3)	Integer32	RO	0.1 A	This shows the maximum current of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.4	powerSupply3 StateAmbientT emp(4)	Integer32	RO	W	This shows the maximum power of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.5	powerSupply3 StateHotSpotT emp(5)	Integer32	RO		This shows the total number of CPU core of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.6	powerSupply3 StateExhaustT emp(6)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.7	powerSupply3 StateMainVolta ge(7)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.8	powerSupply3 StateSubVoltag e(8)	NA	NA	NA	This shows the setting of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.9	powerSupply3 StateInputVolt age(9)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.10	powerSupply3 StateMainCurr ent(10)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.11	powerSupply3 StateSubCurre nt(11)	NA	NA	NA	This shows the state of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.12	powerSupply3 StateInputCurr ent(12)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13	powerSupply3 StateLEDTable (13)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1	powerSupply3 StateLEDEntry (1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 1	powerSupply3 StateLEDIndex (1)	Integer32	RO	0.1 A	This shows the consumption current of partition8.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 2	powerSupply3 StateLEDName (2)	Integer32	RO	w	This shows the current power consumption of partition8.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 3	powerSupply3 StateLEDType (3)	NA	NA	NA	This shows the information of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 4	powerSupply3 StateLEDState (4)	NA	NA	NA	This shows the basic information of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.13.1. 5	powerSupply3 StateLEDColor (5)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14	powerSupply3 StateFanTable (14)	Integer32	RO	0.1 A	This shows the maximum current of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1	powerSupply3 StateFanEntry (1)	Integer32	RO	w	This shows the maximum power of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1. 1	powerSupply3 StateFanIndex (1)	Integer32	RO		This shows the total number of CPU core of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1. 2	powerSupply3 StateFanLocati on(2)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.3.4.14.1. 3	powerSupply3 StateFanRPM (3)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4	powerSupply4 (4)	NA	NA	NA	This shows the setting of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1	powerSupply4 BasicInfo(1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.1	powerSupply4I nfoType(1)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.2	powerSupply4I nfoProductNam e(2)	NA	NA	NA	This shows the state of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.3	powerSupply4I nfoModel(3)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.4	powerSupply4I nfoSerialNum (4)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.5	powerSupply4I nfoProductVers ion(5)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.6	powerSupply4I nfoProductMan ufacturer(6)	Integer32	RO	0.1 A	This shows the consumption current of partition9.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.7	powerSupply4I nfoBoardProdu ctName(7)	Integer32	RO	w	This shows the current power consumption of partition9.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.8	powerSupply4I nfoBoardSerial Num(8)	NA	NA	NA	This shows the information of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.9	powerSupply4I nfoBoardManuf acturer(9)	NA	NA	NA	This shows the basic information of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20	powerSupply4I nfoSpec(20)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.1	powerSupply4 SpecRateVolta geMain(1)	Integer32	RO	0.1 A	This shows the maximum current of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.2	powerSupply4 SpecRateVolta geSub(2)	Integer32	RO	W	This shows the maximum power of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.3	powerSupply4 SpecAmbientT empUpperLimit (3)	Integer32	RO		This shows the total number of CPU core of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.4	powerSupply4 SpecAmbientT empLowerLimit (4)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.5	powerSupply4 SpecHotSpotTe mpUpperLimit (5)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.6	powerSupply4 SpecHotSpotTe mpLowerLimit (6)	NA	NA	NA	This shows the setting of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.7	powerSupply4 SpecExhaustTe mpUpperLimit (7)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.1.20.8	powerSupply4 SpecExhaustTe mpLowerLimit (8)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.2	powerSupply4 Capacity(2)	NA	NA	NA	This shows the state of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.2.1	powerSupply4 CapacityFan(1)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.3	powerSupply4 Settings(3)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4	powerSupply4 State(4)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition10.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.1	powerSupply4 StateSlotNum (1)	Integer32	RO	0.1 A	This shows the consumption current of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.2	powerSupply4 StatePower(2)	Integer32	RO	W	This shows the current power consumption of partition10.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.3	powerSupply4 StateHealth(3)	NA	NA	NA	This shows the information of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.4	powerSupply4 StateAmbientT emp(4)	NA	NA	NA	This shows the basic information of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.5	powerSupply4 StateHotSpotT emp(5)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.6	powerSupply4 StateExhaustT emp(6)	Integer32	RO	0.1 A	This shows the maximum current of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.7	powerSupply4 StateMainVolta ge(7)	Integer32	RO	W	This shows the maximum power of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.8	powerSupply4 StateSubVoltag e(8)	Integer32	RO		This shows the total number of CPU core of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.9	powerSupply4 StateInputVolt age(9)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.10	powerSupply4 StateMainCurr ent(10)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.11	powerSupply4 StateSubCurre nt(11)	NA	NA	NA	This shows the setting of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.12	powerSupply4 StateInputCurr ent(12)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13	powerSupply4 StateLEDTable (13)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1	powerSupply4 StateLEDEntry (1)	NA	NA	NA	This shows the state of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 1	powerSupply4 StateLEDIndex (1)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 2	powerSupply4 StateLEDName (2)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 3	powerSupply4 StateLEDType (3)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition11.	

C-62

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 4	powerSupply4 StateLEDState (4)	Integer32	RO	0.1 A	This shows the consumption current of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.13.1. 5	powerSupply4 StateLEDColor (5)	Integer32	RO	w	This shows the current power consumption of partition11.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14	powerSupply4 StateFanTable (14)	NA	NA	NA	This shows the information of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1	powerSupply4 StateFanEntry (1)	NA	NA	NA	This shows the basic information of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1. 1	powerSupply4 StateFanIndex (1)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1. 2	powerSupply4 StateFanLocati on(2)	Integer32	RO	0.1 A	This shows the maximum current of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.4.4.14.1. 3	powerSupply4 StateFanRPM (3)	Integer32	RO	w	This shows the maximum power of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.5	powerSupply5 (5)	Integer32	RO		This shows the total number of CPU core of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1	powerSupply5 BasicInfo(1)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.1	powerSupply5I nfoType(1)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.2	powerSupply5I nfoProductNam e(2)	NA	NA	NA	This shows the setting of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.3	powerSupply5I nfoModel(3)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.4	powerSupply5I nfoSerialNum (4)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.5	powerSupply5I nfoProductVers ion(5)	NA	NA	NA	This shows the state of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.6	powerSupply5I nfoProductMan ufacturer(6)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.7	powerSupply5I nfoBoardProdu ctName(7)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.8	powerSupply5I nfoBoardSerial Num(8)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition12.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.9	powerSupply5I nfoBoardManuf acturer(9)	Integer32	RO	0.1 A	This shows the consumption current of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20	powerSupply5I nfoSpec(20)	Integer32	RO	W	This shows the current power consumption of partition12.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.1	powerSupply5 SpecRateVolta geMain(1)	NA	NA	NA	This shows the information of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.2	powerSupply5 SpecRateVolta geSub(2)	NA	NA	NA	This shows the basic information of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.3	powerSupply5 SpecAmbientT empUpperLimit (3)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.4	powerSupply5 SpecAmbientT empLowerLimit (4)	Integer32	RO	0.1 A	This shows the maximum current of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.5	powerSupply5 SpecHotSpotTe mpUpperLimit (5)	Integer32	RO	W	This shows the maximum power of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.6	powerSupply5 SpecHotSpotTe mpLowerLimit (6)	Integer32	RO		This shows the total number of CPU core of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.7	powerSupply5 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.1.20.8	powerSupply5 SpecExhaustTe mpLowerLimit (8)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.2	powerSupply5 Capacity(2)	NA	NA	NA	This shows the setting of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.2.1	powerSupply5 CapacityFan(1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.3	powerSupply5 Settings(3)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4	powerSupply5 State(4)	NA	NA	NA	This shows the state of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.1	powerSupply5 StateSlotNum (1)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.2	powerSupply5 StatePower(2)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition13.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.3	powerSupply5 StateHealth(3)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.4	powerSupply5 StateAmbientT emp(4)	Integer32	RO	0.1 A	This shows the consumption current of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.5	powerSupply5 StateHotSpotT emp(5)	Integer32	RO	w	This shows the current power consumption of partition13.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.6	powerSupply5 StateExhaustT emp(6)	NA	NA	NA	This shows the information of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.7	powerSupply5 StateMainVolta ge(7)	NA	NA	NA	This shows the basic information of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.8	powerSupply5 StateSubVoltag e(8)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.9	powerSupply5 StateInputVolt age(9)	Integer32	RO	0.1 A	This shows the maximum current of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.10	powerSupply5 StateMainCurr ent(10)	Integer32	RO	w	This shows the maximum power of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.11	powerSupply5 StateSubCurre nt(11)	Integer32	RO		This shows the total number of CPU core of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.12	powerSupply5 StateInputCurr ent(12)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13	powerSupply5 StateLEDTable (13)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1	powerSupply5 StateLEDEntry (1)	NA	NA	NA	This shows the setting of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 1	powerSupply5 StateLEDIndex (1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 2	powerSupply5 StateLEDName (2)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 3	powerSupply5 StateLEDType (3)	NA	NA	NA	This shows the state of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 4	powerSupply5 StateLEDState (4)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition14.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.13.1. 5	powerSupply5 StateLEDColor (5)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14	powerSupply5 StateFanTable (14)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1	powerSupply5 StateFanEntry (1)	Integer32	RO	0.1 A	This shows the consumption current of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1. 1	powerSupply5 StateFanIndex (1)	Integer32	RO	w	This shows the current power consumption of partition14.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1. 2	powerSupply5 StateFanLocati on(2)	NA	NA	NA	This shows the information of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.5.4.14.1. 3	powerSupply5 StateFanRPM (3)	NA	NA	NA	This shows the basic information of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6	powerSupply6 (6)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1	powerSupply6 BasicInfo(1)	Integer32	RO	0.1 A	This shows the maximum current of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.1	powerSupply6I nfoType(1)	Integer32	RO	w	This shows the maximum power of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.2	powerSupply6I nfoProductNam e(2)	Integer32	RO		This shows the total number of CPU core of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.3	powerSupply6I nfoModel(3)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.4	powerSupply6I nfoSerialNum (4)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.5	powerSupply6I nfoProductVers ion(5)	NA	NA	NA	This shows the setting of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.6	powerSupply6I nfoProductMan ufacturer(6)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.7	powerSupply6I nfoBoardProdu ctName(7)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.8	powerSupply6I nfoBoardSerial Num(8)	NA	NA	NA	This shows the state of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.9	powerSupply6I nfoBoardManuf acturer(9)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition15.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20	powerSupply6I nfoSpec(20)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.1	powerSupply6 SpecRateVolta geMain(1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.2	powerSupply6 SpecRateVolta geSub(2)	Integer32	RO	0.1 A	This shows the consumption current of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.3	powerSupply6 SpecAmbientT empUpperLimit (3)	Integer32	RO	w	This shows the current power consumption of partition15.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.4	powerSupply6 SpecAmbientT empLowerLimit (4)	NA	NA	NA	This shows the information of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.5	powerSupply6 SpecHotSpotTe mpUpperLimit (5)	NA	NA	NA	This shows the basic information of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.6	powerSupply6 SpecHotSpotTe mpLowerLimit (6)	INTEGER	RO	invalid(1)/ valid(2) /unknown(3)	This shows the validity of information of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.7	powerSupply6 SpecExhaustTe mpUpperLimit (7)	Integer32	RO	0.1 A	This shows the maximum current of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.1.20.8	powerSupply6 SpecExhaustTe mpLowerLimit (8)	Integer32	RO	w	This shows the maximum power of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.2	powerSupply6 Capacity(2)	Integer32	RO		This shows the total number of CPU core of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.2.1	powerSupply6 CapacityFan(1)	Integer32	RO	GB	This shows the total amount of DIMM capacity of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.3	powerSupply6 Settings(3)	DisplayStr ing	RO	(SIZE(040))	This shows the HVM license information of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4	powerSupply6 State(4)	NA	NA	NA	This shows the setting of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.1	powerSupply6 StateSlotNum (1)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode setting of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.2	powerSupply6 StatePower(2)	INTEGER	RO	redundancy(1)/ non-redundancy(2)/ unknown(3)	This shows the DIMM redundancy of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.3	powerSupply6 StateHealth(3)	NA	NA	NA	This shows the state of partition16.	

OID	Object identifier	Syntax	Access	Value	Description	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.4	powerSupply6 StateAmbientT emp(4)	INTEGER	RO	poweroff(1)/ standby(2)/ poweron(3)/ unknown(4)/powero n-executing(5)/pow eroff-executing(6)	This shows the power supply state of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.5	powerSupply6 StateHotSpotT emp(5)	INTEGER	RO	normal(1)/fail(2)/un known(3)	This shows the health state o partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.6	powerSupply6 StateExhaustT emp(6)	INTEGER	RO	basic(1)/ hvm(2)/ unknown(3)	This shows the hvm mode of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.7	powerSupply6 StateMainVolta ge(7)	Integer32	RO	0.1 A	This shows the consumption current of partition16.	
1.3.6.1.4.1.116.5. 52.2.2.2.6.4.8	powerSupply6 StateSubVoltag e(8)	Integer32	RO	w	This shows the current power consumption of partition16.	

# D

# **IPMI Commands List**

This Appendix-D provides the list of IPMI Commands.

□ IPMI Commands List

IPMI Commands List

# **IPMI Commands List**

Table D-1 shows supported IPMI Commands.

#### **Table D-1: Supported IPMI Commands**

Command	NetFn	CMD	Remark
IPMI Device "Global" Commands			
Get Device ID	App(06h,07h)	01h	
Get ACPI Power State	App(06h,07h)	07h	
BMC Watchdog Timer Commands	-	-	
Reset Watchdog Timer	App(06h,07h)	22h	
Set Watchdog Timer	App(06h,07h)	24h	
Get Watchdog Timer	App(06h,07h)	25h	
BMC Device and Messaging Commands	-		
Get System GUID	App(06h,07h)	37h	
Get Channel Authentication Capabilities	App(06h,07h)	38h	
Set Session Privilege Level	App(06h,07h)	3Bh	
Close Session	App(06h,07h)	3Ch	
Get Session Info	App(06h,07h)	3Dh	
Set Channel Access	App(06h,07h)	40h	
Get Channel Access	App(06h,07h)	41h	
Set User Access	App(06h,07h)	43h	
Get User Access	App(06h,07h)	44h	
Set User Name	App(06h,07h)	45h	
Get User Name	App(06h,07h)	46h	
Set User Password	App(06h,07h)	47h	
Activate Payload	App(06h,07h)	48h	
Deactivate Payload	App(06h,07h)	49h	
Get Payload Activation Status	App(06h,07h)	4Ah	
Get Payload Instance Info	App(06h,07h)	4Bh	
Set User Payload Access	App(06h,07h)	4Ch	
Get User Payload Access	App(06h,07h)	4Dh	
Get Channel Cipher Suites	App(06h,07h)	54h	
Chassis Device Commands			
Get Chassis Capabilities	Chassis(00h,01h)	00h	
Get Chassis Status	Chassis(00h,01h)	01h	
Chassis Control	Chassis(00h,01h)	02h	
Chassis Identify	Chassis(00h,01h)	04h	
Set System Boot Options	Chassis(00h,01h)	08h	

IPMI Commands List

Command	NetFn	СМД	Remark		
Get System Boot Options	Chassis(00h,01h)	09h			
Sensor Device Commands					
Get Sensor Threshold	Sensor/Event(04h,05h)	27h			
Get Sensor Reading	Sensor/Event(04h,05h)	2Dh			
FRU Device Commands					
Get FRU Inventory Area Info	Storage(0Ah,0Bh)	10h			
Read FRU Data	Storage(0Ah,0Bh)	11h			
SDR Device Commands					
Get SDR Repository Info	Storage(0Ah,0Bh)	20h			
Reserve SDR Repository	Storage(0Ah,0Bh)	22h			
Get SDR	Storage(0Ah,0Bh)	23h			
SEL Device Commands	•	-			
Get SEL Info	Storage(0Ah,0Bh)	40h			
Reserve SEL	Storage(0Ah,0Bh)	42h			
Get SEL Entry	Storage(0Ah,0Bh)	43h			
Clear SEL	Storage(0Ah,0Bh)	47h			
Get SEL Time	Storage(0Ah,0Bh)	48h			
Set SEL Time	Storage(0Ah,0Bh)	49h			
LAN Device Commands					
Set LAN Configuration Parameters	Transport(0Ch,0Dh)	01h	*		
Get LAN Configuration Parameters	Transport(0Ch,0Dh)	02h			
Serial/Modem Device Commands		-			
SOL Activating	Transport(0Ch,0Dh)	20h			
Set SOL Configuration Parameters	Transport(0Ch,0Dh)	21h			
Get SOL Configuration Parameters	Transport(0Ch,0Dh)	22h			
DCMI Command					
Get Asset Tag	DCGRP(2Ch,2Dh)	06h			
Set Asset Tag	DCGRP(2Ch,2Dh)	08h			
<ul> <li>* "Commit write" option for Set In Progress Parameter does not work.</li> <li>Any changes made during "commit write" set affect immediately.</li> </ul>					

IPMI Commands List

# E

# LDAP Server Linkage

This Appendix-E describes the LDAP Server Linkage.

- Overview of the LDAP Server Linkage
- □ <u>Supported LDAP Server</u>
- Environmental Setting for Active Directory
- □ <u>Setting BMC</u>

# **Overview of the LDAP Server Linkage**

BMC search the LDAP directory on the LDAP server by using the Lightweight Directory Access Protocol (LDAP) to authenticate users. With this function, you can perform the following:

- Login to BMC as a user registered with the LDAP director
- Group authentication that allows only the account belonging to a specific group in the LDAP directory to login

## Logging in As a User registered with the LDAP Directory

BMC judge whether to allow a user to log in based on the user account information registered with each module and the user account information in the LDAP directory at user authentication.

Adding user account information to the LDAP directory on the LDAP server allows all BMC using the LDAP server to use the added user account information. Besides, it is not necessary to register the user account information with each module.

## **Group Authentication**

During user authentication, the group information in the LDAP directory is viewed and only the user accounts belonging to the group are allowed to log in. By using the group authentication function, you can construct an LDAP server linkage environment between BMC without drastically changing the already constructed LDAP directory.

# **Supported LDAP Server**

CR 220S supports Active Directory, attached to the following OSes, as the LDAP server with linkage.

- Windows Server 2008 R2, Standard
- Windows Server 2008 R2, Enterprise
- Windows Server 2008 Standard
- Windows Server 2008 Enterprise
- Windows Server 2008 Standard without Hyper-V
- Windows Server 2008 Enterprise without Hyper-V
- Windows Server 2003 R2, Standard Edition
- Windows Server 2003 R2, Enterprise Edition

# **Environmental Setting for Active Directory**

This section describes settings required when Active Directory is used as an LDAP server.

The following items show the required setting items.

- Server certificate
- Bind DN for the LDAP server
- User account for logging in to BMC
- Group that is allowed to login to the BMC

### **Server Certificate**

Because all communications between BMC and LDAP servers are carried out through Secure Socket Layer (SSL), the server certificate must be registered for Active Directory to be used as an LDAP server.

For details about how to register the server certificate, see the documentation of your OS.



There are two different server certificates. One is self- signed certificate, and the other one is a certificate certified by an external certificate authority. You can use either of them for communication between BMC and Active Directory.

## **Bind DN for the LDAP Server**

To search an LDAP directory at user authentication, you must connect to an LDAP server. There are two methods for connecting to an LDAP server as below. Perform either of the following methods:

- Connect to an LDAP server by using an LDAP bind DN and the password.
- Connect to an LDAP server as an anonymous user.



We recommend to use an LDAP bind DN and the password.

# Connect to an LDAP server by using an LDAP bind DN and the password

Register a user account to use as an LDAP bind DN with your Windows. For details about how to register user accounts, see the documentation of your OS.

You must grant the access permission for the LDAP directory to use when authenticating users to the user account to be used as the LDAP bind DN.

#### **Connect to an LDAP server as an anonymous user**

Follow the procedure below to register an anonymous user.



When registering a user for LDAP connection, skip this procedure.

1. Select **Start** > **Run...**, type "mmc" and click **OK**. The Console Root screen is displayed.

🚡 Console1		
File Action View Favorites W	<u>Vindow H</u> elp	
m Console Root		
ADSI Edit		
	STRUCT LUK	
<u> </u>		
<u>k</u>		

2. Select **Menu** > **File** > **Add/Remove Snap-in**. Add/Remove Snap-in screen is displayed.

Add/Remove Snap-in	? ×
Standalone Extensions	
Use this page to add or remove a stand-alone snap-in from the consol	le.
Snap-ins added to:	
Description	
Add	
ок с	ancel

3. In the Add Standalone Snap-in screen, click **Add...**, select **ADSI Edit** from "Available standalone snap-ins:", click **Add**, and then click **Close**.

5nap-in	Vendor	
💑 .NET Framework 1.1 Configuration	Microsoft Corporation	
Active Directory Domains and Trusts	Microsoft Corporation	
Active Directory Sites and Services	Microsoft Corporation	
Active Directory Users and Compu	Microsoft Corporation	
📥 ActiveX Control	Microsoft Corporation	
🖏 ADSI Edit	Microsoft Corporation	
🚰 Authorization Manager	Microsoft Corporation	
🙀 Certificate Templates	Microsoft Corporation	
Certificates	Microsoft Corporation	
Certification Authority	Microsoft Corporation	
Description 4 low level Active Directory Services Inte	rface editor.	

LDAP Server Linkage



When ADSI Edit is not available, see <u>Windows Support Tools</u>.

 When Add/Remove Snap-in screen is displayed once again, confirm that [ADSI Edit] is added, and click **OK**. [ADSI Edit] is added to the Console Root screen.

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 Image: Second Second

5. Place and right-click the mouse on **ADSI Edit**, and select **Connect to...**.

6. Select **Domain** for the domain context of Active Directory to connect, and click **OK**.

Connec	tion Settings	×
<u>N</u> ame:	Domain	
<u>P</u> ath:	LDAP://hitachi-deb24ec.hitachi.local/Domain	
Conn C s	ection Point Select or type a <u>D</u> istinguished Name or Naming Context:	1
• s	5elect a well known Naming Context:	
	Domain	
	buter Select or type a domain or cerver:	
• (	Default (Domain or server that you logged in to)	101
Ad <u>v</u> a	nced OK Cancel	

- 7. When the Console Root screen is displayed once again, right-click **ADSI Edit** once more, and select **Connect to...**.
- 8. Select **Configuration** as Context, and click **OK**.

Ionnec	tion Settings	×
<u>N</u> ame:	Configuration	
<u>P</u> ath:	LDAP://hitachi-deb24ec.hitachi.local/Configuration	
Conr	nection Point Select or type a <u>D</u> istinguished Name or Naming Context:	
c	Select a well known Naming Context:	1994 - 00
Com	puter	
	Select or type a domain or server:	
œ	Default (Domain or server that you logged in to)	Ĩ
Adva	inced OK Cancel	

9. When the Console Root screen is displayed once again, place and right-click the mouse on

**¥ADSI¥Edit¥configuration¥CN=Configuration¥DC=domain base¥CN-Services¥CN=Windows NT¥CN=Directory Service**, and select **properties**.

The Properties screen is displayed.

Directory Service Pro	perties		?
ttribute Editor Security			
Show mandatory attrib	outes		
Show optional attribut	es		
Show only attributes t	hat have values		
Attributes:			
Attribute	Syntax	Value	
displayName	Unicode String	<not set=""></not>	
displayNamePrintable	IA5-String	<not set=""></not>	
distinguishedName	Distinguished	CN=Directory Service,CN	
dSASignature	Octet String	<not set=""></not>	
dSCorePropagationD	UTC Coded Ti	<not set=""></not>	
dSHeuristics	Unicode String	<not set=""></not>	
extensionName	Unicode String	<not set=""></not>	
flags	Integer	<not set=""></not>	
fromEntry	Boolean	TRUE	
frsComputerReferenc	Distinguished	<not set=""></not>	
fRSMemberReferenc	Distinguished	<not set=""></not>	
fSMORoleOwner	Distinguished	<not set=""></not>	-
garbageCollPeriod	Integer	<not set=""></not>	<u> </u>
		<u></u>	
Edit			
	OK	Cancel App	ly -

10. Click **dSHeuristics**, and then click **Edit** to set a value in the properties screen. When the value is <Not Set>, type "0000002" in the field. When a value is set, change the 7th figure from the left to "2". Do not change other figures.

String Attribute Editor		×
Attribute: dSHeuristics		
Value: 0000002		
<u></u> lear	OK	Cancel

11. When setting is completed, click **OK**, and the Console Root screen is displayed. Click **OK** in the properties screen to apply the setting.

The procedure above can allow you to register an anonymous user.

Then select <u>Registering the User Account for Logging in to the BMC</u> to give access to an anonymous user.

# **Registering the User Account for Logging in to the BMC**

In [Start > Management Tools > Active Directory Users and Computers], register the user account for the LDAP directory. For details about how to register user accounts, see the documentation of your OS.

This section describes the limitations for user names and passwords to be registered and the procedure for granting role information to be used after logging in to BMC.

#### **User name**

The following characters and the number of characters are available for user names.

- Number of characters: from 1 to 32 characters
- Available characters for the head of a name: [A-Z] [a-z]
- Available characters for from the second to the end of a name: [A-Z] [a-z] [0-9], "-" (hyphen), "\_" (underscore), "." (period)

#### Password

The following characters and the number of characters are available for passwords.

- Number of characters: from 1 to 32 characters
- Available characters: Printable characters in ASCII (0x20-0x7e)



The complexity of passwords depends on the security policy of your OS.

#### **Granting Role Information**

By granting role information to a user account registered with the LDAP directory, you can set the range of operations to be performed after the login.



If you do not grant role information, operations you can perform after the login are minimized.

Follow the procedure below to assign role information.

1. Select **Start** > **Run...**, type "mmc" and click **OK**. The Console Root screen is displayed.

Console1			
<u>File Action View Favorites Win</u>	dow <u>H</u> elp		
🚡 Console Root			
Console Root	Name		
E ADSI Edit	KADSI Edit		
		li	
2. Select **Menu** > **File** > **Add/Remove Snap-in**. Add/Remove Snap-in screen is displayed.

Add/Remove Snap-in	? ×
Standalone Extensions	
Use this page to add or remove a stand-alone snap-in from the console	
Snap-ins added to:	
Description	
Add Remove About	
ОК Са	ncel

3. In the Add Standalone Snap-in screen, click **Add...**, select **ADSI Edit** from [Available standalone snap-ins:], click **Add**, and then click **Close**.

Snap-in	Vendor	
💑 .NET Framework 1.1 Configuration	Microsoft Corporation	
Retive Directory Domains and Trusts	Microsoft Corporation	
🙀 Active Directory Sites and Services	Microsoft Corporation	
Active Directory Users and Compu	Microsoft Corporation	
📩 ActiveX Control	Microsoft Corporation	
ADSI Edit	Microsoft Corporation	
🚜 Authorization Manager	Microsoft Corporation	
🙀 Certificate Templates	Microsoft Corporation	
Certificates	Microsoft Corporation	
Certification Authority	Microsoft Corporation	
Description 4 low level Active Directory Services Inte	rface editor.	

LDAP Server Linkage



When ADSI Edit is not available, see <u>Windows Support Tools</u>.

 When Add/Remove Snap-in screen is displayed once again, confirm that **ADSI Edit** is added, and click **OK**.
 **ADSI Edit** is added to the Console Root screen.

 Image: Consolet South Service Syndow Help

 Image: Service Root

 Image: Consolet Root

 Image: Service Root

 <tr

5. Place and right-click the mouse on **ADSI Edit**, and select **Connect to...**.

6. Select **Domain** for the domain context of Active Directory to connect, and click **OK**.

Connec	tion Settings	×
<u>N</u> ame:	Domain	
<u>P</u> ath:	LDAP://hitachi-deb24ec.hitachi.local/Domain	-
Conr	nection Point	
	Select or type a Distinguished Name or Naming Context:	
•	Select a well known Naming Context:	
	Domain	
	puter Select or type a domain or server:	
•	Default (Domain or server that you logged in to)	
Adva	nced OK Cancel	

 Open the ADSI Edit tree. Right-click a user account to give roles on the LDAP directory. Open **Properties**.
 The Properties screen opens and the attributes list assigned to the user.

The Properties screen opens and the attributes list assigned to the user account is displayed.

- 8. Select the attribute with "Unicode String" for Syntax and "<Not Set>" for Value from the attributes list, and click **Edit**.
- 9. Set roles for BMC. Set roles for BMC with the following character string.

ServerBladeRole=XXXXXXXX (X: "0" or "1")
following role in the numerical order.
1 Login
2 Administrator
3 Server Operation
4 User Account Management
5 Service Settings
6 Remote Console
7 Remote Media
8 SMASH CLIP

10. After setting roles, click **OK**. When the screen returns to Properties, click **OK**.

The procedure above completes the role setting for users to log in to BMC.

LDAP Server Linkage

# Group that is allowed to login to the BMC

Register the group to use for group authentication.



If you do not use group authentication, this setting is not required.

Open [Start > Management Tools > Active Directory Users and Computers], create a group you allow login to BMC in the LDAP directory. After you create the groups, register user accounts you allow login with the group.

For details about how to create groups and how to register user accounts with groups, see the documentation of your OS.

# Windows Support Tools

Windows Support Tools is a package software program that contains "ADSI (Active Directory Service Interface) Edit" for operating objects registered with Active Directory, and "Idp" for performing Active Directory operations through LDAP.

Select [Control Panel] and open [Add and Remove Programs]. The list of installed programs is displayed. When "Windows Support Tools" is displayed in the list, "ADSI Edit" and "ldp" are available. If not, install "Windows Support Tools" form the install media.



When Windows Server 2008 or higher versions are equipped with this package, skip this procedure.

# **Setting BMC**

This section describes necessary settings for connecting BMC to LDAP servers. For details about BMC, see <u>LDAP</u>.

# **User Authentication Method**

Select **When local user authentication fails, do LDAP user authentication**. The system authenticates users by using the user account information set for BMC. If the system fails to authenticate users, the system authenticates users by using the user account information on the LDAP servers.



- If the LDAP connection function is enabled, you can log in to BMC by using the user account you already set.
- If you register a user account name you already set for BMC with the LDAP directory, the system authenticate users by using the user account information set for BMC.

# **Registering LDAP Servers**

A maximum of three LDAP servers can be registered. If you register multiple LDAP servers, BMC tries to connect to the LDAP servers in the order they were registered. BMC searches the LDAP directory on the server of which connection was established first, and tries to authenticate users.

If BMC fails to connect to all the registered LDAP servers, user authentication using the LDAP servers also fails.



Even if BMC fails to connect to all registered LDAP servers, BMC can authenticate users by using a user account registered with BMC correctly.

# **Setting the LDAP Server Connection**

# **Port Number**

Specify the port number to use for connecting to the LDAP server. Normally, the 636 port is used, however, depending on your environment, you might have to use another port. Check your network environment before you specify a port.

### **Bind DN and Bind Password**

Set the method for connecting the LDAP server at user authentication.

You must set the method according to the settings you specified during user registration for LDAP connection. See <u>LDAP</u>.

# Setting for Searching the LDAP Directory

### **Base DN**

Specify the DN for the root directory of the LDAP directory to be searched. The directories under the specified root directory are to be searched at user authentication.

### **Attribute for Login ID**

Specify the attribute of each entry in the LDAP directory to be compared with the user ID specified at user authentication.

For Active Directory, the attribute name "sAMAccountName" is used for searching login IDs usually.

# **Attribute for Role**

If you grant a role to the user account for logging in to BMC during the operation described in "Granting Role Information", specify the attribute used for granting the role.



If you did not grant a role, you do not need to perform this operation.

# **Setting Group Authentication**



If you do not specify group settings during the operation described in <u>Group that is allowed to login to the BMC</u>, you do not need to perform this operation.

### **Attribute for Group Member**

Specify the attribute in which the list of user accounts whose login is to be allowed is stored.

For Active Directory, the list of user accounts is normally stored in the attribute name "member".

### **Group DN**

Specify the group DN created in <u>Group that is allowed to login to the BMC</u>.

A maximum of five groups can be specified. User accounts of which login you want to allow must belong to one of the specified groups

LDAP Server Linkage

# F

# Security strength

This Appendix-F describes the security strength.

- Overview of security strength
- □ <u>Relationship between security strength and functions</u>
- □ <u>Security strength settings</u>
- □ <u>Comparing functions for security strength settings</u>

# **Overview of security strength**

For BMC network, security strength can be enhanced by the user settings. You can set "Default" or "High", and the factory default settings is "Default".

Security strength can be enhanced in BMC network by setting to "High". When security strength is set to "High", the following restrictions are required.

- When an encryption communication is available, a plaintext communication is not available.
- For the encryption communication, only use a cipher algorithm with high security strength.

# **Relationship between security strength and functions**

When changing the settings of security strength, each function of system unit use the following protocols and encryption methods depending on settings.

Function Drotocol		Security strength		
		Default	High	
	НТТР	Available	N/A	
Web	HTTPS	Available (SSL 3.0, TLS1.0/1.1/1.2)	Available (TLS 1, 2) <sup>12</sup>	
	IPMI v1.5	Available	N/A <sup>3</sup>	
IPMI over LAN	IPMI v2.0	Available	Available <sup>4</sup>	
Remote console	Original protocol of Hitachi	Available (Plaintext/SSL 3.0, TLS 1.0/1.1/1.2)	Available (TLS 1.2) <sup>1</sup>	
LDAP	LDAPS	Available (SSL 3.0, TLS 1.0/1.1/1.2)	Available (TLS 1.2)	
SNMP	SNMP (v1/v2c)	Available	N/A (No response to a demand of manager / No trap issue)	
	SNMP (v3)	Available	Available	
HCSM	HTTPS and original protocol of Hitachi	Available (SSL 3.0, TLS 1.0/1.1/1.2) <sup>5</sup>	Available (TLS 1.2) <sup>5</sup>	

### Table F-1: BMC

#### Notes:

1. When using a certificate less than 2048 bit, cannot connect. Set back to "Default" for security strength, and register a certificate over 2048 bit. Set to "High" for security strength again.

- 2. Need to a web browser corresponded SSL/TLS version to use.
- 3. Connection is refused when executing when executing "IPMI v1.5 LAN Session Startup".
- 4. When the CipherSuite ID is 3 and the both of UserName and Password are set, "High" is available.
- 5. Need to an application corresponded SSL/TLS version to use.

# Security strength settings

Security strength can be set using Web console in BMC version 09-80 or higher. The settable functions are as follows.

For details of security strength settings, see <u>Security and Service</u>.

# Table F-2: Security strength settings

Function	Description
Exchanging "default" and "high" for security strength	BMC is restarted after changing settings. Settings is reflected after restarting BMC.
Specifying version of supported SSL/TLS	The change of settings is reflected dynamically.



- When change the settings of security strength, BMC is restarted automatically.
- The settings of security strength are executed backup and restore.

# **Comparing functions for security strength settings**

# Table F-3: SSL/TLS

Circles suits	Security strength	
Cipner suite	Default	High
TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA	-	-
SSL_RSA_WITH_RC4_128_MD5	-	-
SSL_RSA_WITH_RC4_128_SHA	-	-
TLS_RSA_WITH_AES_128_CBC_SHA	$\checkmark$	$\checkmark$
TLS_RSA_WITH_AES_256_CBC_SHA	$\checkmark$	$\checkmark$
TLS_DHE_RSA_WITH_AES_128_CBC_SHA	-	-
TLS_DHE_DSS_WITH_AES_128_CBC_SHA	-	-
SSL_RSA_WITH_3DES_EDE_CBC_SHA	-	-
SSL_DHE_RSA_WITH_3DES_EDE_CBC_SHA	-	-
SSL_DHE_DSS_WITH_3DES_EDE_CBC_SHA	-	-
SSL_RSA_WITH_DES_CBC_SHA	-	-
SSL_DHE_RSA_WITH_DES_CBC_SHA	-	-
SSL_DHE_DSS_WITH_DES_CBC_SHA	-	-
SSL_RSA_EXPORT_WITH_RC4_40_MD5	-	-
SSL_RSA_EXPORT_WITH_DES40_CBC_SHA	-	-
SSL_DHE_RSA_EXPORT_WITH_DES40_CBC_SHA	-	-
SSL_DHE_DSS_EXPORT_WITH_DES40_CBC_SHA	-	-
TLS_EMPTY_RENEGOTIATION_INFO_SCSV	-	-
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256	-	-
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256	-	-
TLS_RSA_WITH_AES_128_CBC_SHA256	$\checkmark$	$\checkmark$
TLS_RSA_WITH_AES_256_CBC_SHA256	$\checkmark$	$\checkmark$
TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA256	-	-
TLS_ECDH_RSA_WITH_AES_128_CBC_SHA256	-	-
TLS_DHE_RSA_WITH_AES_128_CBC_SHA256	-	-
TLS_DHE_DSS_WITH_AES_128_CBC_SHA256	-	-
TLS_RSA_WITH_3DES_EDE_CBC_SHA	$\checkmark$	-
TLS_RSA_WITH_RC4_128_MD5	$\checkmark$	-
TLS_RSA_WITH_RC4_128_SHA	$\checkmark$	-
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA	-	-
TLS_ECDH_RSA_WITH_AES_128_CBC_SHA	-	-
TLS_ECDHE_RSA_WITH_RC4_128_SHA	-	-
TLS_ECDH_RSA_WITH_RC4_128_SHA	-	-

Security strength

Server certificate	Security strength	
[Public key algorithm]	Default	High
RSA1024 verification	$\checkmark$	-
RSA1024 creation	$\checkmark$	-
RSA2048 verification	$\checkmark$	$\checkmark$
RSA2048 creation	$\checkmark$	$\checkmark$
RSA4096 verification	-	-
RSA4096 creation	-	-
DSA1024 verification	$\checkmark$	-
DSA1024 creation	$\checkmark$	_

Server certificate	Security strength	
[Signature algorithm]	Default	High
SHA1 verification	$\checkmark$	$\checkmark$
SHA1 creation	$\checkmark$	-
SHA256 verification	$\checkmark$	$\checkmark$
SHA256 creation	$\checkmark$	$\checkmark$

# Table F-4: SSH

Host key algorithm		Security strength	
		Default	High
Password verification	RSA1024 verification	-	-
	RSA1024 creation	-	-
	RSA2048 verification	$\checkmark$	$\checkmark$
	RSA2048 creation	$\checkmark$	$\checkmark$
	RSA4096 verification	-	-
	RSA4096 creation	-	-
	DSA1024 verification	$\checkmark$	-
	DSA1024 creation	$\checkmark$	-
Public key verification	RSA1024 verification	$\checkmark$	$\checkmark$
	RSA1024 creation	-	-
	RSA2048 verification	$\checkmark$	$\checkmark$
	RSA2048 creation	-	-
	RSA4096 verification	$\checkmark$	$\checkmark$
	RSA4096 creation	-	-
	DSA1024 verification	$\checkmark$	$\checkmark$
	DSA1024 creation	-	-

	Security strength	
key exchange algorithm	Default	High
diffie-hellman-group1-sha1	$\checkmark$	$\checkmark$
diffie-hellman-group14-sha1	$\checkmark$	$\checkmark$
diffie-hellman-group-exchange-sha1	$\checkmark$	$\checkmark$
diffie-hellman-group-exchange-sha256	$\checkmark$	$\checkmark$

Cinkey elecyithm	Security strength	
Cipner algorithm	Default	High
3des	-	-
3des-cbc	$\checkmark$	$\checkmark$
aes128-cbc	$\checkmark$	$\checkmark$
aes192-cbc	$\checkmark$	$\checkmark$
aes256-cbc	$\checkmark$	$\checkmark$
aes128-ctr	$\checkmark$	$\checkmark$
aes192-ctr	$\checkmark$	$\checkmark$
aes256-ctr	$\checkmark$	$\checkmark$
blowfish-cbc	$\checkmark$	-
cast128-cbc	$\checkmark$	-
arcfour	$\checkmark$	-
arcfour128	$\checkmark$	-
arcfour256	$\checkmark$	_
rijndael-cbc@lysator.liu.se	$\checkmark$	-

Message authentication algorithm	Security strength	
	Default	High
hmac-md5	$\checkmark$	-
hmac-sha1	$\checkmark$	$\checkmark$
hmac-ripemd160	$\checkmark$	-
hmac-ripemd160@openssh.com	$\checkmark$	-
umac-64@openssh.com	$\checkmark$	-
hmac-sha1-96	$\checkmark$	$\checkmark$
hmac-md5-96	$\checkmark$	-
hmac-sha2-256	$\checkmark$	$\checkmark$
hmac-sha2-512	$\checkmark$	$\checkmark$

# Table F-5: SNMP v3

Cipher algorithm	Security strength	
	Default	High
None	$\checkmark$	-
DES	$\checkmark$	-
AES128	$\checkmark$	$\checkmark$

Authentication algorithm	Security strength	
	Default	High
None	$\checkmark$	-
MD5	$\checkmark$	-
SHA1	$\checkmark$	$\checkmark$

Security strength

Security strength

### Hitachi Data Systems

**Corporate Headquarters** 2845 Lafayette Street Santa Clara, California 95050-2639 U.S.A. www.hds.com

### **Regional Contact Information**

Americas +1 408 970 1000 info@hds.com

Europe, Middle East, and Africa +44 (0) 1753 618000 info.emea@hds.com

Asia Pacific +852 3189 7900 hds.marketing.apac@hds.com

# **@Hitachi Data Systems**