Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0

REST API Reference Manual

CA92344-5733-02
November 2024

Preface

Purpose

This manual describes the APIs of Infrastructure Manager (hereafter referred to as "ISM") and Infrastructure Manager for PRIMEFLEX (hereafter referred to as "ISM for PRIMEFLEX").

This product provides APIs that work in link with your own self-created applications. The APIs in this product are REST (Representational State Transfer) interfaces that communicate with a TLS (Transport Layer Security) protocol and are implemented by sending and receiving data in JSON (JavaScript Object Notation) format.

Product Manuals

Manual Name	Description
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 First Step Guide	This manual is for those using this product for the first time. This manual summarizes the procedures for the use of this product, the product system, and licensing. In this manual, it is referred to as "First Step Guide."
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 User's Guide	This manual describes the functions of this product, the installation procedure, and procedures for operation. It allows you to quickly grasp all functions and all operations of this product. In this manual, it is referred to as "User's Guide."
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 Operating Procedures	This manual describes the installation procedure and usages for the operations of this product. In this manual, it is referred to as "Operating Procedures."
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 REST API Reference Manual	This manual describes how to use the required APIs and provides samples and parameter information for using user-created applications that integrate with this product. In this manual, it is referred to as "REST API Reference Manual."
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 Messages	This manual describes the messages that are output when using ISM or ISM for PRIMEFLEX and the actions to take for these messages. In this manual, it is referred to as "ISM Messages."
Infrastructure Manager for PRIMEFLEX V3.0.0 Messages	This manual describes the messages that are output when using ISM for PRIMEFLEX and the actions to take for these messages. In this manual, it is referred to as "ISM for PRIMEFLEX Messages."
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 Items for Profile Settings (for Profile Management)	This manual describes detailed information for the items set when creating profiles for managed devices. In this manual it is referred to as "Items for Profile Settings (for Profile Management)."
Infrastructure Manager for PRIMEFLEX V3.0.0 Cluster Creation and Cluster Expansion Parameter List	This manual describes Cluster Definition Parameters that are used for the automatic settings in Cluster Creation and Cluster Expansion when using ISM for PRIMEFLEX. In this manual, it is referred to as "ISM for PRIMEFLEX Parameter List."
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 Glossary	This document defines the terms that you need to understand in order to use this product. In this manual, it is referred to as "Glossary."

Manual Name	Description
Infrastructure Manager / Infrastructure Manager for PRIMEFLEX V3.0.0 Plug-in and Management Pack Setup Guide	This manual describes the procedures, from installation to operation as well as precautions and reference information, for the following features of Infrastructure Manager Plug-in. - Infrastructure Manager Plug-in for Microsoft System Center Operations Manager - Infrastructure Manager Plug-in for Microsoft System Center Virtual Machine Manager - Infrastructure Manager Plug-in for VMware vCenter Server Appliance - Infrastructure Manager Plug-in for Microsoft Windows Admin Center In this manual, it is referred to as "ISM Plug-in/MP Setup Guide."

Together with the manuals mentioned above, you can also refer to the latest information about ISM by contacting your local Fujitsu customer service partner.

For the information about managed hardware products, refer to the manuals of the relevant hardware.

For PRIMERGY, refer to "ServerView Suite ServerBooks" or the manual pages for PRIMERGY.

https://support.ts.fujitsu.com/

Intended Readers

This manual is intended for system administrators, network administrators, facility administrators, and service technicians who have sufficient knowledge of hardware and software.

Notation in this Manual

Notation

Keyboard

Keystrokes that represent nonprintable characters are displayed as key icons such as [Enter] or [F1]. For example, [Enter] means press the key labeled "Enter." [Ctrl]+[B] means hold down the key labeled "Ctrl" or "Control" and then press the B key.

Symbols

Items that require particular attention are indicated by the following symbols.

Point

Describes the content of an important point.

Note

Describes an item that requires your attention.

Variables: <xxx>

Represents variables that require replacement by numerical values or text strings in accordance with your usage environment.

Example: <IP address>

Abbreviation

This document may use the abbreviation for OS as shown in the following examples.

Official name	Abbreviation	
Microsoft(R) Windows Server(R) 2022 Datacenter	Windows Server 2022 Datacenter	Windows Server 2022 or Windows
Microsoft(R) Windows Server(R) 2022 Standard	Windows Server 2022 Standard	
Microsoft(R) Windows Server(R) 2022 Essentials	Windows Server 2022 Essentials	
Red Hat Enterprise Linux 9.3 (for Intel64)	RHEL 9.3	Red Hat Enterprise Linux or Linux
SUSE Linux Enterprise Server 15 SP5 (for AMD64 & Intel64)	SUSE 15 SP5 (AMD64) SUSE 15 SP5 (Intel64) or SLES 15 SP5 (AMD64) SLES 15 SP5 (Intel64)	SUSE Linux Enterprise Server or Linux
SUSE Linux Enterprise Server 15 (for AMD64 & Intel64)	SUSE 15 (AMD64) SUSE 15 (Intel64) or SLES 15 (AMD64) SLES 15 (Intel64)	
VMware ESXi™ 8.0	VMware ESXi 8.0	VMware ESXi
VMware Virtual SAN	vSAN	
Microsoft Storage Spaces Direct	S2D	

In this document, VMware by Broadcom is referred to as VMware.

Terms

For the major terms and abbreviations used in this manual, refer to "Glossary."

Using PDF applications (Adobe Reader, etc.)

Depending on the specifications of the PDF application you are using, issues (extra spaces and line breaks, missing spaces, line breaks, and hyphens in line breaks) may occur when you perform the following operations.

- Saving to a text file
- Copying and pasting text

High Risk Activity

The Customer acknowledges and agrees that the Product is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use, and ordinary industrial use, but is not designed, developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter "High Safety Required Use"), including without limitation, nuclear reaction control in nuclear facility, aircraft flight control, air traffic control, mass transport control, medical life support system, missile launch control in weapon system. The Customer shall not use the Product without securing the sufficient safety required for the High Safety Required Use. In addition, Fsas Technologies (or other affiliate's name) shall not be liable against the Customer and/or any third party for any claims or damages arising in connection with the High Safety Required Use of the Product.

To Use This Product Safely

This document contains important information required for using this product safely and correctly. Read this manual carefully before using the product. In addition, to use the product safely, the customer must understand the related products (hardware and software) before using the product. Be sure to use the product by following the precautions on the related products. Be sure to keep this manual in a safe and convenient location for quick reference during use of the product.

Modifications

The customer may not modify this software or perform reverse engineering through decompiling or disassembly.

Disclaimers

Fsas Technologies Inc. assumes no responsibility for any claims for losses, damages or other liabilities arising from the use of this product. The contents of this document are subject to change without notice.

Trademarks

Microsoft, Windows, Windows Vista, Windows Server, Hyper-V, Active Directory, and the titles or names of other Microsoft products are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.

Linux is a trademark or registered trademark of Linus Torvalds in the United States and other countries.

Red Hat and all trademarks and logos based on Red Hat are trademarks or registered trademarks of Red Hat, Inc. in the United States and other countries.

SUSE and the SUSE logo are trademarks or registered trademarks of SUSE LLC in the United States and other countries.

VMware, VMware logo, VMware ESXi, VMware SMP, and vMotion are trademarks or registered trademarks of VMware, Inc. in the United States and other countries.

Intel and Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Java is a registered trademark of Oracle Corporation and its subsidiaries/affiliates in the United States and other countries.

Zabbix is a trademark of Zabbix LLC that is based in the Republic of Latvia.

PostgreSQL is a trademark of PostgreSQL in the United States and other countries.

Apache is a trademark or registered trademark of Apache Software Foundation.

Cisco is a trademark of Cisco Systems, Inc. in the United States and other countries.

Elasticsearch is a trademark or registered trademark of Elasticsearch BV in the United States and other countries.

Xen is a trademark of XenSource, Inc.

Trend Micro and Deep Security are trademarks or registered trademarks of Trend Micro Incorporated.

All other company and product names are trademarks or registered trademarks of the respective companies.

All other products are owned by their respective companies.

Copyright

Copyright 2017 - 2024 Fsas Technologies Inc.

This manual shall not be reproduced or copied without the permission of Fsas Technologies Inc.

Modification History

Edition	Issue Date	Modification Overview	Section	
01	September 2024	First edition	-	-
02	November 2024 Modification for ISM 3.0.0.010 patch	Add new parameter for session time - SessionTime	4.1.3 User Registration 4.1.4 List Retrieval for Users 4.1.5 Individual Retrieval of User 4.1.6 Update of User Information	[Request Parameter] [Response Parameter]

Edition	Issue Date	Modification Overview	Section	
		Changed description of the following parameter for session time - SessionTime	4.1.18 Retrieval of Policy Information 4.1.19 Update of Policy Information	[Request Parameter] [Response Parameter]
		Added description of ETRENUS DX900 S6	4.3.1 Node Registration	[Node Type] storage-dx900 frontend-enclosure controller-enclosure
		Added new parameter for OS information - OsRefreshDate	4.3.2 List Retrieval for Nodes 4.3.3 Individual Retrieval of Node 4.6.4 Registration of OS Information 4.6.5 List Retrieval for Oses 4.6.6 Individual Retrieval of OS 4.6.7 Updating of OS Information	[Response Parameter]
		Added new REST for authentication confirmation at node registration	4.3.37 Manually Registered Node Verification 4.4.9 Confirmation of Automated Verification 4.4.10 Manually Discovered Node Authentication Verification Appendix A List of Privileges for Each API	-
		Added new parameter for iRMC system overview - Overview	4.6.2 List Retrieval for Detailed Node Information	[Response Parameter] VariableData
		Added OS information - Red Hat Enterprise Linux 9.5	4.6.4 Registration of OS Information	[Request Parameter] OsVersion
			4.18.2 Registration of Cloud Management Software	[Request Parameter] CmsVersion
		Added description on profile assignment	4.10.8 Assigning Profiles to Nodes	[Request Parameter] AdvancedKind
		Added OS type for profiles - Red Hat Enterprise Linux 9.5	4.10.29 DVD Import	[Request Parameter] MediaType
			4.10.33 List Retrieval for Packages and Applications	[Query Parameter] ostype
			D.4 OSInstallation	[OSInstallation] - [Linux] - [OsType] - [Type]
		Added OS type for profiles	4.10.29 DVD Import	[Request Parameter]

Edition	Issue Date	Modification Overview	Section	
		- VMware ESXi 8.0 Update 3		MediaType
			D.4 OSInstallation	[OSInstallation] - [Linux] - [OsType] - [Type]
		Changed the function name from "BIOS/iRMC (for each model) Settings" to "BIOS/iRMC (for specific model) Settings"	-	-

Contents

Chapter 1 Overview....1
1.1 Outline....1
1.2 Handled Resources....1
1.3 Prerequisites....2

Chapter 2 Common Specifications....3
2.1 Protocol....3
2.1.1 Communication Method....3
2.1.2 Request Data....3
2.1.3 Response Data....4
2.2 HTTP Header....5
2.2.1 Request Header....5
2.2.2 Response Header....6
2.2.3 Exclusive Control by Using Headers....7
2.3 Status Codes....7
2.4 Encryption....8
2.5 Authentication....9
2.5.1 Session Authentication....9
2.5.2 One-Time Authentication....10
2.6 Resource ID....11
2.6.1 Retrieving the Resource ID....11

Chapter 3 Usage....13
3.1 Authentication....13
3.1.1 Preparation....13
3.1.2 Session Authentication....14
3.1.2.1 Examples of execution....14
3.1.3 One-Time Authentication....14
3.1.3.1 Examples of execution....15
3.1.4 Precautions for Use of the curl Command....15
3.2 Exclusive Control of Individual REST APIs....15
3.3 Registration....16
3.4 Information Retrieval....17
3.5 Update....17
3.6 Deletion....18
3.7 Operation....18
3.8 Task....19

Chapter 4 API Reference....20
4.1 User Management....20
4.1.1 Login (Session Authentication)....20
4.1.2 Logout (Session Authentication)....23
4.1.3 User Registration....24
4.1.4 List Retrieval for Users....27
4.1.5 Individual Retrieval of User....29
4.1.6 Update of User Information....31
4.1.7 Deletion of Users....36
4.1.8 Registration of User Groups....36
4.1.9 Searching User Groups....41
4.1.10 Selecting User Groups....43
4.1.11 List Retrieval for User Groups....43
4.1.12 Individual Retrieval of User Groups....44
4.1.13 Update of User Group Information....47
4.1.14 Deletion of User Groups....54
4.1.15 Retrieval of LDAP Information....54
4.1.16 Update of LDAP Information....57

4.1.17 Switch of LDAP Information ... 62
4.1.18 Retrieval of Policy Information ... 63
4.1.19 Update of Policy Information ... 65
4.2 License Management ... 69
4.2.1 Setting Licenses ... 69
4.2.2 List Retrieval for License Information ... 70
4.2.3 Deleting Licenses ... 71
4.2.4 Replacing Licenses ... 72
4.3 Node Management ... 73
4.3.1 Node Registration ... 73
4.3.2 List Retrieval for Nodes ... 85
4.3.3 Individual Retrieval of Node ... 89
4.3.4 Update of Nodes ... 93
4.3.5 Deletion of Nodes ... 99
4.3.6 Registration of Racks ... 99
4.3.7 List Retrieval for Racks ... 101
4.3.8 Individual Retrieval of Rack ... 102
4.3.9 Updating of Racks ... 104
4.3.10 Deletion of Racks ... 106
4.3.11 Registration of Floors ... 107
4.3.12 List Retrieval for Floors ... 108
4.3.13 Individual Retrieval of Floor ... 109
4.3.14 Update of Floors ... 110
4.3.15 Deletion of Floors ... 112
4.3.16 Registration of Datacenters ... 112
4.3.17 List Retrieval for Datacenters ... 113
4.3.18 Individual Retrieval of Datacenter ... 114
4.3.19 Update of Datacenters ... 115
4.3.20 Deletion of Datacenters ... 116
4.3.21 Registration of Node Groups ... 116
4.3.22 List Retrieval for Node Groups ... 117
4.3.23 Individual Retrieval of Node Group ... 118
4.3.24 Updating of Node Groups ... 119
4.3.25 Deletion of Node Groups ... 120
4.3.26 Allocation of Nodes to Node Groups ... 120
4.3.27 Account Registration ... 121
4.3.28 List Retrieval for Accounts ... 124
4.3.29 Individual Retrieval of Account Information ... 125
4.3.30 Updating of Account Information ... 126
4.3.31 Deletion of Accounts ... 130
4.3.32 Clearing Node Alarms ... 130
4.3.33 Changing from/to Maintenance Mode ... 131
4.3.34 List Retrieval for Node Tags ... 132
4.3.35 Creating Node Registration Script Files for AIS Gateway ... 132
4.3.36 Batch Update of Nodes ... 133
4.3.37 Confirmation of Authentication of Manually Registered Nodes (ISM 3.0.0.010 and later) ... 136
4.4 Node Discovery ... 140
4.4.1 Execution of Manual Node Discovery ... 140
4.4.2 Retrieving Results of Manual Node Discovery ... 142
4.4.3 Registration of Manually Discovered Nodes ... 147
4.4.4 Retrieving Results of Auto Discovery of Nodes ... 153
4.4.5 Registration of Automatically Discovered Nodes ... 154
4.4.6 Execution of Manual Node Discovery by Specifying CSV ... 161
4.4.7 Retrieving Key Names and Alternatives for the Value of the Keys to be Entered in the CSV File ... 162
4.4.8 Canceling Manual Node Discovery ... 163
4.4.9 Confirmation of Authentication of Automatically Discovered Nodes (ISM 3.0.0.010 or later) ... 163
4.4.10 Confirmation of authentication of manually Discovered nodes. (ISM 3.0.0.010 or later) ... 165

4.5 Node Operation....166
4.5.1 Instruction to Change Power Status....166
4.5.2 Retrieval of Node LED Information....166
4.5.3 Instruction to Change Node LED Status....167
4.5.4 Output of Power Statuses....168
4.5.5 Retrieving iRMC Login Sessions....168
4.6 Detailed Node Information Management....170
4.6.1 Instruction to Execute Retrieval of Node Information....170
4.6.2 List Retrieval for Detailed Node Information....170
4.6.3 Individual Retrieval of Detailed Node Information....183
4.6.4 Registration of OS Information....184
4.6.5 List Retrieval for OSes....187
4.6.6 Individual Retrieval of OS....188
4.6.7 Updating of OS Information....190
4.6.8 Deletion of OS Information....193
4.6.9 Instruction to Execute Retrieval of Virtualization Information....193
4.6.10 List Retrieval for Virtual Machines....194
4.6.11 Individual Retrieval of Virtual Machine....196
4.6.12 List Retrieval for Virtual Switches....198
4.6.13 Individual Retrieval of Virtual Switch....200
4.6.14 List Retrieval for Virtual Routers....201
4.6.15 Individual Retrieval of Virtual Router....202
4.6.16 Connection Test of Cloud Management Software....204
4.6.17 Batch Updating of OS Information....205
4.6.18 Scheduling Node Information Retrieval....207
4.7 Monitoring....208
4.7.1 List Retrieval for Information on Monitoring Items....208
4.7.2 Registration of Monitoring Items....208
4.7.3 Retrieval of Monitoring Items....211
4.7.4 Updating of Monitoring Items....213
4.7.5 Deletion of Monitoring Items....215
4.7.6 Retrieval of Monitoring History....216
4.7.7 Updating of Common Monitoring Settings of Nodes....216
4.7.8 Retrieval of Common Monitoring Settings of Nodes....217
4.7.9 Retrieval of Network Monitoring Settings....217
4.7.10 Updating of Network Monitoring Settings....219
4.7.11 Retrieval of Network Monitoring History....222
4.7.12 Updating of CPU Utilization Prediction Threshold....222
4.7.13 Retrieval of CPU Utilization Prediction Threshold....223
4.8 Event /Alarm....223
4.8.1 Registration of Action Settings....223
4.8.2 List Retrieval for Action Settings....227
4.8.3 Updating of Action Settings....229
4.8.4 Deletion of Action Settings....233
4.8.5 Registration of Alarm Settings....233
4.8.6 List Retrieval for Alarm Settings....236
4.8.7 Updating of Alarm Settings....237
4.8.8 Deletion of Alarm Settings....239
4.8.9 Registration of SMTP Server Settings Information....240
4.8.10 Retrieval of SMTP Server Settings Information....241
4.8.11 Registration of SNMP Server Settings Information....241
4.8.12 List Retrieval for SNMP Server Settings Information....243
4.8.13 Updating of SNMP Server Settings Information....244
4.8.14 Deletion of SNMP Server Settings Information....246
4.8.15 List Retrieval for Available SNMP Traps....247
4.8.16 List Retrieval for Available ISM Event IDs....247
4.8.17 List Retrieval for Logs for Received SNMP Traps....248

4.8.18 Registration of SNMP Traps To Be Excluded....249
4.8.19 List Retrieval for Information on Excluded SNMP Traps....250
4.8.20 Deletion of Excluded SNMP Traps....250
4.8.21 Registration of Shared Alarm Settings....251
4.8.22 Retrieval of Shared Alarm Settings....251
4.8.23 Test Execution of Actions....251
4.8.24 Adding Information on SNMP Trap Reception Settings....252
4.8.25 Retrieval for Information on SNMP Trap Reception Settings....254
4.8.26 Updating Information on SNMP Trap Reception Settings....255
4.8.27 Deletion of Information on SNMP Trap Reception Settings....257
4.9 Event List Management....257
4.9.1 Output of Log Type....257
4.9.2 List Retrieval for Operation Logs....258
4.9.3 List Retrieval for Audit Logs....260
4.9.4 List Retrieval for Anomaly Detection Logs....262
4.9.5 Individual Retrieval of Operation Logs....264
4.9.6 Individual Retrieval of Audit Logs....265
4.9.7 Individual Retrieval of Anomaly Detection Logs....266
4.9.8 Export of Operation Logs....267
4.9.9 Export of Audit Logs....268
4.9.10 Export of Anomaly Detection Logs....269
4.9.11 Display of Retention Periods....270
4.9.12 Renewal of Retention Periods....270
4.10 Profile Management....271
4.10.1 List Retrieval for Profile Categories....271
4.10.2 Conversion of Profile Categories....272
4.10.3 Adding Profiles....273
4.10.4 List Retrieval for Profiles....278
4.10.5 Individual Retrieval of Profiles....282
4.10.6 Updating Profiles....289
4.10.7 Deleting Profiles....289
4.10.8 Assigning Profiles to Nodes....290
4.10.9 Cancellation of Assigning Profile to Nodes....291
4.10.10 Releasing Profile Assignment to Nodes....291
4.10.11 Cancellation of Releasing Profile Assignment to Nodes....291
4.10.12 Adding Profile Groups....292
4.10.13 List Retrieval for Profile Groups....292
4.10.14 Individual Retrieval of Profile Groups....293
4.10.15 Updating Profile Groups....294
4.10.16 Deleting Profile Groups....294
4.10.17 Adding Policies....295
4.10.18 List Retrieval for Policies....297
4.10.19 Individual Retrieval of Policies....299
4.10.20 Updating Policies....302
4.10.21 Deleting Policies....302
4.10.22 Adding Policy Groups....302
4.10.23 List Retrieval for Policy Groups....303
4.10.24 Individual Retrieval of Policy Groups....304
4.10.25 Updating Policy Groups....304
4.10.26 Deleting Policy Groups....305
4.10.27 Importing Profiles....305
4.10.28 Exporting Profiles....306
4.10.29 DVD Import....306
4.10.30 Canceling DVD Import....310
4.10.31 List Retrieval for Registered Repositories....311
4.10.32 Deleting Registered Repositories....312
4.10.33 List Retrieval for Packages and Applications....312

4.10.34 Backing Up Hardware Settings....314
4.10.35 Canceling of Backup Hardware Settings....315
4.10.36 List Retrieval for Registered Backups....316
4.10.37 Deleting Registered Backups....318
4.10.38 Exporting Registered Backups....318
4.10.39 Adding Profiles from Registered Backups....319
4.10.40 Adding Policies from Registered Backups....320
4.10.41 Importing Backups....320
4.10.42 Restoring Hardware Settings....321
4.10.43 Canceling Restoration of Hardware Settings....322
4.10.44 List Retrieval of Profile Information for Nodes....322
4.10.45 Verifying Profiles....325
4.10.46 Canceling Verification of Profiles....325
4.10.47 Updating eIM to the Latest Version....326
4.10.48 Canceling Update of eIM to the Latest Version....326
4.11 Firmware Management....327
4.11.1 Starting Update Firmware/Driver....327
4.11.2 Canceling Update Firmware....330
4.11.3 List Retrieval for Firmware Documents....331
4.11.4 List Retrieval for Registered Repositories....332
4.11.5 List Retrieval for Firmware....332
4.11.6 Retrieval of Version Number Template Information....335
4.11.7 DVD Import....335
4.11.8 Canceling DVD Import....336
4.11.9 Individual Import Firmware....337
4.11.10 Canceling Individual Import Firmware....338
4.11.11 Deleting Repositories....338
4.11.12 Deleting Individual Firmware....339
4.11.13 List Output of Update Firmware Jobs....339
4.11.14 Deleting Update Firmware Jobs....340
4.11.15 Retrieving Information of Firmware Baseline Creation....340
4.11.16 Creation and Updates of Firmware Baseline....341
4.11.17 Deletion of Firmware Baseline....342
4.11.18 Allocation of Firmware Baseline....342
4.11.19 Releasing Firmware Baseline Allocation....343
4.11.20 List Retrieval for Firmware Baseline....344
4.11.21 Firmware Tool Import....347
4.11.22 Canceling Firmware Tool Import....348
4.11.23 List Retrieval for Firmware Tools....348
4.11.24 Deleting Firmware Tools....349
4.12 Log Management....349
4.12.1 Retrieving Log Collection Settings....349
4.12.2 Changing Log Collection Settings....352
4.12.3 Retrieving Log File Information....356
4.12.4 Retrieving Node Statuses....358
4.12.5 Collecting Logs....358
4.12.6 Canceling Log Collection....359
4.12.7 Creating Node Log Download Files....360
4.12.8 Canceling Creation of Node Log Download Files....361
4.12.9 Creating Archived Log Download Files....361
4.12.10 Canceling Creation of Archived Log Download Files....362
4.12.11 Retrieving Information on Node Log Download Files....363
4.12.12 Retrieving Information on Archived Log Download Files....364
4.12.13 Deleting Log Files....365
4.12.14 Canceling Deletion of Log Files....366
4.13 Network Management....366
4.13.1 Retrieving Port Information from All Nodes....366

4.13.2 Retrieving Virtual Switch Connection Information from All Nodes ... 368
4.13.3 Retrieving Virtual Machine Connection Information from All Nodes ... 368
4.13.4 List Retrieval for Definitions for Manual Connection ... 369
4.13.5 Changing Definitions for Manual Connection ... 369
4.13.6 Retrieving Information on Changes in Network Connections ... 371
4.13.7 Reference Settings for Information on Changes in Network Connections ... 371
4.13.8 Retrieving Information on Implemented Updates of Network Management Information ... 372
4.13.9 Updating Network Management Information ... 372
4.13.10 List Retrieval for VLAN Settings ... 373
4.13.11 Batch Modification of VLAN Settings on Multiple Nodes ... 373
4.13.12 Canceling Batch Modification of VLAN Settings on Multiple Nodes ... 374
4.13.13 Retrieving of Settings for Link Aggregation ... 374
4.13.14 Changing Settings for Link Aggregation ... 375
4.13.15 List Retrieval for VFAB Settings ... 376
4.13.16 List Retrieval for Information on Interface Groups ... 377
4.13.17 Retrieving Virtual Router Connection Information from All Nodes ... 378
4.14 Power Capping (Not available from ISM 3.0.0) ... 378
4.15 Virtual Resource Management ... 379
4.15.1 List Retrieval for Storage Pools ... 379
4.15.2 Individual Retrieval of Storage Pool ... 380
4.15.3 Updating Storage Pool Information ... 383
4.15.4 List Retrieval for Clusters ... 383
4.15.5 Individual Retrieval of Cluster ... 384
4.15.6 Migrating Virtual Machines ... 388
4.15.7 Turning On Power of Virtual Machines ... 389
4.15.8 Turning Off Power of Virtual Machines ... 389
4.15.9 Restarting Nodes ... 390
4.15.10 Setting Maintenance Mode on Nodes ... 390
4.15.11 Releasing Maintenance Mode on Nodes ... 391
4.15.12 Retrieval of Storage Pool History Information ... 391
4.15.13 Shutdown of Nodes ... 393
4.16 Task Management ... 394
4.16.1 Individual Retrieval of Task ... 394
4.16.2 List Retrieval for Tasks ... 395
4.17 ISM-VA Management ... 396
4.17.1 Retrieving and Releasing Privileges for VA Operation ... 396
4.17.2 Changing Password for the Privilege for VA Operation ... 398
4.17.3 Display of Information on Privilege for VA Operation ... 399
4.17.4 Display of ISM-VA Information ... 400
4.17.5 Setting ISM-VA System Information ... 400
4.17.6 Collecting Archived Logs ... 402
4.17.7 Applying Plug-Ins ... 404
4.17.8 Applying Patches ... 405
4.17.9 Displaying Plug-Ins ... 406
4.17.10 Deleting Plug-Ins ... 407
4.17.11 Displaying ISM-VA Login Statuses ... 408
4.17.12 Displaying Results of Operation Before Restarting ... 408
4.17.13 Output of Web Server Logs ... 409
4.17.14 Displaying Locales and Keymaps ... 410
4.17.15 Setting Locales and Keymaps ... 410
4.17.16 Displaying Available Locale Settings ... 411
4.17.17 Displaying Available Keymap Settings ... 411
4.17.18 Displaying Time Information ... 412
4.17.19 Setting of Time Information ... 415
4.17.20 Displaying Available Time Zone Settings ... 419
4.17.21 Displaying Volume Settings ... 419
4.17.22 Creating LVM Volumes ... 421

4.17.23 Allocating LVM Volumes to User Groups....421
4.17.24 Deallocating LVM Volumes from User Groups....422
4.17.25 Deleting LVM Volumes....423
4.17.26 Expanding LVM Volumes....424
4.17.27 Displaying SSL Certificates....425
4.17.28 Deploying SSL Certificates....425
4.17.29 Output of SSL Certificates....426
4.17.30 Displaying Information on ISM-VA Internal DHCP server....427
4.17.31 Setting up ISM-VA Internal DHCP Server....428
4.17.32 Exporting Setting Files for ISM-VA Internal DHCP....429
4.17.33 Initializing Domain Settings....430
4.17.34 Adding Domain Settings....431
4.17.35 Going Back to Previous Domain Setting....431
4.17.36 Displaying Domain Settings....432
4.17.37 Restarting ISM-VA....433
4.17.38 Stopping ISM-VA....434
4.17.39 Displaying Service Status....434
4.17.40 Retrieving ISM Version Number....435
4.17.41 Retrieving CAS Settings....435
4.17.42 Updating CAS Settings....436
4.17.43 Execution of ISM Backup....437
4.17.44 Execution of ISM Restore....439
4.18 Common Information....440
4.18.1 List Retrieval for FTP Files....440
4.18.2 Registration of Cloud Management Software....441
4.18.3 List Retrieval for Cloud Management Softwares....444
4.18.4 Individual Retrieval of Cloud Management Software....446
4.18.5 Updating of Cloud Management Software....447
4.18.6 Deletion of Cloud Management Software....450
4.18.7 Pool Settings....451
4.18.8 Retrieval of Pool Information....452
4.18.9 Allocating Values from Pools....453
4.18.10 Release of Assigned Values....454
4.18.11 Adding Shared Directories....455
4.18.12 List Retrieval for Shared Directories....457
4.18.13 Individual Retrieval of Shared Directory....458
4.18.14 Updating Shared Directories....459
4.18.15 Deleting Shared Directories....461
4.18.16 Mounting Shared Directories....461
4.18.17 Unmounting Shared Directories....463
4.18.18 Adding Proxy Settings....463
4.18.19 Displaying Proxy Settings....465
4.18.20 Update of Proxy Settings....465
4.18.21 Deleting Proxy Settings....467
4.18.22 Connection Test of Proxy Settings....467
4.18.23 Modifying Event Output Restricted Mode for Cloud Management Software....468
4.18.24 Retrieval of Relay Route Settings....469
4.18.25 Updating Relay Route Settings....470
4.18.26 Retrieval of Relay Route Information....471

Appendix A List of Privileges for Each API....473

Appendix B Examples of REST API Usage....487
B.1 Node Registration (from Discovery to Registration)....487
B.2 List Display of Node Statuses....491
B.3 Assigning Profiles....492
B.4 Updating Firmware....496
B.5 Extracting Logs....503

Appendix C List of Profile Parameters (ProfileData) 509
C.1 Server-BX 509
C.2 Storage-DX 530
C.3 Storage-NetAppCluster 533
C.4 Switch-SRX 534
C.5 Switch-CFX 538
C.6 Switch-VDX 542
C.7 Switch-PSWITCH 557

Appendix D Details of Profile Parameters (ProfileData) 561
D.1 BIOS 561
D.2 iRMC 573
D.3 IOVirtualization 588
D.3.1 CNAAdapter 590
D.3.2 LANAdapter 596
D.3.3 FCAdapter 599
D.4 OSInstallation 601
D.5 MMB 626
D.6 Monitoring 628
D.7 RAID 629
D.8 BIOSByModel 630
D.9 iRMCByModel 630

Index 631

Chapter 1 Overview

This chapter provides an overview of the APIs in this product.

1.1 Outline

This product provides APIs that work in link with your own self-created applications.

The APIs in this product are REST (Representational State Transfer) interfaces that communicate with a TLS (Transport Layer Security) protocol and are implemented by sending and receiving data in JSON (JavaScript Object Notation) format.

In this product, the following REST API body style formats are available:

- Registration, Deletion, Retrieval, and Update

  Denotes the API that controls resources (information) such as nodes, users, etc.

- Process execution

  Denotes the API that executes a specific process, such as login or firmware update.

1.2 Handled Resources

This product has the following resources:

Category	Resource name	Description
User	/users	User and authentication information
	/usergroups	User group information
Node	/nodes	Node information
	/networks/nodes	
	/resources/nodes	
	/nodes/profiles	
	/nodegroups	Node group information
OS	/nodes/{nodeid}/os	Node OS information
Virtual node	/resources	Virtual resource information
	/resources/virtualmachines	Virtual machine information
	/resources/virtualswitches	Virtual switch information
	/resources/virtualrouters	Virtual router information
Installation location	/datacenters	Datacenter information
	/floors	Floor information
	/racks	Rack information
Event	/event	Event information (ISM Operation Log, Audit Log, and SNMP Trap)
Task	/tasks	Task information
Network Management	/networks	Network Management information
Profile	/profiles/profiles	Profile definition and profile definition group information
	/profiles/policies	Policy and policy groups information
	/profiles/categories	Device category information

Category	Resource name	Description
	/profiles/backups	Hardware settings backup information
System settings	/system	System settings information
	/system/licenses	License information
	/system/settings	ISM settings information
	/system/settings/repositories	ISM repository information
ISM VA	/ismva	ISM-VA information

1.3 Prerequisites

For using the APIs in this product, an environment that can use the following functions is required:

- Receiving responses and sending requests based on HTTP1.1 in the TLS protocol
- Using X.509 CA certificates in PEM format for TLS protocol transmissions
- Freely specifiable HTTP methods and HTTP headers
- JSON interpretation and creation
- URL encoding and decoding (percent encoding/decoding)
- AES-256-CBC encryption/decryption and BASE64 coding/decryption (example: OpenSSL)

Chapter 2 Common Specifications

This chapter describes the common specifications for using the REST API in this product.

- 2.1 Protocol
- 2.2 HTTP Header
- 2.3 Status Codes
- 2.4 Encryption
- 2.5 Authentication
- 2.6 Resource ID

2.1 Protocol

This section describes the REST API protocol.

2.1.1 Communication Method

Communicates in HTTPS.

2.1.2 Request Data

Request data have the following structure:

Method

The available method types are as follows:

- GET
- POST
- PATCH
- DELETE

URL

The URL specifications are as follows:

```
https://<IP address or server FQDN>:<port number>/ism/api/v2/<resource> [?<query parameter>]
```

- Port number

  Specify 25566.

  When you want to change the port number, refer to "User's Guide."

- Resource

  Specify the resource that indicates the API type. For details, refer to "Chapter 4 API Reference."

- Query parameters

  Only when using the GET method, specify query parameters in the following format:

  ```
  Parameter name1 = parameter value1& parameter name2 = parameter value2&...
  ```

  - Connect each API parameter name with a parameter value using an equal sign (=).
  - Set the parameter values to URL-encoded values (percent encoding).
  - When specifying multiple parameters, connect them with ampersand (&) signs.

HTTP header (request header)

Specify character code type, API version, and session ID, etc. in the request header.

For details, refer to "2.2.1 Request Header."

HTTP body (request body)

When using the REST API, specify values for the following key name in the HTTP body:

Key name	Format	Content
IsmBody	Object	Request parameter of each API

Example:

```
{
 "IsmBody":{
       <Request parameter of each API>
  }
}
```

Note

When there are no API parameters

Depending on the API, there are no parameters to be specified under IsmBody. In such cases, it is not required to specify the IsmBody key itself.

Depending on the tools you use for execution of REST, HTTP body (request body) in POST cannot be omitted. In that case, specify the HTTP body with empty.

2.1.3 Response Data

Response data have the following structure:

HTTP header (response header)

The processing result of a request (normal or error), API version, session ID and similar items are returned in the response header.

For details, refer to "2.2.2 Response Header."

HTTP body (response body)

As the result of REST API, the following key names and values are returned in the HTTP body:

Key name	Format	Content
IsmBody	Object	API processing results API processing results are returned. For details, refer to "Chapter 4 API Reference."
MessageInfo	Array	Message information Errors, warnings, and notification messages regarding API processing are returned. If there is no information available, only the key names are returned.
SchemaType	Character string	The file name containing the JSON schema (JSON schema file name) that displays the entire HTTP body structure is returned.

Example:

```
{
  "IsmBody":{
          <output data of each API service>
```

```
  },
  "MessageInfo":[],
  "SchemaType":" https://<IP address or server FQDN>:<port number>/ism/schema/v2/<resource>/<JSON
schema file name>"
}
```

SchemaType

The following is the structure returned in SchemaType:

```
https://<ID address or server FQDN>:<port number>/ism/schema/v2/<resource>/<JSON schema file name>
```

- JSON schema file name

  The following shows how the JSON schema files are named:

  <Resource name><Method name><-Out-(Version number)>.json

  - Resource name

    Unique name for each API resource

  - Method name

    Either GET, POST, PATCH, or DELETE

  - Version number

    Version number of the API

  Example:

```
"SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/Nodes-GET-Out.0.0.1.json"
```

Point

The JSON schema clearly states the data input/output format of the API in use, and was made to be usable within user-created applications.

MessageInfo

The following is the structure of the elements in the array returned in MessageInfo:

Key name	Format	Content
MessageId	Character string	Message ID A unique ID is returned for each message.
API	Character string	API type The API type is returned in the format "Method name URI."
Message	Character string	API processing results API processing results are returned as response parameters.
Timestamp	Character string	Time stamp information Information on the time stamp of the message is returned.

2.2 HTTP Header

This section describes the HTTP header of the REST API.

2.2.1 Request Header

When requesting the REST API, specify the HTTP header as follows.

Table 2.1 List of request headers

Header name	Content	Description
Content-Type	application/JSON;charset=UTF-8	These contents must always be specified.
X-FJ-Ism-Version	2.0.0	Specify the version to be used. If omitted, the latest version is used.
X-Ism-Authorization	Session ID	Specify an ID when using session authentication. For details on session authentication, refer to "2.5.1 Session Authentication."
Authorization	ISM authentication character string	When using one-time authentication, specify a character string. For details on one-time authentication, refer to "2.5.2 One-Time Authentication."
Cookie	X-Ism-Authorization = session ID	The session ID stored in the client's cookie is specified.
If-Match	ETag value that was returned in the response header the last time that the REST API was executed	Specify this when carrying out exclusive control by ETags. Using ETags is recommended for using REST APIs in a given sequence. If omitted, ETag exclusion is not executed. For details, refer to "2.2.3 Exclusive Control by Using Headers."

Example:

```
Content-Type: application/JSON; charset=UTF-8
X-FJ-Ism-Version:2.0.0
X-Ism-Authorization: xxxxxxxxxxxxxx
Authorization: ISM xxxxxxxxxxxxxx
If-Match: "686897696a7c876b7e"
```

2.2.2 Response Header

The following HTTP headers are returned in the REST API response.

Table 2.2 List of response headers

Header name	Content	Description
HTTP/1.1	A status code is set. Status code examples: - Normal: 200 OK - When there is an error: 400 Bad Request, etc.	Status line This is always returned without fail. For details regarding the status codes, refer to "2.3 Status Codes."
Content-Type	application/JSON; charset=UTF-8	This is always returned without fail.
Allow	One of the following is set: GET, POST, PATCH, or DELETE	The method that is available in the specified URI is returned.
X-FJ-Ism-Version	2.0.0	The used version is returned.
X-Ism-Authorization	Session ID	The session ID for session authentication is returned.

Header name	Content	Description
		For details on session authentication, refer to "2.5.1 Session Authentication."
Set-Cookie	X-Ism-Authorization = session ID; Secure; Httponly	Returned when the session ID in session authentication is set in cookies.
ETag	ETag value	Specify this when carrying out exclusive control by ETags. Using ETags is recommended for using REST APIs in a given sequence. If omitted, ETag exclusion is not executed. For details, refer to "2.2.3 Exclusive Control by Using Headers."

Example:

```
HTTP/1.1 200 OK
Content-Type: application/JSON; charset=UTF-8
Allow:GET,DELETE
X-FJ-Ism-Version:2.0.0
X-Ism-Authorization: xxxxxxxxxxxxx
```

2.2.3 Exclusive Control by Using Headers

For exclusive control of individual REST APIs, use ETags in the HTTP response header.

ETags are set to unique values to connect each resource with the corresponding resource version.

When you execute update processing for resources, you can control whether processing of the REST API is conducted by comparing the ETags stored within ISM with the ETag values received last time the resources were accessed by setting these last ETag values for If-Match in the request header.

Relation between ETag values set for If-Match and internally stored ETag values	Processing
Matching	Processing is executed.
Not matching	Processing is not executed, and a status code set to 412 is returned.

For details on usage, refer to "Chapter 3 Usage."

2.3 Status Codes

Whether REST API processing ended normally or in error is returned as the HTTP protocol status code in the response header status line.

Classification	Code	Code	Status	Description
Success	2xx	200	OK	OK Results of processing are returned in the HTTP response body.
		201	Created	Created A new resource was created.
		202	Accepted	Accepted Request has been accepted.
		204	No Content	No content

Classification	Code	Code	Status	Description
				Nothing to return, but headers are usable.
Error	4xx	400	Bad Request	Invalid request Due to an invalid request, there was a processing error.
		401	Unauthorized	No permission Your request is not authenticated.
		403	Forbidden	Prohibited There is no access privilege.
		404	Not Found	Not found There is no API that matches the URL.
		405	Method Not Allowed	Prohibited method The method is not supported by the resource shown in the URL.
		412	Precondition failed	Failure due to preconditions (Failure due to ETag exclusive control)
Connection not available	5xx	500	Internal Server Error	Internal error An internal ISM error occurred during processing.
		501	Not Implemented	Presently not supported Functions required for the request are not supported.
		503	Service Unavailable	Service unavailable The request could not be processed due to a temporary overload, or because maintenance is in progress.

2.4 Encryption

For specifying a password for a REST API query parameter or request parameter, set encrypted character strings as passwords for each API according to the following procedure.

With the following command examples for Linux for reference, execute password encryption.

```
$ echo -n <password> | openssl enc -aes-256-cbc -e -base64 -pass pass:<server IP address> -A -md md5
```

Server IP address

Use the IP address of the ISM-VA as the encryption key.

The following shows how to use IP addresses as keys.

- For IPv4

  Omit the first 0 in the numerical value of the IP address.

  Example:

  OK: 10.26.144.10

  Wrong: 010.026.144.010

- For IPv6

  Do not omit any part of the IP address numerical value.

Use lowercase for letters.

Example:

OK: 2001:0db8:bd05:01d2:288a:1fc0:0001:10ee

Wrong - 2001:db8:bd05:1d2:288a:1fc0:1:10ee

Wrong: 2001:db8::1234:0:0:9abc

Wrong: 2001:db8::9abc

Note

- OpenSSL version incompatibility

  The initial value of the -md option varies depending on the OpenSSL version:

  - OpenSSL version 1.0.2 or earlier: md5
  - OpenSSL version 1.1.0 or later: sha 256

    For OpenSSL 1.1.0 or later, specify md5 for the -md option for encryption when using the REST API.When you execute the openssl command with -md md5, the following message may be displayed, but this does not mean there is a problem.

```
*** WARNING : deprecated key derivation used.
Using -iter or -pbkdf2 would be better.
```

- Other methods of encryption

  When encrypting by methods other than the openssl command, confirm if the resulting encrypted password remains the same password after decrypting it with the openssl command.

  The following is an example of an encryption command.

  Example:

  JavaScript crypto-js library, AES.encrypt method

```
crypto-js.AES.encrypt (crypto-js.enc.Utf8.parse (<password>), <server IP address>)
```

2.5 Authentication

For using the ISM APIs, an authentication operation is required.

There are two kinds of authentication as follows:

- 2.5.1 Session Authentication
- 2.5.2 One-Time Authentication

2.5.1 Session Authentication

This is used when issuing multiple APIs consecutively.

1. Encrypt the passwords following the procedure in "2.4 Encryption."
2. Retrieve a session ID as described in "4.1.1 Login (Session Authentication)."

   The session ID is returned to the following location:

Return location	Return key
Response header	X-Ism-Authorization
Response body	Auth key within IsmBody

3. Specify the session ID returned in Step 2 in the request header (X-Ism-Authorization) to issue an API.

4. Log out.

   When access has ended, specify the session ID in the request header (X-Ism-Authorization) and issue a logout API.

Note

- The following are precautions for when login fails:
  - The session termination time, locking threshold value and locking time are set in the security policy.
  - If the number of repeated failures exceeds the locking threshold value, the respective user cannot log in for the duration of the locking time.
  - After the set locking time has passed, the failure count returns to 0.
- After logging in, when the session termination time has elapsed without any operation after the last access, the user is logged out automatically.
- The same user can log in multiple times.
- The following are precautions for when the user with Multi-Factor Authentication enabled logs into ISM.
  - Authorization Code is updated once every 30 seconds. Authentication Code that has been successfully authenticated cannot be reused.
  - If authentication with Authorization Code fails three times in 30 seconds, you cannot log in for the next 30 seconds.

2.5.2 One-Time Authentication

The API can be issued easily by including both the login and logout operations in one API issuance.

1. Encrypt the character strings used for the user name/password/authentication code according to "2.4 Encryption."

   ```
   <User name>:<password>
   ```

   User with Multi-Factor Authentication enabled

   ```
   <User name>:<password>:<authentication code>
   ```

2. Specify the character string encrypted in Step 1 in the request header (Authorization) to issue an API.

   Example of HTTP header:

   ```
   Authorization:ISM <Encrypted character string>
   ```

Note

- As login and logout processing is carried out internally, performance becomes slower when executing multiple APIs than with session authentication.
- The following are precautions for when authentication fails:
  - The session termination time, locking threshold value and locking time are set in the security policy.
  - If the number of repeated failures exceeds the locking threshold value, the respective user cannot log in for the duration of the locking time.
  - After the set locking time has passed, the failure count returns to 0.
- After logging in, when the session termination time has elapsed without any operation after the last access, the user is logged out automatically.

2.6 Resource ID

In this product, each resource is managed by ID. When executing API, there are situations when it is required to specify the resource ID.

2.6.1 Retrieving the Resource ID

The Resource ID used in the product and the REST API retrieving the resource ID are displayed below.

Resource ID	Parameter	REST API	Reference
User ID	UserId	GET /users	4.1.4 List Retrieval for Users
User Group ID	UserGroupId	GET /usergroups	4.1.11 List Retrieval for User Groups
Node ID	NodeId	GET /nodes	4.3.2 List Retrieval for Nodes
Rack ID	RackId	GET /racks	4.3.7 List Retrieval for Racks
Floor ID	FloorId	GET /floors	4.3.12 List Retrieval for Floors
Datacenter ID	DataCenterId	GET /datacenters	4.3.17 List Retrieval for Datacenters
Node Group ID	NodeGroupId	GET /nodegroups	4.3.22 List Retrieval for Node Groups
Account ID	AccountId	GET /nodes/{nodeid}/accounts	4.3.28 List Retrieval for Accounts
Action ID	ActionId	GET /event/actions	4.8.2 List Retrieval for Action Settings
Alarm Settings ID	AlarmId	GET /event/alarms	4.8.6 List Retrieval for Alarm Settings
Category ID	CategoryId	GET /profiles/categories	4.10.1 List Retrieval for Profile Categories
Cloud Management Software ID	CmsId	GET /system/settings/cms	4.18.3 List Retrieval for Cloud Management Softwares
Firmware ID	FirmwareId	GET /system/settings/firmware/list	4.11.5 List Retrieval for Firmware
Policy Group ID	PolicyGroupId	GET /profiles/policies/groups	4.10.23 List Retrieval for Policy Groups
Profile Group ID	ProfileGroupId	GET /profiles/profiles/groups	4.10.13 List Retrieval for Profile Groups
Monitor Item ID	ItemId	GET /nodes/monitor/items	4.7.3 Retrieval of Monitoring Items
Log ID	Id	GET /event/history/audit/show	4.9.3 List Retrieval for Audit Logs
Manual Discovery ID	ManualDiscoveryId	GET /nodes/discovery/manual	4.4.2 Retrieving Results of Manual Node Discovery
Manual Discovery Node ID	ManualNodeId	GET /nodes/discovery/manual	4.4.2 Retrieving Results of Manual Node Discovery
Auto Discovery Node ID	DiscoveredNodeId	GET /nodes/discovery/auto	4.4.4 Retrieving Results of Auto Discovery of Nodes
Policy ID	PolicyId	GET /profiles/policies	4.10.18 List Retrieval for Policies

Resource ID	Parameter	REST API	Reference
Profile ID	ProfileId	GET /profiles/profiles	4.10.4 List Retrieval for Profiles
Backup ID	BackupId	GET /profiles/backups	4.10.36 List Retrieval for Registered Backups
Repository ID	RepositoryId	GET /system/settings/firmware/repositories GET /system/settings/repositories/profiles	4.11.4 List Retrieval for Registered Repositories 4.10.31 List Retrieval for Registered Repositories
Task ID	TaskId	GET /tasks	4.16.2 List Retrieval for Tasks
VFAB ID	VfabId	GET /networks/nodes/{nodeid}/vfabs	4.13.15 List Retrieval for VFAB Settings
Virtual Machine ID	VirtualMachineId	GET /resources/virtualmachines	4.6.10 List Retrieval for Virtual Machines
Virtual Switch ID	VirtualSwitchId	GET /resources/virtualswitches GET /networks/virtualswitches	4.6.12 List Retrieval for Virtual Switches 4.13.2 Retrieving Virtual Switch Connection Information from All Nodes
Virtual Router ID	VirtualRouterId	GET /resources/virtualrouters	4.6.14 List Retrieval for Virtual Routers
Storage Pool ID	PoolId	GET /resources/storagepools	4.15.1 List Retrieval for Storage Pools
Cluster ID	ClusterId	GET /resources/clusters	4.15.4 List Retrieval for Clusters
SNMP Settings Management ID	SNMPServerId	GET /event/snmpmanagers	4.8.12 List Retrieval for SNMP Server Settings Information
Mount ID	MountId	GET /system/settings/shareddirectory	4.18.12 List Retrieval for Shared Directories
Job ID	JobId	GET /system/settings/job/firmwareupdate	4.11.13 List Output of Update Firmware Jobs
Virtual Switch Identification ID	VirtualSwitchInstanceId	GET /resources/virtualswitches	4.6.12 List Retrieval for Virtual Switches

The following displays an example of retrieving the node ID.

By specifying the query parameters in "4.3.2 List Retrieval for Nodes" you can narrow down the node you want to retrieve.

Retrieve node by specifying node name

If retrieving a node with the node name "Server-1," execute the following REST API.

```
GET /nodes?name=Server-1
```

Retrieve node by specifying node type

If retrieving a node whose node type is "server," execute the following REST API.

For information on node types, refer to [Node Type] in "4.3.1 Node Registration."

```
GET /nodes?type=server
```

Chapter 3 Usage

This chapter provides examples of how to use the curl command in a Linux environment to call REST APIs.

3.1 Authentication

This section provides an overview of authentication operations when using the REST API.

3.1.1 Preparation

In order to execute https communication, there are the following three usage methods relating to certificate verification with the curl command:

- When using with a CA certificate created and retrieved after having created a self-signed certificate with ISM
- When using with a certificate signed by a certificate authority and registered in ISM
- When using without regard to certificates, due to conditions such as the environment being under development

When using with a CA certificate created and retrieved after having created a self-signed certificate with ISM

1. Create a self-signed certificate.

   For information on how to create self-signed SSL certificates, refer to "4.7.4 Creation of Self-signed Certificates" in "User's Guide."

2. Retrieve a CA certificate from ISM.

```
$ curl -o /tmp/certificate.crt "https://192.168.1.2:25566/ca.crt" --insecure
```

3. Apply the CA certificate to your environment, or specify and use the CA certificate you retrieved via the --cacert option of the curl command when issuing the REST API.

   Example of execution with the --cacert option

```
$ curl "https://192.168.1.2:25566/ism/api/v2/nodes" -X GET --cacert /tmp/certificate.crt
-H "X-Ism-Authorization: <session id>"
```

Note

Select the --insecure option only when acquiring the CA certificate with this method.

When using with a certificate signed by a certificate authority and registered in ISM

When the certificate is unsatisfactory in some way, such as an intermediate CA certificate or similar, either retrieve a CA certificate from a certificate authority and apply said CA certificate to your environment, in the same way as described in "When using with a CA certificate created and retrieved after having created a self-signed certificate with ISM," or alternatively specify and use a CA certificate retrieved with the --cacert option.

When using without regard to certificates, due to conditions such as the environment being under development

By specifying the --insecure option of the curl command when you issue a REST API, you can disable the verification of the certificate.

Example of execution with the --insecure option

```
$ curl "https://192.168.1.2:25566/ism/api/v2/nodes" -X GET --insecure -H "X-Ism-Authorization:
<session id>"
```

Note

This method is not recommended for environments that will be used long-term or permanently.

3.1.2 Session Authentication

This is used when issuing multiple APIs consecutively.

Issue a login API in advance, and then retrieve a session ID.

Specify the session ID and issue the subsequent API. After issuing the required API(s), issue a logout API.

For the procedure, refer to "2.5.1 Session Authentication."

3.1.2.1 Examples of execution

Password encryption

Encrypt the password with the method described in "2.4 Encryption."

```
$ enc_passwd=`echo -n "password123" | openssl enc -aes-256-cbc -e -base64 -A -md md5 -pass pass:
192.168.1.2`
$ echo $enc_passwd
U2FsdGVkX1/FlRxcsia+3hh1bBhmRD+E8ApWf/fZHWLJz5ZQU6hbsRHN72GnMk8D
```

Login

Retrieve a session ID.

```
$ session_id=`curl "https://192.168.1.2:25566/ism/api/v2/users/login" -X POST -H "Content-Type:
application/JSON; charset=UTF-8" --cacert /tmp/certificate.crt -d "{ \"IsmBody\": { \"UserName\" :
\"administrator\", \"Password\": \"${enc_passwd}\"}}" -s --include | grep "X-Ism-Authorization" |
sed -e 's/X-Ism-Authorization:[ \t]*//' -e 's/[\r\n]//g'`
$ echo $session_id
f55f5bf5abd7db99db706fdd27c9d85f
```

Login (User with Multi-Factor Authentication)

Retrieve a session ID.

```
$ session_id=`curl "https://192.168.1.2:25566/ism/api/v2/users/login" -X POST -H "Content-Type:
application/JSON; charset=UTF-8" --cacert /tmp/certificate.crt -d "{ \"IsmBody\": { \"UserName\" :
\"administrator\", \"Password\": \"${enc_passwd}\"}}" -s --include | grep "X-Ism-Authorization" |
sed -e 's/X-Ism-Authorization:[ \t]*//' -e 's/[\r\n]//g'`
$ echo $session_id
f55f5bf5abd7db99db706fdd27c9d85f
```

API execution

Specify the session ID in the request header and execute the API.

```
$ curl "https://192.168.1.2:25566/ism/api/v2/nodes" -X GET --cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id" -H "Content-Type: application/JSON; charset=UTF-8"
```

Logout

Specify the session ID in the request header and logout.

```
$ curl  "https://192.168.1.2:25566/ism/api/v2/users/logout" -X POST  --cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id" -H "Content-Type: application/JSON; charset=UTF-8"
```

3.1.3 One-Time Authentication

You can include login and logout operations in a single API issuance.

For the procedure, refer to "2.5.2 One-Time Authentication."

3.1.3.1 Examples of execution

User name and password encryption

```
$ auth=`echo -n "user123:password123" | openssl enc -aes-256-cbc -e -base64  -A -md md5 -pass pass:
192.168.1.2`
$ echo $ auth
U2FsdGVkX1/FlRxcsia+3hh1bBhmRD+E8ApWf/fZHWLJz5ZQU6hbsRHN72GnMk8D
```

User name/password/authentication code encryption (User with Multi-Factor Authentication)

```
$ auth=`echo -n "user123:password123:237692" | openssl enc -aes-256-cbc -e -base64 -A -md md5 -pass
pass:192.168.1.2`
$ echo $ auth
U2FsdGVkX1/FlRxcsia+3hh1bBhmRD+E8ApWf/fZHWLJz5ZQU6hbsRHN72GnMk8D
```

Execution of respective API

```
$ curl "https://192.168.1.2:25566/ism/api/v2/nodes?DcId=2&FloorId=3&RackId=4" -X GET --cacert /tmp/
certificate.crt -H "Authorization: ISM $auth" -H "Content-Type: application/JSON; charset=UTF-8"
```

3.1.4 Precautions for Use of the curl Command

When you are going to use the curl command, note the following precautions:

- It is recommended to use the --cacert option.

  Options such as -k and --insecure can also be used, but make sure before use that the certificate is properly set.

- When writing a URL, enclose it in quotation marks ("").

  Because the "&" character is used when specifying the query parameter for the GET method, any URL not enclosed in quotation marks will be interpreted as a Linux command and operations will not work properly.

3.2 Exclusive Control of Individual REST APIs

This section provides examples of exclusive control by using ETags in the HTTP response header.

1. Issue a REST API, and retrieve the value for the ETag in the response header.

   Response header example:

   ```
   Content-Type: application/JSON,charset=UTF-8
   Allow:GET,DELETE
   x-FJ-ism-version:2.0.0
   ETag: "686897696a7c876b7e"
   ```

2. Specify the retrieved ETag value in the request header.

   Example of request header when carrying out resource update based on processing result of Step 1:

   ```
   Content-Type: application/JSON,charset=UTF-8
   Allow:GET,DELETE
   x-FJ-ism-version:2.0.0
   If-Match: "686897696a7c876b7e"
   ```

   - When there is no resource update between Steps 1 and 2:

     The request is processed.

   - When there is a resource update:

     The following is returned.

     Response header

```
HTTP/1.1 412 Precondition Failed
Content-Type: application/JSON,charset=UTF-8
Allow:GET,DELETE
x-FJ-ism-version:2.0.0
ETag: "347923840f34db4234"
```

HTTP body

```
{
  "SchemaType":" https://{server URL}:{port number}/ism/schema/v2/...",
  "MessageInfo":[
      {
          "Timestamp":"2016-07-30T15:30:45.250Z ",
          "MessageId":"50200003",
          "API":"POST https:// XXX. XXX....",
          "Message":"Etag has updated."
      }
  ],
  "IsmBody":{ }
}
```

Point

When there is a resource update between steps 1 and 2 and you want to re-execute the request, execute the steps again from Step 1.

3.3 Registration

Register the resource information. Using the POST method, enter the required parameters into the message body in JSON format.

When registering rack information

```
# curl "https://192.168.1.2:25566/ism/api/v2/racks"
-X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id"
-d '{"IsmBody" : {"Rack" : {"Name" : "Rack-1","Unit" : 50,"Width" : 700,"Depth" : 1000,"Height" :
2000,"FloorId" : 1,"Angle" : 0,"Xposition" : 10,"Yposition" : 10,"Description" : "memo"}}}'
```

Response (JSON)

```
{
    "IsmBody": {
        "Rack": {
            "AlarmStatus": "Normal",
            "Angle": 0,
            "Depth": 1000,
            "Description": " memo",
            "FloorId": 1,
            "Height": 2000,
            "Name": " Rack-1",
            "RackId": 1,
            "Status": "Normal",
            "Unit": 50,
            "UpdateDate": "2016-01-10T14:30:36.222Z",
            "Width": 700,
            "Xposition": 10,
            "Yposition": 10
        }
    },
    "MessageInfo": [],
```

```
    "SchemaType": ""
}
```

3.4 Information Retrieval

Retrieve the resource information.

In principle, you should use the GET method to specify the query parameters in the URI.

In some cases, however, the POST method is used. In such cases, enter the parameters into the request body in JSON format.

When retrieving rack information

```
# curl "https://192.168.1.2:25566/ism/api/v2/racks?FloorId=1"
-X GET
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id"
```

Response (JSON)

```
{
    "IsmBody": {
        "Racks": [
            {
                "AlarmStatus": "Normal",
                "Angle": 0,
                "Depth": 1000,
                "Description": " memo",
                "FloorId": 1,
                "Height": 2000,
                "Name": "Rack-1",
                "RackId": 1,
                "Status": "Normal",
                "Unit": 50,
                "UpdateDate": "2016-01-10T14:30:36.222Z",
                "Width": 700,
                "Xposition": 10,
                "Yposition": 10
            }
        ]
    },
    "MessageInfo": [],
    "SchemaType": ""
}
```

3.5 Update

Update the resource information. Using the PATCH method, enter the required parameters into the message body in JSON format.

When updating rack information

```
# curl "https://192.168.1.2:25566/ism/api/v2/racks/1"
-X PATCH
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id"
-d '{"IsmBody" : {"Rack" : {"Name" : "Rack-1-1","Unit" : 50,"Width" : 700,"Depth" : 1000,"Height" :
2000,"FloorId" : 1,"Angle" : 0,"Xposition" : 10,"Yposition" : 10,"Description" : "memomemo"}}}'
```

Response (JSON)

```
{
    "IsmBody": {
        "Rack": {
```

```
            "AlarmStatus": "Normal",
            "Angle": 0,
            "Depth": 1000,
            "Description": "memomemo",
            "FloorId": 1,
            "Height": 2000,
            "Name": "Rack-1-1",
            "RackId": 1,
            "Status": "Normal",
            "Unit": 50,
            "UpdateDate": "2016-01-10T15:02:59.093Z",
            "Width": 700,
            "Xposition": 10,
            "Yposition": 10
        }
    },
    "MessageInfo": [],
    "SchemaType": ""
}
```


3.6 Deletion

For deleting any resource information, use the DELETE method.

When deleting rack information

```
# curl "https://192.168.1.2:25566/ism/api/v2/racks/1"
-X DELETE
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id"
```

Response (JSON)


```
{
    "IsmBody": { },
    "MessageInfo": [],
    "SchemaType": ""
}
```


3.7 Operation

For executing a specific process for a resource, use the POST method. If parameters need to be specified, enter them in JSON format to the request body with the POST method.

When instructing to retrieve of detailed node information

```
curl  "https://192.168.1.2:25566/ism/api/v2/nodes/1/inventory/refresh"
-X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization: $session_id"
```

Response (JSON)


```
{
    "IsmBody": { },
    "MessageInfo": [],
    "SchemaType": ""
}
```

3.8 Task

APIs that start processes a synchronizing with the display, such as "4.11.1 Starting Update Firmware/Driver" or "4.10.8 Assigning Profiles to Nodes" might return the TaskID in the response body.

For these APIs, you can detect when the process has been completed by checking the API progress information (Status or Result) in "4.16.1 Individual Retrieval of Task."

```
$ curl "https://192.168.1.2:25566/ism/api/v2/tasks/1" -X GET -H "Authorization: ISM \"xxxxxx xxxxx\""
-s -k
```

Chapter 4 API Reference

This chapter provides an overview of the ISM REST API.

The following is the API format as it will be from this point onward:

```
<Method><Resource>
```

In the case of constructing an actual URL, refer to "2.1.2 Request Data."

4.1 User Management

4.1.1 Login (Session Authentication)

[Overview]

Logs in with user session authentication.

[Format]

```
POST /users/login
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserName	string	User Name
Password	string	Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method.
SetCookie	string	Cookie Settings Specifies whether or not a Cookie setting response header is returned. - Enable: Returns Cookie setting response header - Disable: Does not return Cookie setting response header When the key is omitted or when the setting value is empty (" "), the Cookie settings will not be executed. With this configuration, when login succeeds, it outputs session ID in the response header for Cookie setting.
Code	string	Authentication Code Specify the authentication code for Multi-Factor Authentication. When the user with Multi-Factor Authentication enabled logs in, see the [Precautions] section. For the user with Mult-Factor Authentication disabled, keys are optional.

[Response Parameter]

Parameter	Type	Description
Auth	string	Session ID The session ID retrieved after login is output.
SetCookie	string	Cookie Settings The same content as that of the request parameter is output.
UserId	string	User ID The user ID of the user that logged in is output.
MessageId	string	Not used
Message	string	Not used
MessageList	array	Message List
MessageId	string	Login Message ID The message ID corresponding to the notification message at the time of login.
Message	string	Login Message The notification message at the time of login.
CasLoginUrl	string	Login URL for CAS The URL is output when a login to CAS is required. - "": Login to CAS is not required - "https://<ISM URL>:<CAS port number>/cas/login?ismlogin=true"

CasEffective	string	Enable CAS
		Outputs whether CAS is enabled or disabled for the login user.
		- Enable: Enabled
		- Disable: Disabled
		CAS is enabled for users that meet following conditions.
		- ISM status
		  - Enable CAS
		- User
		  - Users that belong to a user group that manages all nodes
		  - Users that belong to a user group that is authenticated by LDAP
		  - Users that have a user role that has more privileges than the user role specified by CAS

UserGroupList	array	List of User Group names to which the user can belong The User Group List is output only when the login user type is LDAP. If the login user type is ISM, the key is not output either.
GroupName	string	User Group names to which the user can belong The User Group name is output only when the login user type is LDAP.

Parameter	Type	Description
CurrentGroupName	string	Current User Group name to which the user belongs The Current User Group name is output only when the login user type is LDAP. If the login user type is ISM, the key is not output either.
SwitchResult	string	Availability or unavailability of switching active host Outputs whether the active host is unconnectable and has been switched to a standby host or not when logging in using Link with Microsoft Active Directory Group. - Switched: Has switch to active host - None: No switch to active host
SwitchMessageId	string	Active Host Switch Message ID The message ID that corresponds to the message that is notified when an active host switch occurs during login using Link with Microsoft Active Directory Group.
SwitchMessage	string	Active Host Switch Message Message to be notified when there a switch of active host during login using Link with Microsoft Active Directory Group.
SetupKey	string	Setup Key Setup Key for Multi-Factor Authentication is output. The encryption key is the IP address of the ISM-VA. The key is displayed when the user with Multi-Factor Authentication enabled logs in for the first time.
OTPAuthURI	string	OTPauth URI otpauth URI for Multi-Factor Authentication is output. The encryption key is the IP address of the ISM-VA. It is displayed when the user with Multi-Factor Authentication enabled logs in for the first time.
EmergencyCode	string	Emergency Codes Emergency Codes for Multi-Factor Authentication are output. Codes are displayed when the user with Multi-Factor Authentication enabled logs in for the first time.

[Precautions]

- The following are precautions for when login fails:
  - With consecutive failures, one cannot log in for a certain time. The threshold value and the time duration that the user cannot log in are specified by the security policy.
  - After the set amount of time has passed, the failure count will return to 0.
  - You cannot login when the password is no longer valid. Check the detailed user information.
- After log in, if a certain time has elapsed without any operation after the last access, it is automatically logged off. The set time is specified in the security policy.

- The following are precautions for when the user with Multi-Factor Authentication enabled logs into ISM:
  - If you are logging in for the first time, omit the code for request parameter. HTTP protocol status codes are returned as 401 Unauthorized, and SetupKey, OTPAuthURI, and EmergencyCode are returned as the response parameters. By setting up SetupKey in the multi-factor authentication client application, you can obtain Authentication Code.
  - Authorization Code is updated once every 30 seconds. Authentication Code that has been successfully authenticated cannot be reused.
  - If authentication with Authorization Code fails three times in 30 seconds, you cannot log in for the next 30 seconds.
- When SetCookie is specified, response header is described as follows:

  Response Header:"Set-Cookie: X-Ism-Authorization = session ID; secure"
- The login message is output to the ISM log. The following message is notified as a reference in the results which call up API.

ID	Content
30061903	The password has expired. Change your password immediately.
30061904	The password is about to expire. Change your password.
30061905	The initial password has not been changed. Change your password.
10060005	Application of ISM patch/upgrade program was successfully completed. ($S1)
50060004	Application of ISM patch/upgrade program failed.($S1)

- Execute this API as follows when you use Link with Microsoft Active Directory Group.
  1. Log in with user session authentication.
  2. Select the user group by specifying the user group you want to use from the list of user group names to which the user can belong that was output in Step 1.
- When using CAS, log in on a client environment using the CAS login URL that was output.
- The switch active host message is output to the ISM log. The following message is notified as a reference in the results which call up API.

ID	Content
30061914	Communication with the specified LDAP server failed, so you have been connected to a standby server.
30061915	Communication with the specified LDAP server failed, so you have been connected to a standby server. CAS is restarting because you tried to change the connection destination LDAP server.

4.1.2 Logout (Session Authentication)

[Overview]

Logs out the user.

[Format]

```
POST /users/logout
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Specify session ID in http header as follows:

  X-Ism-Authentication:Session ID

4.1.3 User Registration

[Overview]

Registers ISM user.

[Format]

```
POST /users
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserName	string	User Name Contains the following restrictions: - Max length: 32 - Half-width alphanumeric characters - Numbers, letters (Upper and lower cases), underscore, $, period, hyphen, and the @ mark can be used. - Cannot begin with "-," can only use "$" at the end.
Password	string	Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 80 characters or less. Also, you can use Japanese language for a decrypted password.
UserRoles	array(string)	List of User Role Information Specify a role to be specified to a user from the following ID: - Administrator - Operator - Monitor More than one can be specified but the highest role will be added.
UserGroupId	string	User Group ID Specify a user group ID to the group to which the user belongs.
Language	string	Classification of Language

Parameter	Type	Description
		Set the language of messages output after login in as one of the following: - English (default) - Japanese
Authentication	string	Authentication Method Specify an authentication method. - ISM: ISM authentication - null: Follows the authentication method of the user group If left blank, it assumes null was specified.
AuthMFA	string	Specify Multi-Factor Authentication. - Disable: disabled - Group: follow AuthMFA for user group When the key is omitted, Disable is set.
Description	string	Description Comment column where free information can be set. Will not be used in controls.
MomUser	string	Specify availability of link with ISM. - Enable: links - Disable: does not link (default)
InnerControl	string	Information for Internal Controls Do not configure because this information will be used in the internal controls of the ISM.
UserLogin	string	Specify enable/disable the login for users. (only administrator user) - Enable: user enabled (login available) (default) - Disable: user disabled (login not available)
SessionTime (ISM 3.0.0.010 or later)	Integer	Session Time - Setting range: 2-1440 (minutes) - Null: follow the session time of the security policy. When the key is omitted, Null is set.

[Response Parameter]

Parameter	Type	Description
UserId	string	User ID IDs of users added are output.
UserName	string	User Name The same content as that of the request parameter is output.
Password	string	Password The same content as that of the request parameter is output.

Parameter	Type	Description
UserRoles	array (string)	List of User Role Information A role specified to a user is output.
UserGroupId	string	User Group ID The same content as that of the request parameter is output.
NodeGroups	array	List of Information of Node Group Information of the node groups corresponding to the user group are output.
NodeGroupId	integer	Node Group ID
Description	string	Description The same content as that of the request parameter is output.
MomUser	string	Availability of link with ISM is output. The same content as that of the request parameter is output.
Language	string	Language The same content as that of the request parameter is output.
Authentication	string	Authentication Method The same content as that of the request parameter is output.
AuthMFA	string	Multi-Factor Authentication The same content as that of the request parameter is output.
InnerControl	string	Information for Internal Controls
Modified	string	Last Updated Time and date added in UTC hours is output.
UserLoginControl	string	Outputs whether user login can be enabled/disabled for users. - Enable: can be specified (login available) (only administrator user) - Disable: cannot be specified (login not available)
UserLogin	string	Outputs enable/disable the login for users. (only administrator user) - Enable: user enabled (login available) - Disable: user disabled (login not available)
SessionTime (ISM 3.0.0.010 or later)	integer	Session Time - Setting range: 2-1440 (minutes) - Null: follow the session time of the security policy.

[Precautions]

- As for roles to be added, a higher role will be added in the following order:

  Administrator > Operator > Monitor

- Can only be executed by a user holding an Administrator role.
- The following names cannot be used as they are used with ISM:
  - Names starting with __
  - administrator

    - Admin
    - anonymous
    - root
    - bin
    - daemon
    - adm
    - lp
    - sync
    - shutdown
    - halt
    - mail
    - operator
    - games
    - ftp
    - nobody
    - avahi-autoipd
    - systemd-bus-proxy
    - systemd-network
    - dbus
    - polkitd
    - abrt
    - libstoragemgmt
    - tss
    - postfix
    - chrony
    - sshd
    - ntp
    - tcpdump
    - vaadmin
    - apache
    - postgres
    - svtuser
    - elasticsearch
    - zabbix
- A user should be unique in the whole of ISM.
- Only a user holding an Administrator role in the Administrator group can set MomUser parameter to Enable.

4.1.4 List Retrieval for Users

[Overview]

Retrieves a complete list of ISM user information.

[Format]

```
GET /users
```

[Query Parameter]

Parameter	Type	Description
UserGroupId	string	User Group ID Specify the range of users to retrieve. If omitted, users of the user group to which the user who executed the retrieval belongs will be retrieved.

[Response Parameter]

Parameter		Type	Description
Users		array	List of User Information
	UserId	string	User ID
	UserName	string	User Name
	UserRoles	array(string)	List of User Role Information
	UserGroups	array	List of User Group Information Enrolled user groups is output by array.
	UserGroupId	string	User Group ID
	UserGroupName	string	User Group Name
	Authentication	string	Authentication Method Authentication method is output. - ISM: ISM authentication - LDAP: LDAP authentication - null: Unable to retrieve data For this value, the following values will be output. - User authentication method: ISM authentication ISM - User authentication method: Follow user group setting Authentication method for user group
	AuthMFA	string	Enable/disable status of Multi-Factor Authentication is output. - Enable: enabled - Disable: disabled This value is output as follows according to the value set in the user AuthMFA (Group/Disable) (output value: user AuthMFA setting value). - User Group AuthMFA (Enable/Disable): for Group

Parameter		Type	Description
			- Disable: for Disable
	Description	string	Description
	MomUser	string	Availability of link with ISM is output. - Enable: links - Disable: does not link
	LastAccessTime	string	Time and Date of Last Access Time and date of last access by a user in UTC is output.
	UserType	string	User Type Output whether the user is logged in with LDAP link - LDAP: user logged in with LDAP link - ISM: user not logged in with LDAP link
	UserLoginControl	string	Outputs whether user login can be enabled/disabled for users. - Enable: can be specified (login available) (only administrator user) - Disable: cannot be specified (login not available)
	UserLogin	string	Outputs enable/disable the login for users. (only administrator user) - Enable: user enabled (login available) - Disable: user disabled (login not available)
	SessionTime (ISM 3.0.0.010 or later)	integer	Session Time - Setting range: 2-1440 (minutes) - Null: follow the session time of the security policy.

[Precautions]

- When omitting request parameters, the users in the following range can be retrieved.
  - When the user who executes is a member of the Administrator group.

    All users in all user groups registered in the ISM can be retrieved.
  - When the user who executes is not a member of the Administrator group.

    All users in the same user group as the executing user can be retrieved.
- Depending on the role of the user who executes, summary of output range is as follows:
  - When holding an Administrator role

    All users belonging to the output target user group are output.
  - When having no Administrator role

    Outputs only the executing user.

4.1.5 Individual Retrieval of User

[Overview]

Retrieves detailed ISM user information.

[Format]

```
GET /users/{userid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
UserId	string	User ID
UserName	string	User Name
UserRoles	array(string)	List of User Role Information
UserGroupId	string	User Group ID specified at the time it was created
UserGroupName	string	User Group Name specified at the time it was created
Language	string	Language - English - Japanese
Authentication	string	Authentication Method Authentication method is output. - ISM: ISM authentication - null: Follows the authentication method of the user group
AuthMFA	string	Settings of Multi-Factor Authentication is output. - Disable: disabled - Group: Follows the AuthMFA of the user group
Description	string	Description
MomUser	string	Availability of link with ISM is output. - Enable: links. - Disable: does not link.
SessionCount	integer	Session Count
LastAccessTime	string	Time and Date of Last Access
Modified	string	Last Updated Outputs time and date added or changed in UTC hours.
InnerControl	string	Information for Internal Controls
Status	string	Status Login enabled status is output. - OK Login enabled - LoginLock Unable to log in due to consecutively failed login attempts. Login enabled after a certain time elapsed.

Parameter	Type	Description
		- ExpirePassword Unable to login because the password is no longer valid. Can login after re-setting the password.
PasswordValidTime	integer	Validity Period of Password When the password validity period has been set, this period is output (in days). If less than a day, it is output in truncated form. When validity of a password is not set, null is output.
UserLoginControl	string	Outputs whether user login can be enabled/disabled for users. - Enable: can be specified (login available) (only administrator user) - Disable: cannot be specified (login not available)
UserLogin	string	Outputs enable/disable the login for users. (only administrator user) - Enable: user enabled (login available) - Disable: user disabled (login not available)
AccessibleUserGroups	array	List of Information of Accessible User Groups
UserGroup	object	User Group Information
UserGroupId	string	User Group ID
UserGroupName	string	User Group Name
NodeGroups	array	List of Information of Node Group
NodeRoleId	string	Node Role ID
NodeGroupId	integer	Node Group ID
SessionTime (ISM 3.0.0.010 or later)	integer	Session Time - Setting range: 2-1440 (minutes) - Null: follow the session time of the security policy.

[Precautions]

- Only when the executing user holds a role of Administrator, details of other users can be retrieved.
- If the user does not hold an Administrator role, only the user's own detailed information can be retrieved.
- The following are the ranges in which this API can output detailed information:
  - When the user who executes is a member of the Administrator group.

    Can retrieve details of any user.
  - When the user who executes is not a member of the Administrator group.

    The user who executes can retrieve user details in the same user group.
- Internal Control Information is the information used in the internal controls of ISM.

4.1.6 Update of User Information

[Overview]

Updates ISM user information.

[Format]

```
PATCH /users/{userid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserName	string	User Name Contains the following restrictions: - Max length: 32 - Half-width alphanumeric characters - Numerical alphabets (Upper and lower cases), under bar, $, period and hyphen can be used. - Cannot begin with "-," can only use "$" at the end.
Password	string	Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 80 characters or less.
CurrentPassword	string	Current Password Specify the current password when changing the password. Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 80 characters or less. Results in an error when the specified password is different from the current password. Key can be omitted when not changing the password. With this configuration, your password is enabled only when you change your own password.
UserRoles	array(string)	List of User Role Information Specify a role to be specified to a user from the following ID: - Administrator - Operator - Monitor
UserGroupId	string	User Group ID Specify a user group ID to the group to which the user belongs.
Authentication	string	Authentication Method Specify an authentication method.

Parameter	Type	Description
		- ISM: ISM authentication - null: Follows the authentication method of a user group If left blank (""), it assumes null was specified. When the key is omitted, change of this parameter does not take place.
AuthMFA	string	Specify Multi-Factor Authentication. - Disable: disabled - Group: Follows the AuthMFA of the user group When the key is omitted, change of this parameter does not take place.
Description	string	Description Comment column where free information can be set. Will not be used in controls.
MomUser	string	Specify availability of link with ISM. - Enable: links. - Disable: does not link. (default)
InnerControl	string	Information for Internal Controls Do not configure because this information will be used in the internal controls of the ISM.
UserLogin	string	Specify enable/disable the login for users. (only administrator user) - Enable: user enabled (login available) (default) - Disable: user disabled (login not available)
SessionTime (ISM 3.0.0.010 or later)	integer	Session Time - Setting range: 2-1440 (minutes) - Null: follow the session time of the security policy. When the key is omitted, Null is set.

[Response Parameter]

Parameter	Type	Description
UserId	string	User ID
UserName	string	User Name The same content as that of the request parameter is output.
Password	string	Password The same content as that of the request parameter is output.
UserRoles	array(string)	List of User Role Information
UserGroupId	string	User Group ID The same content as that of the request parameter is output.
AccessibleUserGroups	array	List of Information of Accessible User Groups
UserGroup	object	User Group Information

Parameter	Type	Description
UserGroupId	string	User Group ID
NodeGroups	array	List of Information of Node Group
NodeRoleId	string	Node Role ID Only "" is output.
NodeGroupId	integer	Node Group ID
Description	string	Description The same content as that of the request parameter is output.
MomUser	string	Availability of link with ISM is output. The same content as that of the request parameter is output.
Authentication	string	Authentication Method The same content as that of the request parameter is output.
AuthMFA	string	Multi-Factor Authentication The same content as that of the request parameter is output.
Modified	string	Last Updated Outputs update time and date in UTC hours.
InnerControl	string	Information for Internal Controls The same content as that of the request parameter is output.
UserLoginControl	string	Outputs whether user login can be enabled/disabled for users. - Enable: Can be specified (login available) (only administrator user) - Disable: Cannot be specified (login not available)
UserLogin	string	Outputs enable/disable the login for users. (only administrator user) - Enable: user enabled (login available) - Disable: user disabled (login not available)
SessionTime (ISM 3.0.0.010 or later)	integer	Session Time - Setting range: 2-1440 (minutes) - Null: follow the session time of the security policy.

[Precautions]

- The following are the ranges that this API can change the user information:
  - When the user who executes is a member of the Administrator group.

    Can change the information on any user.
  - When the user who executes is not a member of the Administrator group.

    The user who executes can change the information on the users in the same user group.
- Required conditions for each change item are as shown below.
  - When changing UserGroupId

    Can be changed by executing user holding an Administrator role and belonging to the Administrator group.

  - When changing UserRoles

    Can be changed by an executing user holding an Administrator role.

  - When changing UserName, Password, Language, Description, InnerControl

    Only users executing with an Administrator role or user's own information can be changed.

  - Do not change InnerControl because this information will be used in the internal controls of the ISM.
  - Contents of Password and InnerControl are not changed unless specifying a key.
  - If "" is specified in the modified content, the content will be deleted.
- The following names cannot be used as they are used with ISM:
  - Names starting with __
  - administrator
  - Admin
  - anonymous
  - root
  - bin
  - daemon
  - adm
  - lp
  - sync
  - shutdown
  - halt
  - mail
  - operator
  - games
  - ftp
  - nobody
  - avahi-autoipd
  - systemd-bus-proxy
  - systemd-network
  - dbus
  - polkitd
  - abrt
  - libstoragemgmt
  - tss
  - postfix
  - chrony
  - sshd
  - ntp
  - tcpdump

    - vaadmin
    - apache
    - postgres
    - svtuser
    - elasticsearch
    - zabbix
- A user should be unique in the whole of ISM.
- Only a user holding an Administrator role in the Administrator group can set MomUser parameter to Enable.
- When you change the password, the session executed with the old password will be disconnected except for the session to update the user information.
- The precautions for when you have specified an incorrect value for the current password are as follows.
    - If you enter an incorrect password repeatedly, the session that has been executed to update the user information will be disconnected. The threshold value, and the duration time that you cannot log in are specified in a security policy.
    - After a certain period of time, the number of failures will return to zero.

4.1.7 Deletion of Users

[Overview]

Deletes ISM users.

[Format]

```
DELETE /users/{userid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Cannot delete so that there will be no users with an Administrator role in the Administrator group.
- The following are the ranges that this API can change the user information:
    - When the user who executes is a member of the Administrator group.

      Can delete any user.
    - When the user who executes is not a member of the Administrator group.

      The user who executes can delete users in the same user group.

4.1.8 Registration of User Groups

[Overview]

Registers ISM user groups.

[Format]

```
POST /usergroups
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserGroupName	string	User Group Name Contains the following restrictions: - Max length: 64 - All these can be used: Japanese, numbers, letters (Upper and lower cases), underscore, $, period and hyphen. The following cannot be used. - Single Quotation - Slash - Begins with a period
Authentication	string	Authentication Method Authentication method can be selected from the following. - ISM ISM Authentication (default) - LDAP Authentication in link with OpenLDAP or Microsoft Active Directory
AuthMFA	string	Specify Multi-Factor Authentication. - Enable: enabled - Disable: disabled When the key is omitted, Disable is set.
IrmcLoginSessionEnable	string	iRMC Login Session - Enable: enabled - Disable: disabled When the key is omitted, it is set to Disable.
ParentsUserGroupId	string	Parent User Group ID Only specify "".
AccessRange	string	Access Range Specify if access range of a user group should be made identical with those of other groups. - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification

Parameter	Type	Description
		Cannot specify other than those mentioned above.
Description	string	Description Comment column where free information can be set. Will not be used in controls.
DomainGroups	array	Domain Group information Specify it if you register the domain group information.
DomainName	string	Domain Name If the group name is specified as an element in the same array, the key cannot be omitted.
GroupName	string	Group Name If the domain name is specified as an element in the same array, the key cannot be omitted.
LdapLink	string	Link with Microsoft Active Directory Group - Enable: Enables Link with Microsoft Active Directory Group - Disable: Disables Link with Microsoft Active Directory Group When the key is omitted or specified null character, it assumes Disable is specified.
LdapLinkUserRole	string	User Roles for executing Link with Microsoft Active Directory Group Specify the user role of a Link with Microsoft Active Directory Group user. - Administrator - Operator - Monitor
NodeGroupId	integer	Node Group ID Specify a node group ID for linking. When the key is omitted and specified with null, it is not associated.
DirSize	object	Information on the Size of the Directory
All	object	Information on Directory Size of user group Specify information on directory size for a user group (Unit: MB). When the key is omitted and specified with null, it is not set.
MaxSize	integer	Maximum Size of directory used by a user group For null, it does not set the maximum value. If it is omitted, it will be handled as if null was specified.
Threshold	integer	Threshold value of directory size used by a user group If it is omitted, it will be handled as if null was specified.
ArchiveLogDir	object	Information of the directory size where Archive Node Log is saved

Parameter	Type	Description
		Specify a directory size (MB) to be used in Archive. When the key is omitted and specified with null, it sets with the maximum value as 0 and threshold value of 0.
MaxSize	integer	Maximum Size of the directory where Node Log is saved When the key is omitted and specified with null, it is set to 0 GB.
Threshold	integer	Threshold value of the directory where Node Logs are saved Assumes 0 (%) was specified when null was specified. Assumes 0 (%) was specified when key is omitted.
ArchiveMaterialDir	object	Information of the directory size to store the Archived Log of Archive Specify a directory size (MB) to be used in Archive. When the key is omitted and specified with null, it sets the maximum value to 0 and threshold value to 0%.
MaxSize	integer	Maximum Size of the Archived Log saving directory When the key is omitted and specified with null, it is set to 0 GB.
Threshold	integer	Threshold value of the directory where the Archived Log is saved Assumes 0 (%) was specified when null was specified. Assumes 0 (%) was specified when key is omitted.
ArchiveLogDirForSearch	object	Information of Archive's Node Log Directory Size used for Search. Specify a directory size (MB) to be used in Archive. When the key is omitted and specified with null, it sets the maximum value to 0 and threshold value to 0%.
MaxSize	integer	Maximum size of the Node Log directory used for search When the key is omitted and specified with null, it is set to 0 GB.
Threshold	integer	Threshold value of the Node Log directory used for search Assumes 0 (%) was specified when null was specified. Assumes 0 (%) was specified when key is omitted.
RepositoryDirectory	object	Directory Size Information of the Repositories Specify a directory size of repositories. (Unit: MB) When the key is omitted and specified with null, it is not set.
MaxSize	integer	Maximum Size of the Directory For null, it does not set the maximum value. If it is omitted, it will be handled as if null was specified.

[Response Parameter]

Parameter	Type	Description
UserGroupId	string	User Group ID

Parameter	Type	Description
UserGroupName	string	User Group Name The same content as that of the request parameter is output.
Authentication	string	Authentication Method The same content as that of the request parameter is output.
AuthMFA	string	Multi-Facotr Authentication The same content as that of the request parameter is output.
IrmcLoginSessionEnable	string	iRMC Login Session The same content as that of the request parameter is output.
ParentsUserGroupId	string	Parent User Group ID Only "" is output.
AccessRange	string	Access Range The same content as that of the request parameter is output.
Description	string	Description The same content as that of the request parameter is output.
DomainGroups	array	Domain Group information The same content as that of the request parameter is output.
DomainName	string	Domain Name The same content as that of the request parameter is output.
GroupName	string	Group Name The same content as that of the request parameter is output.
Exist	boolean	If the domain exists in the Ldap settings - true: exists - false: does not exist
LdapLink	string	Link with Microsoft Active Directory Group The same content as that of the request parameter is output.
LdapLinkUserRole	string	User Roles for executing Link with Microsoft Active Directory Group The same content as that of the request parameter is output.
NodeGroupId	integer	Node Group ID Related node group ID
DiskSize	integer	Disk size allocated for user group When the value is null, the disk has not been configured.
DirSize	object	Information on the size of the directory The same content as that of the request parameter is output.
All	object	Information on directory size of user group The same content as that of the request parameter is output.
MaxSize	integer	Maximum size of directory used by a user group
Threshold	integer	Threshold value of directory size used by a user group
ArchiveLogDir	object	Information of the directory size where Archive Node Log is saved

Parameter	Type	Description
		The same content as that of the request parameter is output.
MaxSize	integer	Maximum Size of the directory where Node Logs are saved
Threshold	integer	Threshold value of the directory where Node Logs are saved
ArchiveMaterialDir	object	Information of the Directory Size to store Archived Log of Archive The same content as that of the request parameter is output.
MaxSize	integer	Maximum Size of the Archived Log saving directory
Threshold	integer	Threshold value of the directory where Archived Log is saved
ArchiveLogDirForSearch	object	Information of Archive's Node Log Directory Size used for Search The same content as that of the request parameter is output.
MaxSize	integer	Maximum Size of the Node Log directory used for search
Threshold	integer	Threshold value of the Node Log directory used for search
RepositoryDirectory	object	Directory size Information of the Repositories The same content as that of the request parameter is output.
MaxSize	integer	Maximum Size of the Directory
UserList	array(string)	List of related User IDs
Modified	string	Last Updated Time and date added in UTC hours is output.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Precautions for Authentication are as shown below.
  - Only one authentication method can be specified for whole of ISM.
  - Only either OpenLDAP or Microsoft Active Directory can be specified as the authentication method in the LDAP.
  - Without any specified authentication method, it shall be assumed that ISM has been specified.
- A registered user cannot be specified when creating a user group.

  If you want to register a user, execute user group change or user change after creating a user group.
- The following names cannot be used as they are used with ISM:
  - Names starting with __
  - Administrator
  - AbstractionLayer
  - anonymous
  - svimcontent
- A user group should be unique in the whole of ISM.

4.1.9 Searching User Groups

[Overview]

Searches for LDAP Server Groups.

[Format]

```
GET /usergroups/search
```

[Query Parameter]

Parameter	Type	Description
SearchKeyword	string	Keyword for Group Name Search Specify a group name to search for. To search for a group name beginning with a specified string, enter an * at the end of the string. To search for a group name with the latter part of a string, enter an * in front of the string.
DomainName	string	Domain Name for Domain name search

[Response Parameter]

Parameter	Type	Description
GroupNameList	array	List of Group Name Search Results
GroupName	string	Group Name
SwitchResult	string	Availability or unavailability of switching active host Outputs whether the active host is unconnectable and has been switched to a standby host or not at the time of group search. - Switched: Has switch to active host - None: No switch to active host
SwitchMessageId	string	Active Host Switch Message ID The message ID that corresponds to the message that is notified when there is a switch of active host during a group search.
SwitchMessage	string	Active Host Switch Message Message to be notified when there is a switch of active host during a group search.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- LDAP information must be set up.
- If the LDAP setting that has the specified domain name is not registered, it will be an error.
- The switch active host message is output to the ISM log. The following message is notified as a reference in the results which call up API.

ID	Content
30061914	Communication with the specified LDAP server failed, so you have been connected to a standby server.
30061915	Communication with the specified LDAP server failed, so you have been connected to a standby server. CAS is restarting because you tried to change the connection destination LDAP server.

4.1.10 Selecting User Groups

[Overview]

Select an LDAP Server Group, and change the group and user roles of users that are logged in.

[Format]

```
POST /users/{userid}/selectgroup
```

[Query Parameter]

Parameter	Type	Description
UserGroupName	string	User Group Name Specify the user group name to be changed. When the key is omitted, it assumes that the current user group to which the user belongs is specified.

[Response Parameter]

Parameter	Type	Description
UserGroupName	string	User Group Name The user group name that was changed is output.

[Precautions]

- Can only be executed for information of a user that logged in.
- LDAP information must be set up.

4.1.11 List Retrieval for User Groups

[Overview]

Retrieves a complete list of ISM user group information.

[Format]

```
GET /usergroups
```

[Query Parameter]

None

[Response Parameter]

Parameter			Type	Description
UserGroups			array	List of User Group Information
	UserGroupId		string	User Group ID
	UserGroupName		string	User Group Name
	NodeGroups		array	List of Information of Node Group
		NodeRoleId	string	Node Role ID
		NodeGroupId	integer	Node Group ID

Parameter	Type	Description
Authentication	string	Authentication Method
AuthMFA	string	Multi-Factor Authentication - Enable: enabled - Disable: disabled
IrmcLoginSessionEnable	string	iRMC Login Session - Enable: enabled - Disable: disabled
UserCount	integer	Number of Users
ParentsUserGroupId	string	Parent User Group ID Only "" is output.
ChildUserGroupCount	integer	Subordinate User Group Number Only 0 is output.
ChildUserGroups	array(string)	List of Subordinate User Group Information Only [ ] is output.
UserGroupId	string	User Group ID
AccessRange	string	Access Range Announces if access range of a user group should be made identical with those of other groups. - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification
Description	string	Description

4.1.12 Individual Retrieval of User Groups

[Overview]

Retrieves detailed ISM user group information.

[Format]

```
GET /usergroups/{usergroupid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
UserGroupId	string	User Group ID
UserGroupName	string	User Group Name
NodeGroups	array	List of Information of Node Group
NodeRoleId	string	Node Role ID

Parameter	Type	Description
NodeGroupId	integer	Node Group ID
Authentication	string	Authentication Method
AuthMFA	string	Multi-Factor Authentication - Enable: enabled - Disable: disabled
IrmcLoginSessionEnable	string	iRMC Login Session - Enable: enabled - Disable: disabled
UserCount	integer	Number of Users
ParentsUserGroupId	string	Parent User Group ID
ChildUserGroupCount	integer	Subordinate User Group Number Only "" is output.
ChildUserGroups	array(string)	Subordinate User Group Information List
UserGroupId	string	User Group ID
AccessRange	string	Access Range Announces if access range of a user group should be made identical with those of other groups. - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification
Description	string	Description
DomainGroups	array	Domain Group information
DomainName	string	Domain Name
GroupName	string	Group Name
Exist	boolean	If the Domain exists in the Ldap settings - true: exists - false: does not exist
DomainGroupsTimestamp	string	Update Time and Date
LdapLink	string	Link with Microsoft Active Directory Group - Enable: Enables Link with Microsoft Active Directory Group - Disable: Disables Link with Microsoft Active Directory Group
LdapLinkUserRole	string	User Roles for executing Link with Microsoft Active Directory Group The user role of a Link with Microsoft Active Directory Group user is output. - Administrator - Operator

Parameter	Type	Description
		- Monitor
SystemVolumeSize	object	Information on the ISM-VA System Volume Outputs information on the ISM-VA system volume (Unit: MB) "null" is output for other than the Administrator group.
Size	integer	System Volume Size
Threshold	integer	Threshold Value of the Used System Volume Size Range: 0.00-100.00 (%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Output for 10.12%: 1012 When the value is null, the threshold value for the used system volume size is not set.
UsedSize	integer	System Volume Size being used
UsedSizeRate	integer	Used Rate of the System Volume Size Range: 0.00-100.00 (%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Output for 10.12%: 1012
DiskSize	integer	Disk Size allocated for the User Group When the value is null, the disk has not been configured.
DirSize	object	Information on the Size of the Directory Outputs information on directory size for a user group.
All	object	Information on Directory Size of User Group Outputs information on directory size for a user group. (Unit: MB)
MaxSize	integer	Maximum Size of the directory used by a user group When a value is null, it is not configured.
Threshold	integer	Threshold value of the directory size used by a user group When a value is null, it is not configured.
UsedSize	integer	Directory Size being used
ArchiveLogDir	object	Information of the Directory Size where Archive Node Log is saved Outputs information on the directory size where Archive Node Log is stored. (Unit: MB)
MaxSize	integer	Maximum Size of the Directory where Node Logs are saved
Threshold	integer	Threshold value of the directory where Node Logs are saved
UsedSize	integer	Size of the Directory currently in use where Node Logs are saved
ArchiveMaterialDir	object	Information of the Directory Size to store the Archived Log of Archive

Parameter	Type	Description
		Outputs information on the directory size to store the Archived Log of Archive. (Unit: MB)
MaxSize	integer	Maximum Size of the Archived Log saving directory
Threshold	integer	Threshold value of the directory where Archived Logs are saved
UsedSize	integer	Size of the directory currently in use where node Archived Logs are saved
ArchiveLogDirForSearch	object	Information of Archive's Node Log directory size used for search Outputs information on the directory size to store Node Logs of Archive. (Unit: MB)
MaxSize	integer	Maximum Size of the Node Log directory used for search
Threshold	integer	Threshold value of the Node Log directory used for search
UsedSize	integer	Size of the directory currently in use for Node Logs used in searches
RepositoryDirectory	object	Directory Size information of the Repositories Outputs information on the directory size of repositories. (Unit: MB)
MaxSize	integer	Maximum Size of the directory When a value is null, it is not configured.
UsedSize	integer	Directory Size being used
Users	array	List of User Information
UserId	string	User ID
UserName	string	User Name
Modified	string	Last Updated Outputs time and date added or changed in UTC hours.

[Precautions]

- Can only be executed by a user executing with an Administrator role.
- The following are the ranges in which this API can output detailed information:
  - When the user who executes is a member of the Administrator group.

    Can retrieve details of any user group.
  - When the user who executes is not a member of the Administrator group.

    Retrieves details of the user group that the executing user belongs to.

4.1.13 Update of User Group Information

[Overview]

Updates the ISM user group information.

[Format]

```
PATCH /usergroups/{usergroupid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserGroupName	string	User Group Name Contains the following restrictions: - Max length: 64 - All these can be used: Japanese, numbers, letters (Upper and lower cases), underscore, $, period and hyphen. The following cannot be used. - Single Quotation - Slash - Begins with a period
Authentication	string	Authentication Method Authentication method can be selected from the following. - ISM ISM Authentication (default) - LDAP Authentication in link with OpenLDAP or Microsoft Active Directory
AuthMFA	string	Specify Multi-Factor Authentication. - Enable: enabled - Disable: disabled When the key is omitted, it does not change the settings.
IrmcLoginSessionEnable	string	iRMC Login Session - Enable: enabled - Disable: disabled When the key is omitted, it is set to Disable.
ParentsUserGroupId	string	Parent User Group ID Only ""
AccessRange	string	Access Range Specify if access range of a user group should be made identical with those of other groups. - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification Cannot specify other than those mentioned above.
Description	string	Description

Parameter	Type	Description
		Comment column where free information can be set. Will not be used in controls.
DomainGroups	array	Domain Group information Specify it if you register the domain group information.
DomainName	string	Domain Name If the group name is specified as an element in the same array, the key cannot be omitted.
GroupName	string	Group Name If the domain name is specified as an element in the same array, the key cannot be omitted.
LdapLinkUserRole	string	User Roles for executing Link with Microsoft Active Directory Group Specify the user role of a Link with Microsoft Active Directory Group user. - Administrator - Operator - Monitor Valid only for user groups created by Link with Microsoft Active Directory Group.
NodeGroupId	integer	Node Group ID Specify a node group ID for linking. - null: Does not associate with a node group. Deselects a link when it has been linked. - Node group ID: Connects with a node group. Changes a link when it has been linked.
SystemVolumeSize	object	Information on ISM-VA System Volume The information on the ISM-VA system volume is ignored other than Administrator group. When the key is omitted, it does not change the settings. Delete settings when null is specified.
Threshold	integer	Threshold Value of the Used System Volume Size Range: 0.00-100.00 (%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Output for 10.12%: 1012
DirSize	object	Information on the size of the directory Specify information on directory size for a user group. When the key is omitted, it does not change the settings. Settings should be deleted (all in default value) when null is specified.
All	object	Information on directory size of user group

Parameter	Type	Description
		Specify information on directory size for a user group. (Unit: MB) When the key is omitted, it does not change the settings. Delete settings when null is specified.
MaxSize	integer	Maximum Size of directory used by a user group When the key is omitted, it does not change the settings. Delete settings when null is specified.
Threshold	integer	Threshold value of directory size used by a user group When the key is omitted, it does not change the settings. Delete settings when null is specified.
ArchiveLogDir	object	Information of the Directory Size where Archive Node Log is saved Specify information of the directory size to store Node Log of Archive. (Unit: MB) When the key is omitted, it does not change the settings. Settings should be 0 when null is specified.
MaxSize	integer	Maximum Size of the Directory where Node Logs are saved When the key is omitted, it does not change the settings. Assumes 0 (%) was specified when null was specified.
Threshold	integer	Threshold value of the directory where Node Logs are saved When the key is omitted, it does not change the settings. Assumes 0 (%) was specified when null was specified.
ArchiveMaterialDir	object	Information of the Directory Size to store Archived Log of Archive Specify information of the directory size to store Node Log of Archive. (Unit: MB) When the key is omitted, it does not change the settings. Delete settings when null is specified.
MaxSize	integer	Maximum Size of the Archived Log saving directory When the key is omitted, it does not change the settings. Assumes 0 (%) was specified when null was specified.
Threshold	integer	Threshold value of the directory where Archived Logs are saved When the key is omitted, it does not change the settings. Assumes 0 (%) was specified when null was specified.
ArchiveLogDirForSearch	object	Information of Archive's Node Log directory size used for search Specify information of the directory size to store Node Logs of Archive. (Unit: MB) When the key is omitted, it does not change the settings. Delete settings when null is specified.

Parameter	Type	Description
MaxSize	integer	Maximum Size of the Node Log directory used for search When the key is omitted, it does not change the settings. Assumes 0 (%) was specified when null was specified.
Threshold	integer	Threshold value of the Node Log directory used for search When the key is omitted, it does not change the settings. Assumes 0 (%) was specified when null was specified.
RepositoryDirectory	object	Directory Size Information of the Repositories Specify information on the directory size of repositories. (Unit: MB) When the key is omitted, it does not change the settings. Delete settings when null is specified.
MaxSize	integer	Maximum Size of the directory When the key is omitted, it does not change the settings. Settings of the largest value should be deleted when null is specified.

[Response Parameter]

Parameter	Type	Description
UserGroupId	string	User Group ID
UserGroupName	string	User Group Name
Authentication	string	Authentication Method
AuthMFA	string	Multi-Factor Authentication - Enable: enabled - Disable: disabled
IrmcLoginSessionEnable	string	iRMC Login Session - Enable: enabled - Disable: disabled
NodeGroupId	integer	Node Group ID ID of node group to link
AccessableNodeGroups	array	List of Information of Node Group
NodeRoleId	string	Node Role ID
NodeGroupId	integer	Node Group ID
Users	array	User Information
UserId	string	User ID
UserName	string	User Name
ParentsUserGroupId	string	Parent User Group ID Only "" is output.
AccessRange	string	Access Range Announces if access range of a user group should be made identical with those of other groups.

Parameter		Type	Description
			- Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification
Description		string	Description
DomainGroups		array	Domain Group information The same content as that of the request parameter is output.
	DomainName	string	Domain Name The same content as that of the request parameter is output.
	GroupName	string	Group Name The same content as that of the request parameter is output.
	Exist	boolean	If the domain exists in the Ldap settings - true: exists - false: does not exist
DomainGroupsTimestamp		string	Last Updated
LdapLinkUserRole		string	User Roles for executing Link with Microsoft Active Directory Group The user role of a Link with Microsoft Active Directory Group user is output. - Administrator - Operator - Monitor
SystemVolumeSize		object	Information on the ISM-VA System Volume Outputs information on the ISM-VA system volume (Unit: MB) "null" is output for other than the Administrator group.
	Size	integer	System Volume Size
	Threshold	integer	Threshold Value of the Used System Volume Size Range: 0.00-100.00 (%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Output for 10.12%: 1012 When the value is null, the threshold value for the used system volume size is not set.
	UsedSize	integer	System Volume Size being used.
	UsedSizeRate	integer	Used Rate of the System Volume Size Range: 0.00-100.00 (%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Outpur for 10.12%: 1012
DiskSize		integer	Disk Size allocated for User Group

Parameter	Type	Description
		When the value is null, the disk has not been configured.
DirSize	object	Information on the Size of the Directory
All	object	Information on the Directory Size of User Group
MaxSize	integer	Maximum Size of the Directory used by a User Group
Threshold	integer	Threshold value of the directory size used by a user group
UsedSize	integer	Directory Size being used
ArchiveLogDir	object	Information of the Directory Size where Archive Node Log is saved
MaxSize	integer	Maximum Size of the directory where Node Log is saved
Threshold	integer	Threshold value of the directory where Node Logs are saved
UsedSize	integer	Size of the Directory currently in use where Node Logs are saved
ArchiveMaterialDir	object	Information of the Directory Size to store Archived Log of Archive
MaxSize	integer	Maximum Size of the Archived Log saving directory
Threshold	integer	Threshold value of the directory where Archived Logs are saved
UsedSize	integer	Size of Directory currently in use where node Archived Logs are saved
ArchiveLogDirForSearch	object	Information of Archive's Node Log Directory Size used for Search
MaxSize	integer	Maximum Size of the Node Log directory used for search
Threshold	integer	Threshold value of the Node Log directory used for search
UsedSize	integer	Size of Directory currently in use for Node Logs used in searches
RepositoryDirectory	object	Directory size information of the repositories
MaxSize	integer	Maximum Size of the Directory
UsedDirSize	integer	Directory Size being used
Modified	string	Last Updated Outputs Last Updated date in UTC hours.

[Precautions]

- Can be executed with a user holding an Administrator role and belonging to the Administrator group.
- Precautions for Authentication are as shown below.
  - Only one authentication method can be specified for whole of ISM.
  - Only either OpenLDAP or Microsoft Active Directory can be specified as the authentication method in the LDAP.
  - Without any specified authentication method, it shall be assumed that ISM has been specified.
  - When specifying LDAP as authentication method, an error occurs unless the LDAP information has been configured in advance.
- If "" is specified in the modified content, the content will be deleted.
- The following names cannot be used as they are used with ISM:
  - Names starting with __

    - Administrator
    - AbstractionLayer
    - anonymous
- A user group should be unique in the whole of ISM.
- The number of node group to be connected with a user group is 1.
- When a user group connected with a node group is connected again with other node group, the node group previously connected is to be deleted.
- Conditions for node groups to be connected are as follows:
    - Cannot associate with ISMDefaultGroup.
    - Cannot associate with ISMSharedGroup.
    - Any node group that does not exist cannot be associated.

4.1.14 Deletion of User Groups

[Overview]

Deletes ISM user groups.

[Format]

```
DELETE /usergroups/{usergroupid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- A user group containing any users cannot be deleted.

  Before deleting a user group, delete the users or move them to a different group.
- Any user group connected with a node group can be deleted.

  In this case, a node group is not deleted.
- Note that a user group cannot be restored after deletion.
- Any data connected with a user group is deleted.
- Administrator group cannot be deleted.

4.1.15 Retrieval of LDAP Information

[Overview]

Retrieves the LDAP information set with ISM.

[Format]

```
GET /system/settings/ldaps
```

[Query Parameter]

Parameter	Type	Description
LdapId	integer	LDAP server ID 3-7: Settings for link with Active Directory
SwitchHostFlg	string	Active Host Switch Flag Specifies whether to switch to a standby host if the active host is unconnectable or not. - Enable: switching - Disable: Do not switch

[Response Parameter]

Parameter	Type	Description
Ldaps	array	LDAP Information
LdapId	integer	LDAP server ID - 1: LDAP authentication primary - 2: LDAP authentication secondary - 3-7: settings for link with Active Directory
LdapSetting	string	LDAP settings Enable/Disable Enable only when the LdapId is 3 - 7. - Enable: Enabled - Disable: Disabled
CasSetting	string	CAS Enable/Disable Enable only when the LdapId is 3 - 7. - Enable: Enabled - Disable: Disabled
DomainName	string	Domain Name Output only when the LdapId is 3 - 7.
LdapHost	string	LDAP Server Name (active host)
Port	integer	Port Number (active host)
BaseDn	string	Basic Path
SearchAttribute	string	Search Attribute
BindDn	string	Account for Binding
SSLcertificate	string	SSL Certificate (active host) Outputs availability/unavailability of a SSL certificate. - "On": Assigned SSL certificate - "Off": No specified SSL certificate
Status	string	Status of LDAP

Parameter	Type	Description

		Outputs a status of LDAP.
		- When LdapId is 1 or 2
		  - "Used": This information is currently being used.
		  - "Reserved": This information is currently being reserved.
		- When Ldap is not set or LdapId is 3 - 7
		  - Null

LdapStatus	string	Status of the LDAP server (active host)
		Outputs the status of the LDAP server.
		- Enable (succeeded)
		- Error (failed)
		- Unknown (" " (Null))
		The following are output depending on the LdapId.
		- When LdapId is 1 or 2:
		  - If the LDAP server name is specified, the status of the LDAP server is output.
		  - If the LDAP server name is not specified, "Unknown (" " (Null))" is output.
		- When LdapId is 3 - 7.
		  - If the LDAP settings are enabled, the status of the LDAP server is output.
		  - If the LDAP settings are disabled, "Unknown (" " (Null))" is output.

Modified	string	Last Updated Outputs update date in UTC hours.
SwitchResult	string	Availability or unavailability of switching active host Outputs whether the active host is unconnectable and has been switched to a standby host or not when retrieving LDAP information. - Switched: Has switch to active host - None: No switch to active host
SwitchMessageId	string	Active Host Switch Message ID The message ID that corresponds to the message to be notified when there is an active host switch when retrieving LDAP information.
SwitchMessage	string	Active Host Switch Message Message to be notified when there is a switch of active host when retrieving LDAP information.
LdapServerList	array	LDAP Server List Output only when the LdapId is 3 - 7.
LdapHost	string	LDAP Server Name

Parameter	Type	Description
Port	integer	Port Number
SSLcertificate	string	SSL Certificate Outputs availability/unavailability of a SSL certificate. - "On": Assigned SSL certificate - "Off": No specified SSL certificate
SSLcertificateInfo	object	SSL Certificate Information
Issuer	string	Issuer
Subject	string	Issued to
ValidityNotBefore	string	Start of Validated Period
ValidityNotAfter	string	End of Validated Period
Fingerprint	string	Finger print
HostStatus	string	Status of LDAP Host Output the connection status of the LDAP host. - Normal: Connection successful - Error: Connection failed - Invalid: No connection check
HostSetting	string	LDAP Host settings Enable/Disable - Enable: Enabled - Disable: Disabled

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- If the LDAP information has never been set, empty character is retrieved for all parameters other than Port parameter.
- The switch active host message is output to the ISM log. The following message is notified as a reference in the results which call up API.

ID	Content
30061914	Communication with the specified LDAP server failed, so you have been connected to a standby server.
30061915	Communication with the specified LDAP server failed, so you have been connected to a standby server. CAS is restarting because you tried to change the connection destination LDAP server.

- Precaution of LDAP information for LdapId 3 - 7 is as follows:

  If the active host is unconnectable, check connectivity until an available host is found in the LDAP server list order. The host that can be connected becomes the active host.

4.1.16 Update of LDAP Information

[Overview]

Sets the LDAP information in ISM.

[Format]

```
PATCH /system/settings/ldaps
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Ldaps	array	LDAP Information
LdapId	integer	LDAP server ID - 1: LDAP authentication primary - 2: LDAP authentication secondary - 3-7: settings for link with Active Directory
LdapSetting	string	LDAP settings Enable/Disable Enable only when the LdapId is 3 - 7. - Enable: Enabled - Disable: Disabled
CasSetting	string	CAS Enable/Disable Enable only when the LdapId is 3 - 7. - Enable: Enabled - Disable: Disabled
LdapHost	string	LDAP Server Name Specify if you want to register only one LDAP host.
Port	integer	Port Number Specify if you want to register only one LDAP host.
BaseDn	string	Basic Path
SearchAttribute	string	Search Attribute
BindDn	string	Account for Binding
BindPassword	string	Bind Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 128 characters or less.
SSLcertificate	string	SSL Certificate Specify when connecting to directory server via SSL. Specify the file name of the SSL certificate that has been registered in the "Administrator" directory by ftp. Specify if you want to register only one LDAP host.
LdapServerList	array	LDAP Server List Specify only when the LdapId is 3 - 7.
LdapHost	string	LDAP Server Name

Parameter	Type	Description
Port	integer	Port Number
SSLcertificate	string	Specify when connecting to directory server via SSL. Specify the file name of the SSL certificate that has been registered in the "Administrator" directory by ftp.
HostSetting	string	LDAP Host settings Enable/Disable - Enable: Enabled - Disable: Disabled
Operation	string	Operation Mode Specify an operation mode. - Update: Normal update mode - Check: Check mode

[Response Parameter]

Parameter	Type	Description
Ldaps	array	LDAP Information
LdapId	integer	LDAP server ID - 1: LDAP authentication primary - 2: LDAP authentication secondary - 3-7: settings for link with Active Directory
LdapSetting	string	LDAP settings Enable/Disable Enable only when the LdapId is 3 - 7. - Enable: Enabled - Disable: Disabled
CasSetting	string	CAS Enable/Disable Enable only when the LdapId is 3 - 7. - Enable: Enabled - Disable: Disabled
DomainName	string	Domain Name Output only when the LdapId is 3 - 7.
LdapHost	string	LDAP Server Name
Port	integer	Port Number
BaseDn	string	Basic Path
SearchAttribute	string	Search Attribute
BindDn	string	Account for Binding
BindPassword	string	Bind Password Outputs a parameter as specified.
SSLcertificate	string	SSL Certificate Outputs an SSL certificate as specified.
Status	string	Status of LDAP

Parameter	Type	Description

		Outputs the status of LDAP.
		- When LdapId is 1 or 2
		  - "Used": This information is currently being used.
		  - "Reserved": This information is currently being reserved.
		- When LdapId is not specified or LdapId is 3 - 7
		  - Null

Modified	string	Last Updated Outputs update date in UTC hours.
LdapServerList	array	LDAP Server List Output only when the LdapId is 3 - 7.
LdapHost	string	LDAP Server Name
Port	integer	Port Number
SSLcertificate	string	SSL Certificate Outputs an SSL certificate as specified.
SSLcertificateInfo	object	SSL Certificate Information Outputs the specified SSL certificate information. Output when "Operation" is "Update" and "REST API" is "OK".
Issuer	string	Issuer
Subject	string	Issued to
ValidityNotBefore	string	Start of Validated Period
ValidityNotAfter	string	End of Validated Period
Fingerprint	string	Finger print
HostStatus	string	Status of LDAP Host Output the connection status of the LDAP host. - Enable: connection succeeded - Certificate Error: connection failed (SSL Certificate Error) - Authentication Error: connection failed (Authentication error on all responding hosts) - Referral Error: connection failed (BaseDN Error) - Connection Error: connection failed (Other Connection Error) - Invalid: no connection check
LdapMessageId	string	ID for LDAP host connection error message The message ID corresponding to the message to be notified when the LDAP host has failed to connect.
LdapMessage	string	LDAP Host Connection Error Message Message to be notified when the LDAP host has a connection error.

Parameter	Type	Description
HostSetting	string	LDAP Host settings Enable/Disable - Enable: Enabled - Disable: Disabled
OperationResult	string	Result of updating LDAP information Output only when the LdapId is 3 - 7. - Success: - Operation mode is Update: Registration is completed - Operation mode is Check: All hosts can be connected - Warning: - Operation mode is Check: some hosts cannot be connected - Referral Error: All hosts are unconnectable (Include a base DN error) - Host Setting Error: All hosts cannot connect (Include authentication failures and certificate errors) - Connection Error: All hosts cannot connect (No Response) - Authentication Error: All hosts are unconnectable (Authentication errors and timeouts)
LdapMessageId	string	ID for result message of LDAP information update The message ID corresponding to the message to be notified as a result of updating the LDAP information. Output only when the LdapId is 3 - 7.
LdapMessage	string	Result Message from updating LDAP information Messages that are notified as a result of updating LDAP information. Output only when the LdapId is 3 - 7.
Cas	object	CAS Information Output only when OperationResult is Update.
TaskId	string	Task ID If CAS started, the started Task ID is output. If CAS is not started, "" is output. If CAS is updating, "" output.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- If you only specify the LdapId and do not specify any other information, the LdapId will be deleted.
- If the LdapId is 2, specify the information together with the information for 1.
- You can not specify the same value for the LdapId more than once.
- You cannot specify LdapId 1 - 2 and LdapId 3 - 7 at the same time.
- If "Operation" is "Check," the LDAP information will be checked by connecting to the LDAP server with the specified information.

- For response data, only the information for LdapId specified with the request data is output.
- For LdapId 3 - 7, response data is returned even if OperationResult is not Success or Warning.
- When updating, if there are multiple servers that have the same DomainName, it will be an error.
- You cannot specify the same LDAP server name for a LdapId.
- If the LDAP server name is already registered with another LdapId, an error occurs.
- Precautions for LDAP information for LdapId 1 - 2 are as shown below.
  - Only one Authentication method can be specified as a primary and a secondary choice respectively for whole of ISM.
  - Only either OpenLDAP or Microsoft Active Directory can be specified as authentication method in the LDAP.
- Precautions for LDAP information for LdapId 3 - 7 are as shown below.
  - You can specify more than one LDAP host for a domain.
  - The connection is checked for hosts with valid LDAP host settings in the order of the LDAP servers listed. Make the host at the top of the list of available hosts the active host.
  - CN is used as the attribute to identify the user.
- SSL certificate should be specified in the following steps.

  Case of AD server

  1. Select [Control Panel] - [Administrative Tools] - [Certificate Authorities].
  2. Right-click the target server, and then select [Properties] - [General] - [Certification authority (CA)]
  3. Select [View Certificates] to confirm the certificate.
  4. Select [Details] in the dialog, and then select [Copy to File...].
  5. In the certificate export wizard, select [Next], and then select "Base64 encoded X509(CER)(S)." Specify where to save the file, and then select [Done].
  6. Upload the file you saved to "Administrator/ftp/."
  7. Specify the file you saved above (you do not need to specify "Administrator/ftp")
- The following messages are displayed for LDAP Host Connection errors when the API is called.

ID	Content
50061720	SSL connection failed. Specify the valid certificate and execute again.
50061730	Failed to connect to the LDAP server. Specify the correct host name and port, and execute again. When the settings are correct, check that the LDAP server is on.
50061740	There is no applicable Base DN. Check the LDAP server settings and execute again.
50061750	User authentication for Bind DN failed. Check and correct the user name and password specified for the Bind DN, and execute again.

- The following messages are displayed for LDAP information updates when the API is called.

ID	Content
50061740	There is no applicable Base DN. Check the LDAP server settings and execute again.
50061750	User authentication for Bind DN failed. Check and correct the user name and password specified for the Bind DN, and execute again.

4.1.17 Switch of LDAP Information

[Overview]

Switches the LDAP information.

[Format]

```
POST /system/settings/ldaps/switch
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter		Type	Description
Ldaps		array	LDAP Information Outputs LDAP information in the order of primary and secondary.
	LdapHost	string	LDAP Server Name
	Port	integer	Port Number
	BaseDn	string	Basic Path
	SearchAttribute	string	Search Attribute
	BindDn	string	Account for Binding
	SSLcertificate	string	SSL Certificate Outputs availability/unavailability of a SSL certificate. - "On": Assigned SSL certificate - "Off": No specified SSL certificate
	Status	string	Status of LDAP Outputs a status of switched LDAP. - "Used": This information is currently being used. - "Reserved": This information is currently being reserved.
	Modified	string	Last Updated Outputs update date in UTC hours.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.1.18 Retrieval of Policy Information

[Overview]

Retrieves the security policy information set in user management.

[Format]

```
GET /users/policy
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
PasswordPolicy	object	Password policy
UnavailablePastData	integer	Past Passwords Unusable Setting range: 0-24 Default value: 0 (Does not restrict passwords in the past)
MinimumLength	integer	Minimum Password Length Setting range: 1-80 Default value: 1 Not word count but byte number
UseCharacterType	integer	Characters may be used in password Outputs how many types should be used from the following. - Number - Lowercase - Uppercase - Special characters Setting range: 0-4 Default value: 0 (unspecified)
ValidPeriod	integer	Password Expiration Date Setting range: 0-365 (days) Default value: 0 (Indefinite)
InValidUserAction	string	User operation after duration exceeded - "Warning": Only warning message - "Lock": Login locked (indefinitely)
UseUserName	boolean	Outputs whether it is possible to specify a password that is identical with the user name. - true: Can be specified - false: Cannot be specified
UnavailableString	array(string)	Outputs a character string that cannot be specified as a password in an array. Only 0-256 are output. Outputs an encrypted character string that cannot be specified as a password as a string. Refer to "2.4 Encryption" for encryption method.
LoginLockPolicy	object	Policy for Login Lock
Threshold	integer	Threshold of a Lock Log in will be locked with consecutive fails in row for more than this value.

Parameter		Type	Description
			Setting Range: 6-256 Default value: 6
	LockTime	integer	Lock tTime Setting range: 1-1440 (minutes) Default value: 30
SessionTime		integer	Session Time Setting range: 2-60 minutes Setting range: 2-1440 minutes (ISM 3.0.0.010 or later) Default value: 30 minutes
Modified		string	Last Updated Outputs the Last Updated date in UTC hours.
LoginMessage		string	Outputs the configured login message.
LoginMessageValid		boolean	Outputs enable/disable setting for the login message. - true: enabled - false: disabled

[Precautions]

- Any user can retrieve PasswordPolicy. In this case, null is retrieved except for PasswordPolicy parameter.
- A user holding an Administrator role can retrieve all information.

4.1.19 Update of Policy Information

[Overview]

Updates security policy information configured by user management.

Operations by each item are shown as follows:

- "Past passwords unusable"

  Becomes valid immediately after changing. The user update checks this configuration when a password is set. When it is violated, the user update will end with an error.

- "Minimum password length," "Characters usable for password," "Specifying a password as same as a user name" and "String that cannot be specified as a password"

  Becomes valid immediately after changing. The user addition and user update check this configuration when a password is set. When it is violated, the user addition and user update will end with an error.

- "Password expiration date"

  Becomes valid immediately after changing. It will operate as follows when specifying a period of validity other than 0:

  - User operation after duration exceeded: When "Warning"

    When logging in, if the validity has already expired, the "The validity of your password has expired. Change the password immediately." message is output.

    When logging in, if the validity will expire within two weeks, the "The validity of your password is coming to an end. Change the password immediately." message is output.

- User operation after duration exceeded: When "Lock"

  When logging in, if the validity has already expired, after the "The validity of your password has been exceeded. Change the password immediately." message is output and it is no longer possible to log in. By changing the password after the message is output, you can continue to log in.

- "Lock threshold value," "Lock time", "Session termination time", "Login Message" and "Enable/Disable Login Message."

  Becomes valid immediately after changing.

[Format]

```
PATCH /users/policy
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
PasswordPolicy	object	Password Policy
UnavailablePastData	integer	Past Passwords Unusable Setting range: 0-24 Default value: 0 (Does not restrict passwords in the past)
MinimumLength	integer	Minimum Password Length Setting range: 1-80 Default value: 1 Not word count but byte number
UseCharacterType	integer	Characters that can be used in your password Specify how many types should be used from the following. - Number - Lowercase - Uppercase - Special characters Setting range: 0-4 Default value: 0 (unspecified)
ValidPeriod	integer	Password Expiration Date Setting range: 0-365 (days) Default value: 0 (Indefinite)
InValidUserAction	string	User operation after duration exceeded - "Warning": Only warning message - "Lock": Login locked (indefinitely)
UseUserName	boolean	Specifies whether it is possible to specify a password that is identical with the user name. - true: Can be specified - false: Cannot be specified

Parameter	Type	Description
		Default value: false
UnavailableString	array (string)	Specify a character string that cannot be specified as a password in an array. Can specify 0-256 pieces. Default value: 0 Specify an encrypted character string that cannot be specified as a password as a string. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 80 characters or less.
LoginLockPolicy	object	Policy for Login Lock
Threshold	integer	Threshold of a Lock Log in will be locked after consecutive fails exceeding this value. Setting range: 6-256 Default value: 6
LockTime	integer	Lock Time Setting range: 1-1440 (minutes) Default value: 30
SessionTime	integer	Session Time Setting range: 2-60 minutes Setting range: 2-1440 minutes (ISM 3.0.0.010 or later) Default value: 30 minutes
LoginMessage	string	Configure the message to be displayed at login.
LoginMessageValid	boolean	Specify enable/disable setting for the login messages. - true: enabled - false: disabled

[Response Parameter]

Parameter	Type	Description
PasswordPolicy	object	Password Policy
UnavailablePastData	integer	Past Passwords Unusable Setting range: 0-24 Default value: 0 (Does not restrict passwords in the past)
MinimumLength	integer	Minimum Password Length Setting range: 1-80 Default value: 1 Not word count but byte number
UseCharacterType	integer	Characters that can be used in your password Outputs how many types should be used from the following.

Parameter	Type	Description
		- Number - Lowercase - Uppercase - Special characters Setting range: 0-4 Default value: 0 (unspecified)
ValidPeriod	integer	Password Expiration Date Setting range: 0-365 (days) Default value: 0 (Indefinite)
InValidUserAction	string	User operation after duration exceeded - "Warning": Only warning message - "Lock": Login locked (indefinitely)
UseUserName	boolean	Outputs whether it is possible to specify a password that is identical with the user name. - true: Can be specified - false: Cannot be specified
UnavailableString	array (string)	Outputs a character string that cannot be specified as a password in an array. Only 0-256 are output. Outputs an encrypted character string that cannot be specified as a password as a string. Refer to "2.4 Encryption" for encryption method.
LoginLockPolicy	object	Policy for Login Lock
Threshold	integer	Threshold of a Lock Log in will be locked with consecutive fails in row for more than this value. Setting range: 6-256 Default value: 6
LockTime	integer	Lock Time Setting range: 1-1440 (minutes) Default value: 30
SessionTime	integer	Session Time Setting range: 2-60 minutes Setting range: 2-1440 minutes (ISM 3.0.0.010 or later) Default value: 30 minutes
Modified	string	Last Updated Outputs update date in UTC hours.
LoginMessage	string	Outputs the configured login message.
LoginMessageValid	boolean	Outputs enable/disable setting for the login message. - true: enabled

Parameter	Type	Description
		- false: disabled

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- The user holding the Administrator role and belonging to the Administrator group is not locked out to login regardless of this setting. Outputs a message at all time.

4.2 License Management

4.2.1 Setting Licenses

[Overview]

Registers the information of a license.

[Format]

```
POST /system/licenses
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
LicenseId	string	License Key

[Response Parameter]

Parameter		Type	Description
License		object	License information
	LicenseId	string	License Key
	Type	string	License Type Outputs types of licenses added.
	Grade	string	License Grade Outputs grade of licenses added.
	ManagementNodeNumber	integer	Number of Licenses Outputs the number of licenses added. It become meaningful only when a license type is Node, but otherwise it becomes null.
	ExpirationDate	integer	License Validity Outputs expiration date of licenses added. When it has no license expiration, it becomes null.
Restart		string	Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA

Parameter	Type	Description
		It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Registration of license: ismadm license set
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.2.2 List Retrieval for License Information

[Overview]

Retrieves the information of a license.

[Format]

```
GET /system/licenses
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Licenses	array	Information of License
LicenseId	string	License Key
Type	string	License Type - Server - Node
Grade	string	License Grade - Advanced - Trial - I4P - TrialI4P
InvalidFlag	boolean	Invalid Flag - true: invalid - false: valid
ExpirationDate	integer	Days remaining before expiration. After the expiration date, it will be -1 or less. Fix to 0 for non-expiring licenses
ManagementNodeNumber	integer	When a type of license is Node, it is the number of management nodes. For all cases other than that, fix to 0.

Parameter		Type	Description
	LicenseStatus	string	License Status - Valid: valid - Expires soon: expiring within 30 days - Expired: already expired
	RegistrationTimestampInfomation	string	Date of Registration
	ExpirationTimestampInfomation	string	Expiration Date
	UpdateTimestampInfomation	string	Update Day
ManagementNodeTotalNumber		integer	Total Number of Management Nodes
ManagementNodeLeftNumber		integer	Total Number of Management Nodes Remaining Number subtracted the number of nodes registered with ISM from the number of management nodes.
Grade		string	License Grade during operation
OperationMode		string	Operation Mode - Advanced - Advanced (Trial) - Advanced for PRIMEFLEX - Advanced for PRIMEFLEX (Trial) - Essential

4.2.3 Deleting Licenses

[Overview]

Deletes a license.

[Format]

```
POST /system/licenses/delete
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
LicenseId	string	License Key

[Response Parameter]

Parameter		Type	Description
License		object	Information of the Deleted License
	LicenseId	string	License Key
	Type	string	License Type Outputs types of licenses added.
	Grade	string	License Grade

Parameter		Type	Description
			Outputs grade of licenses added.
	ManagementNodeNumber	integer	Number of Licenses Outputs the number of licenses added. It become meaningful only when a license type is Node, but otherwise it becomes null.
	ExpirationDate	integer	License Validity Outputs expiration date of licenses added. When it has no license expiration, it becomes null.
Restart		string	Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Deletion of license: ismadm license delete
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.2.4 Replacing Licenses

[Overview]

Replaces the information of a license.

[Format]

```
PATCH /system/licenses
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
LicenseList		array	Information of License
	LicenseId	string	License Key

[Response Parameter]

Parameter		Type	Description
LicenseList		array	Information of License Replaced
	LicenseId	string	License Key
	Type	string	License Type

Parameter		Type	Description
			Outputs types of licenses added.
	Grade	string	License Grade Outputs grade of licenses added.
	ManagementNodeNumber	integer	Number of Licenses Outputs the number of licenses added. It become meaningful only when a license type is Node, but otherwise it becomes null.
	ExpirationDate	integer	License Validity Outputs expiration date of licenses added. When it has no license expiration, it becomes null.
ReplacedLicenseList		array	Information of License Replaced
	LicenseId	string	License Key
	Type	string	License Type Outputs a type of the deleted license.
	Grade	string	License Grade Outputs a grade of the deleted license.
	ManagementNodeNumber	integer	License Number Outputs the number of deleted licenses. It become meaningful only when a license type is Node, but otherwise it becomes null.
	ExpirationDate	integer	License Validity Outputs expiration date of the deleted license. When it has no license expiration, it becomes null.
Restart		string	Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
  - Deletion of license: ismadm license delete
  - Registration of license: ismadm license set
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.3 Node Management

4.3.1 Node Registration

[Overview]

Registers a node.

[Format]

```
POST /nodes
```

[Query Parameter]

None

[Request Parameter]

Parameter			Type	Description
Node			object	Node Information
	Name		string	Node Name Designate a unique name in the ISM.
	Type		string	Node Type Specify a node type to correspond with a device. Refer to [Node Type] for the node type that can be specified.
	Model		string	Model Name Specify a model name of a device. For machines supported, it may not work normally unless specifying a correct model name.
	IpAddress		string	IP Address Designate a unique IP address in the ISM.
	IpVersion		string	IP Version of IP Address - V4: IPv4 - V6: IPv6
	WebUrl		string	WebURL (such as the WebUI of a device) to use in main Key can be omitted.
	Urls		array	Miscellaneous WebURL Information Key can be omitted.
		Url	string	WebURL
		UrlName	string	WebURL Name
	Description		string	Description Key can be omitted.
	NodeTagList		array	Node Tag Information Key can be omitted.
		NodeTag	string	Node Tag Name
	ManagementLanOption		object	Information of Management LAN Key can be omitted. Sets management LAN to be used when executing PXE boot in the server.
		ManagementLanMode	string	Specifying Mode for Management LAN

Parameter	Type	Description
		- null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MAC Address: Specify MAC address - Adapter: Specify an adapter
AdapterInfo	object	Information of an adapter to be used as Management LAN When a specified mode is "Adapter," specifying is compulsory.
SlotIndex	integer	Slot Number Specifies 0 for on board.
PortIndex	integer	Port Number
Type	string	Type - Onboard: Onboard - PCICard: PCI card
MACAddress	string	MAC Address to be used as the Management LAN When a specified mode is "MACAddress," specifying is compulsory. Checks the input format only when it is enabled.
RackInfo	object	Information on mounting position in a rack
RackId	integer	Rack ID Mounted Specify a mounted Rack ID or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM.
Position	integer	Mounting Position (Unit Number) Specify the unit number at the bottom that a node possesses or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. When displaying on the GUI, refer to [Precautions].
OccupySize	integer	Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM.
MountType	string	PDU Mount Type Key can be omitted. - Rack: Type to mount as same as normal nodes

Parameter	Type	Description
		- 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it. Key can be omitted.
Outlet	array	Summary of PDU Connection Information Key can be omitted. Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the destination of connection Presently it is not supported.
Accounts	array	Account Information Key can be omitted. Set up information for access to the node. As for account information required, refer to the manual.
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication with SNMP v1 - SnmpV2: Used for communication with SNMP v2c - SnmpV3: Used for communication with SNMP v3 - Https: Used for communication with HTTPS(REST)
PortNum	integer	Port Number Used Specify the port number or null. When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.

Parameter	Type	Description
		Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
NewPassword	string	New Account Password Specify the factory default password for PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, PRIMERGY 1WAY M6, or PRIMEQUEST 4000 series (iRMC) to be the new account password. If you have already changed the password, you do not need to specify it. Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is Https.
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Key can be omitted. Presently it is not supported.
Ssh	string	Ssh Information Key can be omitted. Presently it is not supported.
SnmpV1	object	SnmpV1 Information Key can be omitted. It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information Key can be omitted. It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information Key can be omitted. It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA

Parameter	Type	Description
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
ContextName	string	Context Name
EngineId	string	Engine ID
SupportPeriod	object	Service Lifecycle
EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
Notification	integer	Advance notice of Service Lifecycle End Date Specify the number of days to be notified before the end date of service lifecycle.

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
NodeId	integer	Node ID
Name	string	Node Name
Type	string	Node Type
Model	string	Model Name
IpAddress	string	IP Address
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
Urls	array	Miscellaneous WebURL Information
Url	string	WebURL
UrlName	string	WebURL Name
Description	string	Description
NodeTagList	array	Node Tag Information
NodeTag	string	Node Tag Name
ManagementLanOption	object	Information of Management LAN Sets management LAN to be used when executing PXE boot in the server.
ManagementLanMode	string	Specifying Mode for Management LAN

Parameter	Type	Description
		- null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: MAC address - Adapter: Adapter
AdapterInfo	object	Information of an Adapter to be used as Management LAN
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
Type	string	Type - Onboard: Onboard - PCICard: PCI card
MACAddress	string	MAC Address to be used as Management LAN
RackInfo	object	Information of mounting position in the rack
RackId	integer	Rack ID Mounted
Position	integer	Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses.
OccupySize	integer	Number of Units Occupying Racks
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the destination of connection Presently it is not supported.
SlotNum	integer	Slot Number of Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically created. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
ParentFabricId	integer	Node ID of Fabric Node it belongs to For fabric switch, it is automatically configured at the time of retrieving node information of the fabric.
ChildNodeList	array	Child Node Information A node as a child node is stored.
NodeId	integer	Node ID of Child Node
Type	string	Node Type of Child Node

Parameter	Type	Description
SlotNum	integer	Slot Number in Chassis
Fabric	array	Information of Switch Nodes Composing Fabric
NodeId	integer	Node ID of Switch Node
Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
PowerStatus	string	Power Status of a Node - On: Power on Server, switch, and storage are powered on. In the case of the server, the power is tuned on even if the OS is not running. - Off: Power off Server is in the status of power saving and responded by iRMC. Switch and storage are not able to communicate with the device. - Standby: Standby An older PRIMERGY model (iRMC S4 or earlier) server is temporarily in standby while the power is changing from Off to On. Server, switch, and storage of iRMC S5 or later are not in this status. - Unknown: Communication impossible The server is not turned on and the status of iRMC itself is turned off, or cannot communicate. Switch and storage are not in this status. - N/A: Unavailable, maintenance mode The status is set to maintenance mode, node information has not been retrieved after node registration, or the power status is not available in the monitoring tab of the node list.
AlarmStatus	string	Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error
MaintenanceMode	string	Maintenance Mode - Normal: Regular Mode

Parameter			Type	Description
				- Maintenance: Maintenance Mode
	NodeGroupId		integer	Node Group ID
	UniqInfo		string	Specific Information for Internal Control
	AdditionalData		object	Internal Control Information
	UpdateDate		string	Last Updated Time
	EnabledGetELCMUpdInfo		boolean	Enable or disable getting eLCM Online Update information - False: disabled (do not get information) (default value) - True: enabled (get information)
	IpmiMode		boolean	IPMI Mode settings Displays the status that whether the IPMI protocol used to communicate with PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, or PRIMEQUEST 4000 series is enabled or disabled. - False: disabled (do not use) (default value) - True: enabled (use)
	SupportPeriod		object	Service Lifecycle
		EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
		Notification	integer	Advance notice of Service Lifecycle End Date Displays the number of days to be notified before the end date of service lifecycle.

[Precautions]

- Can only be executed by ISM administrators.
- Node name with its head starting with under bar "_" cannot be used as it is used with ISM.
- You cannot use the following characters in a node name.

  Slash (/), back slash (\), colon (:), asterisk (*), question mark (?), double-quotation ("), brackets (<>) and pipeline (|)
- When displaying on the GUI, the controls below are executed.
  - Information on the mounting position in a rack

    When a node type is facility, specify 101. Displayed as Rack CDU at upper position of the rack.

    When node type is pdu or intelligent-pdu and PDU mount type is 0U, specify 201-204. Displayed as 0U PDU beside the rack.
  - Number of units occupying the rack in the information on the mounting position in a rack.

    Displayed as nodes of height of 44.5 mm multiplied by the number of units occupying the rack.

[Node Type]

Meanings of symbols in table

Y: Can execute

-: Cannot execute

Node Type	Model	Node Registration	Retrieval of Node Information	Deletion of Node	Setting of Maintenance Mode
server	PRIMERGY RX server and others	Y	Y	Y	Y
server-primergylx	PRIMERGY LX server	Y	Y	Y	Y
server-primequest3000b	PRIMEQUEST 3000B	Y	Y	Y	Y
server-primequest2000b	PRIMEQUEST 2000B	Y	Y	Y	Y
server-ipcomvx	IPCOM VX2	Y	Y	Y	Y
server-generic	Platform made by other companies	Y	Y	Y	Y
server-primergycx	PRIMERGY CX server	Y	Y	Y	Y
server-primergybx	PRIMERGY BX server	Y	Y	Y	Y
server-zz5000	PRIMERGY CX1430 M1	Y	Y	Y	Y
server-snmp	Server (SNMP monitoring)	Y	Y	Y	Y
server-ping	Server (Ping monitoring)	Y	Y	Y	Y
primequest	PRIMEQUEST 2000 series	Y	Y	Y [Note 13]	Y
primequest-3000e	PRIMEQUEST 3000E series	Y	Y	Y [Note 13]	Y
primequest-4000	PRIMEQUEST 4000 chassis only	- [Note 2]	- [Note 8]	Y [Note 15]	Y
partition	PRIMEQUEST partition	- [Note 1]	- [Note 7]	- [Note 14]	- [Note 21]
partition-primequest4000	PRIMEQUEST 4000 partition	Y	Y	Y	Y
extended-partition	PRIMEQUEST expansion partition	- [Note 1]	- [Note 7]	- [Note 14]	- [Note 21]
chassis	PRIMERGY CX chassis	- [Note 2]	- [Note 8]	Y [Note 15]	Y
chassis-primergybx	PRIMERGY BX chassis (MMB)	Y	Y	Y [Note 15]	Y
fabric-vcs	VCS Fabric (Brocade VCS Fabric) (hereafter refer to as VCS Fabric)	Y	Y	Y [Note 16]	Y
fabric-cfx	Converged Fabric (C-Fabric)	Y	Y	Y [Note 16]	Y
fabricswitch-vdx	VDX Switch	- [Note 3]	- [Note 9]	Y	- [Note 22]
fabricswitch-cfx	CFX Switch	- [Note 4]	- [Note 10]	Y	- [Note 23]
fabricswitch-bxsbax3	PY CB Eth Switch 10/40Gb 18/8+2 (Fabric mode)	- [Note 4]	- [Note 10]	Y	- [Note 23]
switch	Switch	Y	Y	Y	Y
switch-fos	PSWITCH	Y	Y	Y	Y
switch-nexus	Cisco Nexus switch	Y	Y	Y	Y

Node Type	Model	Node Registration	Retrieval of Node Information	Deletion of Node	Setting of Maintenance Mode
switch-bxpassthru	PY CB Eth Pass Thru 10Gb 18/18	- [Note 26]	Y	Y	Y
switch-bxsb11	PY CB Eth Switch/IBP 1Gb connection blade	Y	Y	Y	Y
switch-bxsbax2	PY CB Eth Switch/IBP 10Gb 18/8	Y	Y	Y	Y
switch-bxsbax3	PY CB Eth Switch 10/40Gb 18/8+2	Y	Y	Y	Y
switch-ipcomex	IPCOM EX2	Y	Y	Y	Y
switch-juniper	Juniper QFX/EX Switch	Y	Y	Y	Y
switch-snmp	Switch (SNMP monitoring)	Y	Y	Y	Y
switch-generic	Arista 7000 Family	Y	Y	Y	Y
switch-ping	Switch (Ping monitoring)	Y	Y	Y	Y
sanswitch-brocade	FC Switch	Y	Y	Y	Y
sanswitch-brocadebxfc	FC Switch Blade	Y	Y	Y	Y
switch-extremexos	ExtremeSwitching X440/460-G2	Y	Y	Y	Y
storage	ETERNUS DX/AF	Y	Y	Y [Note 17]	Y
storage-generic	ETERNUS CS800 ETERNUS LT	Y	Y	Y	Y
storage-nr	NetApp (ETERNUS NR), ETERNUS HX/AX ETERNUS AC	- [Note 5]	- [Note 11]	- [Note 18]	- [Note 24]
storage-dx900	ETERNUS DX900 S5 ETERNUS DX900 S6 (ISM 3.0.0.010 or later)	Y	Y	Y	Y
storage-hb	ETERNUS AB/HB	Y	Y	Y	Y
storage-snmp	Storage (SNMP monitoring)	Y	Y	Y	Y
storage-ping	Storage (Ping monitoring)	Y	Y	Y	Y
cluster-nr	NetApp (ETERNUS NR) cluster, ETERNUS HX/AX cluster ETERNUS AC cluster	Y	Y	Y [Note 19]	Y
pdu	PDU	Y	Y	Y	Y
intelligent-pdu	Intelligent PDU	Y	Y	Y	Y
ups	UPS	Y	Y	Y	Y
facility	Rack CDU	Y	Y	Y	Y
facility-snmp	Facility machine (SNMP monitoring)	Y	Y	Y	Y

Node Type	Model	Node Registration	Retrieval of Node Information	Deletion of Node	Setting of Maintenance Mode
facility-ping	Facility machine (Ping monitoring)	Y	Y	Y	Y
frontend-enclosure	ETERNUS DX900 S5 front-end enclosure ETERNUS DX900 S6 front-end enclosure (ISM 3.0.0.010 or later)	- [Note 6]	- [Note 12]	- [Note 20]	- [Note 25]
controller-enclosure	ETERNUS DX900 S5 controller enclosure ETERNUS DX900 S6 controller enclosure (ISM 3.0.0.010 or later)	- [Note 6]	- [Note 12]	- [Note 20]	- [Note 25]
drive-enclosure	ETERNUS DX/AF drive enclosure	- [Note 6]	- [Note 12]	- [Note 20]	- [Note 25]
driveenclosure-nr	NetApp (ETERNUS NR) external attachment disk shelf ETERNUS HX/AX external attachment disk shelf ETERNUS AC external attachment disk shelf	- [Note 5]	- [Note 11]	- [Note 18]	- [Note 24]
driveenclosure-hb	ETERNUS AB/HB drive enclosure	- [Note 6]	- [Note 12]	- [Note 20]	- [Note 25]
other	Others	Y	Y	Y	Y

[Note 1]: When retrieving node information of PRIMEQUEST 2000/3000E series, nodes are automatically created.

[Note 2]: When retrieving node information of PRIMERGY CX servers or PRIMEQUEST 4000 series, nodes are automatically created.

[Note 3]: When retrieving node information of VCS Fabric(Brocade VCS Fabric) (hereafter refer to as VCS Fabric), nodes are automatically created.

[Note 4]: When retrieving node information of the Converged Fabric (C-Fabric), nodes are automatically created.

[Note 5]: When retrieving NetApp (ETERNUS NR) cluster, ETERNUS HX/AX cluster or ETERNUS AC cluster node information, nodes are automatically created.

[Note 6]: Execute retrieving of node information for the ETERNUS DX/AF/AB/HB.

[Note 7]: Execute retrieving of node information for the PRIMEQUEST 2000/3000E series.

[Note 8]: Execute retrieving of node information for the PRIMERGY CX servers or the PRIMEQUEST 4000 series.

[Note 9]: Execute retrieving of node information for the VCS Fabric.

[Note 10]: Execute retrieving of node information of the Converged Fabric (C-Fabric).

[Note 11]: Execute retrieving of node information of the NetApp (ETERNUS NR) cluster, ETERNUS HX/AX cluster or ETERNUS AC cluster.

[Note 12]: Execute retrieving of node information for the ETERNUS DX/AF/AB/HB.

[Note 13]: Both subordinate partitions and expansion partitions will be deleted altogether.

[Note 14]: When nodes do not exist, nodes will be deleted automatically at retrieving of node information for the PRIMEQUEST 2000/3000E series.

[Note 15]: Server nodes and switch blades mounted in the chassis are to be deleted altogether.

[Note 16]: Switches composing the fabric are to be deleted altogether.

[Note 17]: Deletes storage in clusters as well as external disk shelf altogether.

[Note 18]: When nodes do not exist, nodes will be deleted automatically at retrieving of node information for the NetApp (ETERNUS NR) cluster, ETERNUS HX/AX cluster or ETERNUS AC cluster.

[Note 19]: A drive enclosure that is connected will be deleted collectively.

[Note 20]: When nodes do not exist, nodes will be deleted automatically at retrieving of node information for ETERNUS DX/AF/AB/HB.

[Note 21]: Set PRIMEQUEST 2000/3000E series to the maintenance mode.

[Note 22]: Set VCS Fabric to the maintenance mode.

[Note 23]: Set Converged Fabric (C-Fabric) to the maintenance mode.

[Note 24]: Set NetApp (ETERNUS NR) cluster ETERNUS HX/AX cluster or ETERNUS AC cluster to the maintenance mode.

[Note 25]: Set ETERNUS DX/AF/AB/HB to the maintenance mode.

[Note 26]: When retrieving node information of PRIMERGY BX Chassis (MMB), nodes are automatically created.

4.3.2 List Retrieval for Nodes

[Overview]

Retrieves information of all nodes under the management of the user group that the user belongs to.

Query parameters can be used to narrow down the nodes to be retrieved.

[Format]

```
GET /nodes
```

[Query Parameter]

Parameter	Type	Description
name	string	Narrowing down by Node Name
type	string	Narrowing down by Node Type For the information on node type that can be specified, refer to [Node Type] in "4.3.1 Node Registration."
model	string	Narrowing down by Model Name
ipaddress	string	Narrowing down by IP Address
rackid	integer	Narrowing down by Rack ID
floorid	integer	Narrowing down by Floor ID
dcid	integer	Narrowing down by Datacenter ID
nodegroupid	integer	Narrowing down by Node Group ID
status	string	Narrowing down by Status - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
powerstatus	string	Narrowing down by Power Status

Parameter	Type	Description
		- On: Power on - Off: Power off - Standby: Standby - Unknown: Communication impossible - N/A: Unavailable, maintenance mode For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."
alarmstatus	string	Narrowing down by Alarm Status - Error: Error - Warning: Warning - Info: Information - Normal: No notification
nodetag	string	Narrowing down by Node Tag Name
uniqinfo	string	For Internal Control
initialnodeid	integer	Start Node ID
nodenumber	integer	Number of nodes retrieved

[Response Parameter]

Parameter		Type	Description
Nodes		array	Node Information
	NodeId	integer	Node ID
	Name	string	Node Name
	Type	string	Node Type
	Model	string	Model Name
	IpAddress	string	IP Address
	IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
	WebUrl	string	WebURL (such as the WebUI of a device) to use in main
	LogUrl	string	Log URL Output when the version of both the PRIMERGY server and iRMC is S5 or later. Other than the above, no key is output.
	Urls	array	Miscellaneous WebURL Information
	Url	string	WebURL
	UrlName	string	WebURL Name
	Description	string	Description
	NodeTagList	array	Node Tag Information
	NodeTag	string	Node Tag Name

Parameter	Type	Description
ManagementLanOption	object	Information of the Management LAN Management LAN that is used when executing PXE boot in server is output.
ManagementLanMode	string	Specifying Mode for the Management LAN - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: MAC address - Adapter: Adapter
AdapterInfo	object	Information of an Adapter to be used as the Management LAN
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
Type	string	Type - Onboard: Onboard - PCICard: PCI card
MACAddress	string	MAC Address to be used as the Management LAN
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted
Name	string	Rack Name
Position	integer	Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses.
OccupySize	integer	Number of Units Occupying Racks
FloorInfo	object	Floor Information
FloorId	integer	Floor ID
Name	string	Floor Name
DataCenterInfo	object	DataCenter Information
DcId	integer	DataCenter ID
Name	string	DataCenter Name
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
SlotNum	integer	Slot Number in Chassis

Parameter	Type	Description
		For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically created. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
ParentFabricId	integer	Node ID of Fabric Node it belongs to For fabric switch, it is automatically configured at the time of retrieving node information by the fabric.
ChildNodeList	array	Child Node Information A node as a child node is stored.
NodeId	integer	Node ID of Child Node
Type	string	Node Type of Child Node
SlotNum	integer	Slot Number in Chassis
Fabric	array	Information of Switch Nodes Composing the Fabric
NodeId	integer	Node ID of Switch Node
Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
PowerStatus	string	Power Status of a Node - On: Power on - Off: Power off - Standby: Standby - Unknown: Communication impossible - N/A: Unavailable, maintenance mode For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."
AlarmStatus	string	Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error
MaintenanceMode	string	Maintenance Mode

Parameter			Type	Description
				- Normal: Regular Mode - Maintenance: Maintenance Mode
	NodeGroupId		integer	Node Group ID
	NodeGroupName		string	Node Group Name
	UniqInfo		string	Specific Information for Internal Control
	AdditionalData		object	Internal Control Information
	UpdateDate		string	Last Updated Time
	InventoryUpdateDate		string	Retrieval Time/Date of Node Information
	UpdateProgress		string	Retrieval Status of Node information - Complete: finished - Updating: during retrieval - Error: failed
	OsRefreshDate (ISM 3.0.0.010 or later)		string	Retrieval Time/Date of OS Information
	EnabledGetELCMUpdInfo		boolean	Enable or disable getting eLCM Online Update information - False: disabled (do not get information) (default value) - True: enabled (get information)
	IpmiMode		boolean	IPMI Mode settings Displays the status that whether the IPMI protocol used to communicate with PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, or PRIMEQUEST 4000 series is enabled or disabled. - False: disabled (do not use) (default value) - True: enabled (use)
	SupportPeriod		object	Service Lifecycle
		EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
		Notification	integer	Advance notice of Service Lifecycle End Date Displays the number of days to be notified before the end date of service lifecycle.
AllNodeNumber			integer	Number of nodes
ReturnNodeNumber			integer	Number of nodes returned
NextInitialNodeId			integer	Next Start Node ID

4.3.3 Individual Retrieval of Node

[Overview]

Retrieves the information of the specified nodes.

[Format]

```
GET /nodes/{nodeid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
NodeId	integer	Node ID
Name	string	Node Name
Type	string	Node Type
Model	string	Model Name
IpAddress	string	IP Address
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
LogUrl	string	Log URL Output when the version of both the PRIMERGY server and iRMC is S5 or later. Other than the above, no key is output.
Urls	array	Miscellaneous WebURL Information
Url	string	WebURL
UrlName	string	WebURL Name
Description	string	Description
NodeTagList	array	Node Tag Information
NodeTag	string	Node Tag Name
ManagementLanOption	object	Information of the Management LAN Sets management LAN to be used when executing PXE boot in the server.
ManagementLanMode	string	Specifying Mode for the Management LAN - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: MAC address - Adapter: Adapter
AdapterInfo	object	Information of an Adapter to be used as the Management LAN
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
Type	string	Type - Onboard: Onboard - PCICard: PCI card
MACAddress	string	MAC Address to be used as the Management LAN

Parameter	Type	Description
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted
Position	integer	Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses.
OccupySize	integer	Number of Units Occupying Racks
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
SlotNum	integer	Slot Number in Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically set. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
ParentFabricId	integer	Node ID of the Fabric Node it belongs to For the fabric switch, it is automatically configured at the time of retrieving node information by the fabric.
ChildNodeList	array	Child Node Information A node as a child node is stored.
NodeId	integer	Node ID of Child Node
Type	string	Node Type of Child Node
SlotNum	integer	Slot Number in Chassis
Fabric	array	Information of Switch Nodes Composing the Fabric
NodeId	integer	Node ID of Switch Node
Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
PowerStatus	string	Power Status of a Node - On: Power on

Parameter	Type	Description
		- Off: Power off - Standby: Standby - Unknown: Communication impossible - N/A: Unavailable, maintenance mode For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."
AlarmStatus	string	Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error
MaintenanceMode	string	Maintenance Mode - Normal: Normal mode - Maintenance: Maintenance mode
NodeGroupId	integer	Node Group ID
UniqInfo	string	Specific Information for Internal Control
AdditionalData	object	Internal Control Information
UpdateDate	string	Last Updated Time
InventoryUpdateDate	string	Retrieval Time/Date of Node Information
UpdateProgress	string	Retrieval Status of Node information - Complete: finished - Updating: during retrieval. - Error: failed
OsRefreshDate (ISM 3.0.0.010 or later)	string	Retrieval Time/Date of OS Information
EnabledGetELCMUpdInfo	boolean	Enable or disable getting eLCM Online Update information - False: disabled (do not get information) (default value) - True: enabled (get information)
IpmiMode	boolean	IPMI Mode settings Displays the status that whether the IPMI protocol used to communicate with PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, or PRIMEQUEST 4000 series is enabled or disabled. - False: disabled (do not use) (default value) - True: enabled (use)
SupportPeriod	object	Service Lifecycle

Parameter	Type	Description
EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
Notification	integer	Advance notice of Service Lifecycle End Date Displays the number of days to be notified before the end date of service lifecycle.

4.3.4 Update of Nodes

[Overview]

Updates the registration information of the specified nodes.

To update registration information for multiple nodes at once, refer to "4.3.36 Batch Update of Nodes."

[Format]

```
PATCH /nodes/{nodeid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Node	object	Node Information
Name	string	Node Name Designate a unique name in the ISM.
Model	string	Model Name Specify a model name of a device. For machines supported, it may not work normally unless specifying a correct model name.
IpAddress	string	IP Address Designate a unique IP address in the ISM.
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
WebUrl	string	WebURL (such as the WebUI of a device) to use in main Key can be omitted.
Urls	array	Miscellaneous WebURL Information Key can be omitted.
Url	string	WebURL
UrlName	string	WebURL Name
Description	string	Description Key can be omitted.
NodeTagList	array	Node Tag Information Key can be omitted.

Parameter	Type	Description
NodeTag	string	Node Tag Name
ManagementLanOption	object	Information of Management LAN Key can be omitted. Sets management LAN to be used when executing PXE boot in the server.
ManagementLanMode	string	Specifying Mode for the Management LAN - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: Specify MAC address - Adapter: Specify an adapter.
AdapterInfo	object	Information of an Adapter to be used as the Management LAN When a specified mode is "Adapter," specifying is compulsory.
SlotIndex	integer	Slot Number Specifies 0 for on board.
PortIndex	integer	Port Number
Type	string	Type - Onboard: Onboard - PCICard: PCI card
MACAddress	string	MAC address to be used as the Management LAN When a specified mode is "MACAddress," specifying is compulsory. Check the input format only when it is enabled.
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted Specify a mounted Rack ID or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM.
Position	integer	Mounting Position (Unit Number) Specify the unit number at the bottom that a node possesses or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. When displaying on the GUI, refer to [Precautions].
OccupySize	integer	Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases.

Parameter	Type	Description
		- When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM.
MountType	string	PDU Mount Type Key can be omitted. - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it. Key can be omitted.
Outlet	array	Summary of PDU Connection Information Key can be omitted. Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
EnabledGetELCMUpdInfo	boolean	Enable or disable getting eLCM Online Update information - False: disabled (do not get information) (default value) - True: enabled (get information)
IpmiMode	boolean	IPMI Mode settings Specify whether the IPMI protocol used to communicate with PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, or PRIMEQUEST 4000 series is enabled or disabled. - False: disabled (do not use) (default value) - True: enabled (use)
SupportPeriod	object	Service Lifecycle
EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
Notification	integer	Advance notice of Service Lifecycle End Date Specify the number of days to be notified before the end date of service lifecycle.

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
NodeId	integer	Node ID
Name	string	Node Name
Type	string	Node Type
Model	string	Model Name

Parameter	Type	Description
IpAddress	string	IP Address
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
Urls	array	Miscellaneous WebURL Information
Url	string	WebURL
UrlName	string	WebURL Name
Description	string	Description
NodeTagList	array	Node Tag Information
NodeTag	string	Node Tag Name
ManagementLanOption	object	Information of the Management LAN Sets the management LAN to be used when executing PXE boot in the server.
ManagementLanMode	string	Specifying Mode for the Management LAN - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: MAC address - Adapter: Adapter
AdapterInfo	object	Information of an Adapter to be used as the Management LAN
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
Type	string	Type - Onboard: Onboard - PCICard: PCI card
MACAddress	string	MAC Address to be used as Management LAN
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted
Position	integer	Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses.
OccupySize	integer	Number of Units Occupying Racks
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU connection information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.

Parameter	Type	Description
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
SlotNum	integer	Slot Number of Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically set. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
ParentFabricId	integer	Node ID of Fabric Node it belongs to For fabric switch, it is automatically configured at the time of retrieving node information by the fabric.
ChildNodeList	array	Child Node Information A node as a child node is stored.
NodeId	integer	Node ID of Child Node
Type	string	Node Type of Child Node
SlotNum	integer	Slot Number in Chassis
Fabric	array	Information of Switch Nodes Composing the Fabric
NodeId	integer	Node ID of Switch Node
Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
PowerStatus	string	Power Status of a Node - On: Power on - Off: Power off - Standby: Standby - Unknown: Communication impossible - N/A: Unavailable, maintenance mode For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."
AlarmStatus	string	Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. - Error: Error - Warning: Warning - Info: Information

Parameter	Type	Description
		- Normal: No notification Priority of Status: Normal < Info < Warning < Error
MaintenanceMode	string	Maintenance Mode - Normal: Regular Mode - Maintenance: Maintenance Mode
NodeGroupId	integer	Node Group ID
UniqInfo	string	Specific Information for Internal Control
AdditionalData	object	Internal Control Information
UpdateDate	string	Last Updated Time
EnabledGetELCMUpdInfo	boolean	Enable or disable getting eLCM Online Update information - False: disabled (do not get information) (default value) - True: enabled (get information)
IpmiMode	boolean	IPMI Mode settings Displays the status that whether the IPMI protocol used to communicate with PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, or PRIMEQUEST 4000 series is enabled or disabled. - False: disabled (do not use) (default value) - True: enabled (use)
SupportPeriod	object	Service Lifecycle
EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
Notification	integer	Advance notice of Service Lifecycle End Date Displays the number of days to be notified before the end date of service lifecycle.

[Precautions]

- Changing the following values can only be executed by ISM administrators.

  RackId, Position, OccupySize, MountType, PduPosition

- Node Name with its head starting with under bar "_" cannot be used as it is used with ISM.
- You cannot use the following characters in a node name.

  Slash (/), back slash (\), colon (:), asterisk (*), question mark (?), double-quotation ("), brackets (<>) and pipeline (|)

- When displaying on the GUI, the controls below are executed.
  - Information on the mounting position in a rack

    When a node type is facility, specify 101. Displayed as Rack CDU at upper position of the rack.

    When node type is pdu or intelligent-pdu and PDU mount type is 0U, specify 201-204. Displayed as 0U PDU beside the rack.
  - Number of units occupying the rack in the information on the mounting position in a rack

    Displayed as nodes of height of 44.5 mm multiplied by the number of units occupying the rack.

4.3.5 Deletion of Nodes

[Overview]

Deletes the specified nodes.

[Format]

```
DELETE /nodes/{nodeid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

4.3.6 Registration of Racks

[Overview]

Registers a rack.

[Format]

```
POST /racks
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Rack		object	Rack Information
	Name	string	Rack Name Designate a unique name in the ISM.
	Unit	integer	Unit Size When displaying on the GUI, refer to [Precautions].
	Width	integer	Width of the Rack Unit: millimeter When displaying on the GUI, refer to [Precautions].
	Depth	integer	Depth of the Rack Unit: millimeter When displaying on the GUI, refer to [Precautions].
	Height	integer	Height of the Rack

Parameter	Type	Description
		Unit: millimeter When displaying on the GUI, refer to [Precautions].
FloorId	integer	Floor ID where the Rack is located Can be omitted
Angle	integer	Placement Angle of the Rack Can be omitted When displaying on the GUI, refer to [Precautions].
Xposition	integer	X coordinate position where the rack is located Unit: millimeter Can be omitted Increasing to the right in plan view. When displaying on the GUI, refer to [Precautions].
Yposition	integer	Y coordinate position where the rack is located Unit: millimeter Can be omitted Increasing downward in plan view. When displaying on the GUI, refer to [Precautions].
Description	string	Description Can be omitted

[Response Parameter]

Parameter	Type	Description
Rack	object	Rack Information
RackId	integer	Rack ID
Name	string	Rack Name
Unit	integer	Unit Size
Width	integer	Width of the Rack Unit: millimeter
Depth	integer	Depth of the Rack Unit: millimeter
Height	integer	Height of the Rack Unit: millimeter
FloorId	integer	Floor ID where the Rack is located
Angle	integer	Placement Angle of the Rack
Xposition	integer	X coordinate position where the rack is located Unit: millimeter
Yposition	integer	Y coordinate position where the rack is located Unit: millimeter
Description	string	Description
Status	string	Status of a Rack

Parameter		Type	Description
			A status mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.
- When displaying on the GUI, set as shown below.
  - Set a unit size within a range of 10-50.
  - For the width of the rack, set it within a range of 1-3000. When it is 500 or less, GUI displays with 500 mm.
  - For the depth of the rack, set it within a range of 1-3000. When it is 700 or less, GUI displays with 700 mm.
  - For the height of the rack, set it within a range of 1-3000. When it is smaller than a value automatically computed based on a unit size, the value of automatic computing is displayed.

    Automatic Calculation: Thickness of the bottom plate and top board of a rack (110 mm) + Height of 1 Unit (44.5 mm) x Unit size
  - As for placement angle of the rack, set from 0, 90, 180 and 270. In other cases, it is displayed by either 0,90, 180, or 270.
  - For both X and Y coordinate positions of the rack installation, set any values that can be accommodated within the relevant floor. When specifying out of this range, it will not be shown by GUI.

4.3.7 List Retrieval for Racks

[Overview]

Retrieves information of all racks.

Query parameters can be used to narrow down the racks to be retrieved.

[Format]

```
GET /racks
```

[Query Parameter]

Parameter	Type	Description
floorid	integer	Narrowing down by Floor ID
dcid	integer	Narrowing down by Datacenter ID

[Response Parameter]

Parameter		Type	Description
Racks		array	Rack Information
	RackId	integer	Rack ID
	Name	string	Rack Name
	Unit	integer	Unit Size

Parameter		Type	Description
	Width	integer	Width of the Rack Unit: millimeter
	Depth	integer	Depth of the Rack Unit: millimeter
	Height	integer	Height of the Rack Unit: millimeter
	FloorId	integer	Floor ID where the Rack is located
	Angle	integer	Placement Angle of the Rack
	Xposition	integer	X coordinate position where the rack is located Unit: millimeter
	Yposition	integer	Y coordinate position where the rack is located Unit: millimeter
	Description	string	Description
	Status	string	Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

4.3.8 Individual Retrieval of Rack

[Overview]

Retrieves the information of the specified racks.

[Format]

```
GET /racks/{rackid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Rack		object	Rack Information
	RackId	integer	Rack ID
	Name	string	Rack Name
	Unit	integer	Unit Size
	Width	integer	Width of the Rack Unit: millimeter

Parameter	Type	Description
Depth	integer	Depth of the Rack Unit: millimeter
Height	integer	Height of the Rack Unit: millimeter
FloorId	integer	Floor ID where the Rack is located
Angle	integer	Placement Angle of the Rack
Xposition	integer	X coordinate position where the rack is located Unit: millimeter
Yposition	integer	Y coordinate position where the rack is located Unit: millimeter
Description	string	Description
Status	string	Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
AlarmStatus	string	Alarm Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error
UpdateDate	string	Last Updated Time
Nodes	array	Information of the node mounted in the rack
NodeId	integer	Node ID
Name	string	Node Name
Type	string	Node Type
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted
Position	integer	Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses.
OccupySize	integer	Occupying Volume of Rack by Node
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID of Connection Destination Presently it is not supported.
SlotNum	integer	Slot Number in Chassis

Parameter			Type	Description
				For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
		ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically created. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
		ChildNodeList	array	Child Node Information A node as a child node is stored.
		NodeId	integer	Node ID of Child Node
		Type	string	Node Type of Child Node
		SlotNum	integer	Slot Number of Chassis
		Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
		PowerStatus	string	Power Status of a Node - On: Power on - Off: Power off - Standby: Standby - Unknown: Communication impossible - N/A: Unavailable, maintenance mode For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."
		AlarmStatus	string	Alarm Status of a Node - Error: Error - Warning: Warning - Info: Information - Normal: No notification
		UpdateDate	string	Last Updated Time

4.3.9 Updating of Racks

[Overview]

Updates the information of the specified racks.

[Format]

```
PATCH /racks/{rackid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Rack	object	Rack Information
Name	string	Rack Name Designate a unique name in the ISM.
Unit	integer	Unit Size When displaying on the GUI, refer to [Precautions].
Width	integer	Width of the Rack Unit: millimeter When displaying on the GUI, refer to [Precautions].
Depth	integer	Depth of Rack Unit: millimeter When displaying on the GUI, refer to [Precautions].
Height	integer	Height of Rack Unit: millimeter When displaying on the GUI, refer to [Precautions].
FloorId	integer	Floor ID where the Rack is located Can be omitted
Angle	integer	Placement Angle of the Rack Can be omitted When displaying on the GUI, refer to [Precautions].
Xposition	integer	X coordinate position where the rack is located Unit: millimeter Can be omitted Increasing to the right in plan view. When displaying on the GUI, refer to [Precautions].
Yposition	integer	Y coordinate position where the rack is located Unit: millimeter Can be omitted Increasing downward in plan view. When displaying on the GUI, refer to [Precautions].
Description	string	Description Can be omitted

[Response Parameter]

Parameter	Type	Description
Rack	object	Rack Information
RackId	integer	Rack ID

Parameter		Type	Description
	Name	string	Rack Name
	Unit	integer	Unit Size
	Width	integer	Width of the Rack Unit: millimeter
	Depth	integer	Depth of Rack Unit: millimeter
	Height	integer	Height of Rack Unit: millimeter
	FloorId	integer	Floor ID where the Rack is located
	Angle	integer	Placement Angle of the Rack
	Xposition	integer	X coordinate position where the rack is located Unit: millimeter
	Yposition	integer	Y coordinate position where the rack is located Unit: millimeter
	Description	string	Description
	Status	string	Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.
- When displaying on the GUI, set as shown below.
  - Set a unit size within a range of 10-50.
  - For the width of the rack, set it within a range of 1-3000. When it is 500 or less, GUI displays with 500 mm.
  - For the depth of the rack, set it within a range of 1-3000. When it is 700 or less, GUI displays with 700 mm.
  - For the height of the rack, set it within a range of 1-3000. When it is smaller than a value automatically computed based on a unit size, the value of automatic computing is displayed.

    Automatic Calculation: Thickness of the bottom plate and top board of a rack (110 mm) + Height of 1 Unit (44.5 mm) x Unit size
  - As for placement angle of the rack, set from 0, 90, 180 and 270. In other cases, it is displayed by either 0, 90, 180, or 270.
  - For both X and Y coordinate positions of the rack installation, set any values that can be accommodated within the relevant floor. When specifying out of this range, it will not be shown by GUI.

4.3.10 Deletion of Racks

[Overview]

Deletes the specified racks.

[Format]

```
DELETE /racks/{rackid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators

4.3.11 Registration of Floors

[Overview]

Registers a floor.

[Format]

```
POST /floors
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Floor		object	Floor Information
	Name	string	Floor Name Designate a unique name in the ISM.
	DcId	integer	Datacenter ID where the Floor is located Can be omitted
	Xsize	integer	X Width of a Floor Unit: meter When displaying on the GUI, refer to [Precautions].
	Ysize	integer	Y Width of a Floor Unit: meter When displaying on the GUI, refer to [Precautions].
	Description	string	Description Can be omitted

[Response Parameter]

Parameter		Type	Description
Floor		object	Floor Information
	FloorId	integer	Floor ID
	Name	string	Floor Name
	DcId	integer	Datacenter ID where the Floor is located
	Xsize	integer	X Width of a Floor Unit: meter
	Ysize	integer	Y Width of a Floor Unit: meter
	Description	string	Description
	Status	string	Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.
- When displaying on the GUI, set as shown below.

  Set X- and Y-coordinate widths of the floor within a range of 2-20. When specifying beyond this range, both floor view of GUI and 3D view will not be shown.

4.3.12 List Retrieval for Floors

[Overview]

Retrieves the information of all floors.

Query parameters can be used to narrow down the floors to be retrieved.

[Format]

```
GET /floors
```

[Query Parameter]

Parameter	Type	Description
dcid	integer	Narrowing down by Datacenter ID

[Response Parameter]

Parameter	Type	Description
Floors	array	Floor Information

Parameter		Type	Description
	FloorId	integer	Floor ID
	Name	string	Floor Name
	DcId	integer	Datacenter ID where the Floor is located
	Xsize	integer	X Width of a Floor Unit: meter
	Ysize	integer	Y Width of a Floor Unit: meter
	Description	string	Description
	Status	string	Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

4.3.13 Individual Retrieval of Floor

[Overview]

Retrieves the information of the specified floor.

[Format]

```
GET /floors/{floorid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Floor		object	Floor Information
	FloorId	integer	Floor ID
	Name	string	Floor name
	DcId	integer	Datacenter ID where the Floor is located
	Xsize	integer	X Width of a Floor Unit: meter
	Ysize	integer	Y Width of a Floor Unit: meter
	Description	string	Description
	Status	string	Status of a Floor

Parameter			Type	Description
				A status of the node with the highest severity in a floor will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus		string	Alarm Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate		string	Last Updated Time
	Racks		array	Rack Information in a Floor
		RackId	integer	Rack ID
		Name	string	Rack Name
		Unit	integer	Unit Size
		Width	integer	Width of the Rack Unit: millimeter
		Depth	integer	Depth of Rack Unit: millimeter
		Height	integer	Height of Rack Unit: millimeter
		FloorId	integer	Floor ID where the Rack is located
		Angle	integer	Placement Angle of the Rack
		Xposition	integer	X coordinate position where the rack is located Unit: millimeter
		Yposition	integer	Y coordinate position where the rack is located Unit: millimeter
		Description	string	Description
		Status	string	Status of a Rack A status of the mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
		AlarmStatus	string	Alarm Status of a Rack A status of the mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error
		UpdateDate	string	Last Updated Time

4.3.14 Update of Floors

[Overview]

Updates the information of the specified floor.

[Format]

```
PATCH /floors/{floorid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Floor	object	Floor Information
Name	string	Floor Name Designate a unique name in the ISM.
DcId	integer	Datacenter ID where the Floor is located Can be omitted
Xsize	integer	X Width of a Floor Unit: meter When displaying on the GUI, refer to [Precautions].
Ysize	integer	Y Width of a Floor Unit: meter When displaying on the GUI, refer to [Precautions].
Description	string	Description Can be omitted

[Response Parameter]

Parameter	Type	Description
Floor	object	Floor Information
FloorId	integer	Floor ID
Name	string	Floor Name
DcId	integer	Datacenter ID where the Floor is located
Xsize	integer	X Width of a Floor Unit: meter
Ysize	integer	Y Width of a Floor Unit: meter
Description	string	Description
Status	string	Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
AlarmStatus	string	Alarm Status of a Floor A status of the node with the highest severity in a floor will be shown.

Parameter		Type	Description
			Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.
- When displaying on the GUI, set as shown below.

  Set X- and Y-coordinate widths of the floor within a range of 2-20. When specifying beyond this range, both floor view of GUI and 3D view will not be shown.

4.3.15 Deletion of Floors

[Overview]

Deletes the information of the specified floor.

[Format]

```
DELETE /floors/{floorid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

4.3.16 Registration of Datacenters

[Overview]

Registers a datacenter.

[Format]

```
POST /datacenters
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
DataCenter		object	Datacenter Information
	Name	string	Datacenter Name

Parameter		Type	Description
			Designate a unique name in the ISM.
	Description	string	Description Can be omitted

[Response Parameter]

Parameter		Type	Description
DataCenter		object	Datacenter Information
	DcId	integer	Datacenter ID
	Name	string	Datacenter Name
	Description	string	Description
	Status	string	Status of Datacenter A status of the node with the highest severity in a datacenter will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of Datacenter A status of the node with the highest severity in a datacenter will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.

4.3.17 List Retrieval for Datacenters

[Overview]

Retrieves the information of all datacenters.

[Format]

```
GET /datacenters
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
DataCenters		array	Datacenter Information
	DcId	integer	Datacenter ID
	Name	string	Datacenter Name
	Description	string	Description
	Status	string	Status of Datacenter

Parameter	Type	Description
		A status of the node with the highest severity in a datacenter will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
AlarmStatus	string	Alarm Status of Datacenter A status of the node with the highest severity in a datacenter will be shown. Priority of Status: Normal < Info < Warning < Error
UpdateDate	string	Last Updated Time

4.3.18 Individual Retrieval of Datacenter

[Overview]

Retrieves the set datacenter information.

[Format]

```
GET /datacenters/{datacenterid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
DataCenter	object	Datacenter Information
DcId	integer	Datacenter ID
Name	string	Datacenter Name
Description	string	Description
Status	string	Status of Datacenter A status of the node with the highest severity in a datacenter will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
AlarmStatus	string	Alarm Status of Datacenter A status of the node with the highest severity in a datacenter will be shown. Priority of Status: Normal < Info < Warning < Error
UpdateDate	string	Last Updated Time
Floors	array	Information on Floors within Datacenter
FloorId	integer	Floor ID
Name	string	Floor name
DcId	integer	Datacenter ID where the Floor is located
Xsize	integer	X Width of a Floor Unit: meter

Parameter	Type	Description
Ysize	integer	Y Width of a Floor Unit: meter
Description	string	Description
Status	string	Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error
AlarmStatus	string	Alarm Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Normal < Info < Warning < Error
UpdateDate	string	Last Updated Time

4.3.19 Update of Datacenters

[Overview]

Updates the information of the specified datacenter.

[Format]

```
PATCH /datacenters/{datacenterid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
DataCenter	object	Datacenter Information
Name	string	Datacenter Name Designate a unique name in the ISM.
Description	string	Description Can be omitted

[Response Parameter]

Parameter	Type	Description
DataCenter	object	Datacenter Information
DcId	integer	Datacenter ID
Name	string	Datacenter Name
Description	string	Description
Status	string	Status of Datacenter A status of node with the highest severity in a datacenter will be shown.

Parameter		Type	Description
			Priority of Status: Updating < Normal < Unknown < Warning < Error
	AlarmStatus	string	Alarm Status of Datacenter A status of node with the highest severity in a datacenter will be shown. Priority of Status: Normal < Info < Warning < Error
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.

4.3.20 Deletion of Datacenters

[Overview]

Deletes the set datacenter information.

[Format]

```
DELETE /datacenters/{datacenterid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

4.3.21 Registration of Node Groups

[Overview]

Registers a node group.

[Format]

```
POST /nodegroups
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
NodeGroup	object	Information of Node Group

Parameter		Type	Description
	Name	string	Node Group Name Designate a unique name in the ISM.
	ParentGroupId	integer	Parent Node Group Can be omitted Presently it is not supported.
	Type	integer	Node Group Type Can be omitted Presently it supports 0 only.

[Response Parameter]

Parameter		Type	Description
NodeGroup		object	Information of Node Group
	NodeGroupId	integer	Node Group ID
	Name	string	Node Group Name
	ParentGroupId	integer	Parent Node Group Presently it is not supported.
	Type	integer	Node Group Type - 0: Node Group Created by User - 1: ISMDefaultGroup - 2: ISMSharedGroup
	UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.
- A node cannot be specified at creating a node group. When setting a node group, execute node allocation after creating a node group.
- The following node names cannot be used as they are used with ISM.
  - A name starting with under bar "_."
  - ISMDefaultGroup
  - ISMSharedGroup

4.3.22 List Retrieval for Node Groups

[Overview]

Retrieves the information of all the nodes managed by the user group that the user belongs to.

Query parameters can be used to narrow down the node groups to be retrieved.

[Format]

```
GET /nodegroups
```

[Query Parameter]

Parameter	Type	Description
type	integer	Narrowing down by Node Group Type

[Response Parameter]

Parameter	Type	Description
NodeGroups	array	Information of Node Group
NodeGroupId	integer	Node Group ID
Name	string	Node Group Name
ParentGroupId	integer	Parent Node Group Presently it is not supported.
Type	integer	Node Group Type - 0: Node Group Created by User - 1: ISMDefaultGroup - 2: ISMSharedGroup
Nodes	array	Node Information within a Node Group
NodeId	integer	Node ID
NodeGroups	array	Information of Node Group within a Node Group Only ISMDefaultGroup information is stored.
NodeGroupId	integer	Node Group ID
UpdateDate	string	Last Updated Time

4.3.23 Individual Retrieval of Node Group

[Overview]

Retrieves the information of the specified node groups.

[Format]

```
GET /nodegroups/{nodegroupid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
NodeGroup	object	Information of Node Group
NodeGroupId	integer	Node Group ID
Name	string	Node Group Name
ParentGroupId	integer	Parent Node Group Presently it is not supported.
Type	integer	Node Group Type - 0: Node Group Created by User - 1: ISMDefaultGroup

Parameter	Type	Description
		- 2: ISMSharedGroup
Nodes	array	Node Information within a Node Group
NodeId	integer	Node ID
NodeGroups	array	Information of Node Group within a Node Group Only ISMDefaultGroup information is stored.
NodeGroupId	integer	Node Group ID
UpdateDate	string	Last Updated Time

4.3.24 Updating of Node Groups

[Overview]

Updates the information of the specified node groups.

[Format]

```
PATCH /nodegroups/{nodegroupid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
NodeGroup	object	Information of Node Group
Name	string	Node Group Name Designate a unique name in the ISM.
ParentGroupId	integer	Parent Node Group Can be omitted Presently it is not supported.

[Response Parameter]

Parameter	Type	Description
NodeGroup	object	Information of Node Group
NodeGroupId	integer	Node Group ID
Name	string	Node Group Name
ParentGroupId	integer	Parent Node Group Presently it is not supported.
Type	integer	Node Group Type - 0: Node Group Created by User - 1: ISMDefaultGroup - 2: ISMSharedGroup
UpdateDate	string	Last Updated Time

[Precautions]

- Can only be executed by ISM administrators.
- Cannot specify the ISMDefaultGroup as well as the ISMSharedGroup.
- The following node names cannot be used as they are used with ISM.
  - A name starting with under bar "_."
  - ISMDefaultGroup
  - ISMSharedGroup

4.3.25 Deletion of Node Groups

[Overview]

Deletes a node group.

[Format]

```
DELETE /nodegroups/{nodegroupid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.
- Cannot specify the ISMDefaultGroup as well as the ISMSharedGroup.

4.3.26 Allocation of Nodes to Node Groups

[Overview]

Allocates the specified nodes to the specified node groups.

[Format]

```
POST /nodes/nodegroups/assign
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Nodes		array	Information on Allocation of Node Group for Nodes
	NodeId	integer	Node ID
	NodeGroupId	integer	Node Group ID

Parameter		Type	Description
			Cannot specify ISMSharedGroup.

[Response Parameter]

Parameter		Type	Description
Nodes		array	Information on Allocation of Node Group for Nodes
	NodeId	integer	Node ID
	NodeGroupId	integer	Node Group ID

[Precautions]

- Can only be executed by ISM administrators.
- Nodes in parent-child relation including ParentNodeId, ParentFabricId, ChildNodeList or linked nodes with Fabric should be configured to become the same node group.

4.3.27 Account Registration

[Overview]

Registers account information to a node.

Set up information for access to the node. For the required account information, refer to the manual.

[Format]

```
POST /nodes/{nodeid}/accounts
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Account		object	Account Information
	AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST)
	PortNum	integer	Port Number used Specify the Port number or null.

Parameter	Type	Description
		When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Key can be omitted. Presently it is not supported.
Ssh	string	Ssh Information Key can be omitted. Presently it is not supported.
SnmpV1	object	SnmpV1 Information Key can be omitted. It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information Key can be omitted. It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information Key can be omitted. It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv."

Parameter	Type	Description
		Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
ContextName	string	Context Name
EngineId	string	Engine ID

[Response Parameter]

Parameter	Type	Description
Account	object	Account Information
AccountId	integer	Account ID
NodeId	integer	Node ID
AccountType	string	Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST)
PortNum	integer	Port Number used
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.

Parameter	Type	Description
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
ContextName	string	Context Name
EngineId	string	Engine ID
UpdateDate	string	Last Updated Time

[Precautions]

- When a target node is PRIMERGY (except CX1430 M1), register both Ipmi and Https (Account Type) at the same time. Set the same user account name and the same account password for Ipmi and for Https.

4.3.28 List Retrieval for Accounts

[Overview]

Retrieves all the account information of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/accounts
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Accounts		array	Account Information
	AccountId	integer	Account ID
	NodeId	integer	Node ID
	AccountType	string	Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST).
	AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
	UpdateDate	string	Last Updated Time

4.3.29 Individual Retrieval of Account Information

[Overview]

Retrieves the account information of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/accounts/{accountid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Account		object	Account Information
	AccountId	integer	Account ID
	NodeId	integer	Node ID
	AccountType	string	Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication with SNMP v1.

Parameter	Type	Description
		- SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST).
PortNum	integer	Port Number used
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
ContextName	string	Context Name
EngineId	string	Engine ID
UpdateDate	string	Last Updated Time

4.3.30 Updating of Account Information

[Overview]

Updates the account information of the specified nodes.

[Format]

```
PATCH /nodes/{nodeid}/accounts/{accountid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Account	object	Account Information
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST).
PortNum	integer	Port Number used Specify the Port number or null. When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password When not updating, the key can be omitted. Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.

Parameter	Type	Description
NewPassword	string	New Account Password Specify the factory default password for PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, PRIMERGY 1WAY M6, or PRIMEQUEST 4000 series (iRMC) to be the new account password. If you have already changed the password, you do not need to specify it. Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is Https.
Property	object	Additional Information according to the Account Type When not updating, the key can be omitted.
Ipmi	string	Ipmi Information Key can be omitted. Presently it is not supported.
Ssh	string	Ssh Information Key can be omitted. Presently it is not supported.
SnmpV1	object	SnmpV1 Information Key can be omitted. It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information Key can be omitted. It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information Key can be omitted. It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv."

Parameter	Type	Description
		- DES: Encryption by DES - AES: Encryption by AES
PrivPassword	string	Privacy Password When not updating, the key can be omitted. Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
ContextName	string	Context Name
EngineId	string	Engine ID

[Response Parameter]

Parameter	Type	Description
Account	object	Account Information
AccountId	integer	Account ID
NodeId	integer	Node ID
AccountType	string	Account type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST)
PortNum	integer	Port Number used
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.

Parameter	Type	Description
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
ContextName	string	Context Name
EngineId	string	Engine ID
UpdateDate	string	Last Updated Time

[Precautions]

- When a target node is PRIMERGY (except CX1430 M1), register both Ipmi and Https (Account Type) at the same time. Set the same user account name and the same account password for Ipmi and for Https.

4.3.31 Deletion of Accounts

[Overview]

Deletes the account information of the specified nodes.

[Format]

```
DELETE /nodes/{nodeid}/accounts/{accountid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.3.32 Clearing Node Alarms

[Overview]

Clears the alarm of the specified node.

With the alarm cleared, the alarm status of the node returns to Normal.

[Format]

```
POST /nodes/{nodeid}/alarmstatus/deactivate
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- When a node has a subordinate node such as ChildNodeList or Fabric, it shows higher severity alarm status including such subordinate nodes. When the alarm status of a subordinate node is not Normal, its alarm status will not become Normal even after clearing the alarm. Execute alarm clearing of the subordinate nodes.

4.3.33 Changing from/to Maintenance Mode

[Overview]

Changes maintenance mode of a node.

A node with its maintenance mode in "Maintenance" cannot monitor, retrieve regular node information, and event notifications are not sent.

[Format]

```
PATCH /nodes/{nodeid}/maintenancemode
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Node	object	Node Information
MaintenanceMode	string	Maintenance Mode - Normal: Maintenance Mode Disabled - Maintenance: Maintenance Mode Enabled

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
MaintenanceMode	string	Maintenance Mode - Normal: Maintenance Mode Disabled

Parameter		Type	Description
			- Maintenance: Maintenance Mode Enabled

[Precautions]

- For the node type that can change the maintenance mode, refer to [Node Type] in "4.3.1 Node Registration."

4.3.34 List Retrieval for Node Tags

[Overview]

Retrieves the information of all node tags managed by the user group the user belongs to.

[Format]

```
GET /nodes/nodetags
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
NodeTagList		array	Node Tag Information
	NodeTag	string	Node Tag Name

4.3.35 Creating Node Registration Script Files for AIS Gateway

[Overview]

Creates a Node Registration Script file for AIS Gateway and returns a download URL.

Only for PRIMERGY (except CX1430 M1) servers that are managed by the user group that the user belongs to.

[Format]

```
POST /nodes/aisgateway/scripts/download
```

[Query Parameter]

Parameter		Type	Description
AisGateway		object	AIS Gateway Information
	ZipPassword	string	Zip Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method.

[Response Parameter]

Parameter		Type	Description
AisGateway		object	AIS Gateway Information
	DownloadUrl	string	Download URL
	IncompleteNodeCount	integer	Number of Node IDs that are commented out
	IncompleteNodeList	array (integer)	Node IDs that are commented out

[Precautions]

- Lines of nodes that do not have an IP address or nodes in which the serial number has not been retrieved are commented out.

4.3.36 Batch Update of Nodes

[Overview]

Updates the registration information for the specified multiple nodes in a batch.

[Format]

```
PATCH /nodes/nodes
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Nodes	array	Node Information
NodeId	integer	Node ID
Node	object	Node Information
Description	string	Description Key can be omitted.
Accounts	array	Account Information Set the information for access to the node.
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST)
PortNum	integer	Port Number used Specify the Port number or null. When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows.

Parameter	Type	Description
		Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.

Parameter	Type	Description
ContextName	string	Context Name
EngineId	string	Engine ID
SupportPeriod	object	Service Lifecycle
EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
Notification	integer	Advance notice of Service Lifecycle End Date Specify the number of days to be notified before the end date of service lifecycle.

[Response Parameter]

Parameter	Type	Description
Nodes	array	Node Information
NodeId	integer	Node ID
Description	string	Description
Accounts	array	Account Information
AccountId	integer	Account ID
AccountType	string	Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - Ssh-Privileged: Used in platform requiring elevated privileges after Ssh login. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST)
PortNum	integer	Port Number used
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.

Parameter	Type	Description
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
ContextName	string	Context Name
EngineId	string	Engine ID
SupportPeriod	object	Service Lifecycle
EndDate	string	Service Lifecycle End Date YYYY-MM-DD (Year-Month-Date)
Notification	integer	Advance notice of Service Lifecycle End Date Displays the number of days to be notified before the end date of service lifecycle.

4.3.37 Confirmation of Authentication of Manually Registered Nodes (ISM 3.0.0.010 and later)

[Overview]

Checks the authentication information of the nodes to be manually registered.

[Format]

```
POST /nodes/account/authentication/check
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Nodes	object	Node Information
Type	string	Node Type

Parameter	Type	Description
		Specify the same specification as for "4.3.1 Node Registration."
Model	String	Model Name Specify the same specification as for "4.3.1 Node Registration."
IpAddress	String	IP Address Specify the same specification as for "4.3.1 Node Registration."
IpVersion	string	IP Version of IP Address Specify the same specification as for "4.3.1 Node Registration."
Accounts	array	Account Information Specify the same specification as for "4.3.1 Node Registration."
AccountType	string	Account Type Specify the same specification as for "4.3.1 Node Registration."
PortNum	integer	Port Number used Specify the same specification as for "4.3.1 Node Registration."
AccountName	string	User Account Name Specify the same specification as for "4.3.1 Node Registration."
Password	string	Account Password Specify the same specification as for "4.3.1 Node Registration."
Property	object	Additional Information according to the Account Type Specify the same specification as for "4.3.1 Node Registration."
Ipmi	string	Ipmi Information Specify the same specification as for "4.3.1 Node Registration."
Ssh	string	Ssh Information Specify the same specification as for "4.3.1 Node Registration."
SnmpV1	object	SnmpV1 Information Specify the same specification as for "4.3.1 Node Registration."
CommunityName	string	Community Name Specify the same specification as for "4.3.1 Node Registration."
SnmpV2	object	SnmpV2 Information Specify the same specification as for "4.3.1 Node Registration."

Parameter	Type	Description
CommunityName	string	Community Name Specify the same specification as for "4.3.1 Node Registration."
SnmpV3	object	SnmpV3 Information Specify the same specification as for "4.3.1 Node Registration."
SecurityLevel	string	Security Level Specify the same specification as for "4.3.1 Node Registration."
AuthProtocol	string	Authentication Protocol Specify the same specification as for "4.3.1 Node Registration."
PrivProtocol	string	Privacy Protocol Specify the same specification as for "4.3.1 Node Registration."
PrivPassword	string	Privacy Password Specify the same specification as for "4.3.1 Node Registration."
ContextName	string	Context Name Specify the same specification as for "4.3.1 Node Registration."
EngineId	string	Engine ID Specify the same specification as for "4.3.1 Node Registration."

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
Type	string	Node Type
Model	string	Model Name
IpAddress	string	IP Address
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
Status	string	Status of specified authentication information - Success: specified authentication information is correct - Error: specified authentication information is invalid
NodeSubStatus	object	Details of the status
DnsLookUpResult	string	Name Resolution Result - Success: succeeded - Failure: failed

Parameter	Type	Description
		- NoNeed: Not a target (when an IP address is specified)
PingResult	string	Transmission Result - Success: succeeded - Failure: failure - Unexecuted: unexecuted - NoNeed: not a target
SnmpResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - AuthenticationFailed: Authentication failed *when you have specified SnmpV3 - CommunicationFailed: communication failed - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
IpmiResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - CommunicationFailed: communication failed - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
SshResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - CommunicationFailed: communication failed - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
HttpsResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - AuthenticationFailed: authentication failed - CommunicationFailed: communication failed - RedfishDisabled: Redfish disabled - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target

Parameter	Type	Description
HttpsStatusCode	string	HTTPS Status Code

[Precautions]

- Can only be executed by ISM administrators.

4.4 Node Discovery

4.4.1 Execution of Manual Node Discovery

[Overview]

Executes manual node discovery according to the set requirements.

[Format]

```
POST /nodes/discovery/manual
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ManualDiscoverySetting	object	Information on Setting of Manual Discovery
Ranges	array	Range of IP addresses of Targets for Discovering
IpAddressRange	string	IP Address Range or FQDN Name To specify an IP address range, refer to [Precautions].
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6 - FQDN: FQDN
Accounts	array	Account Information Set the information for access to the node.
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST).
PortNum	integer	Port Number used Specify the Port number or null.

Parameter	Type	Description
		When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
Property	object	Additional Information according to the Account Type
Ipmi	string	IPMI Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol

Parameter	Type	Description
		Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
ContextName	string	Context Name
EngineId	string	Engine ID

[Response Parameter]

Parameter	Type	Description
ManualDiscoveryId	integer	ID for Manual Node Discovery

[Precautions]

- Manual discovery of nodes is controlled by each session ID of the user. Discovery results can be retrieved only for requests with the same session IDs.

  How to specify a range of IP Address (examples)

  - For specifying a specific IP address

    "192.168.1.10"

  - For specifying a range

    Specify one of the following.

    "192.168.2.10-90": specified by linking the parts of the specified value in the 4th octet is linked with "-" (hyphen).

    "192.168.2.10-3.90": specified by linking the parts of the specified value in the 3rd and 4th octets are linked with "-" (hyphen).

4.4.2 Retrieving Results of Manual Node Discovery

[Overview]

Retrieves the manual discovery results of all nodes managed by the user group that the user belongs to.

[Format]

```
GET /nodes/discovery/manual
```

[Query Parameter]

Parameter	Type	Description
manualdiscoveryid	integer	Narrowing down by Node ID Manually Discovered

[Response Parameter]

Parameter	Type	Description
ManualDiscoveryList	array	Result of Manual Node Discovery

Parameter	Type	Description
ManualDiscoveryId	integer	ID for Manual Node Discovery
Status	string	Status of Discovery Process - Running: Execution in progress - Complete: Finished - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete
TotalIpAddressCount	integer	Number of IP Addresses of Targets for Discovering
CompletedIpAddressCount	integer	Number of IP Addresses of the Completed Discovery
ManualDiscoveredNodes	array	Manually Discovered Node
ManualNodeId	integer	ID of Manually Discovered Node
IpAddress	string	IP Address of Manually Discovered Node
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
NodeStatus	string	Status of Manually Discovered Node - Success: succeeded (supported) - Not supported: not supported - Error: failed to discover (Ping communication is successful. Failed to retrieve information.) - Only automatic registration: not handled by node registration (if fabric switch) - Registered: node is already registered in ISM
NodeSubStatus	object	Details of the discovered status
NodeId	integer	Registered Node ID
NodeName	string	Registered Node Name
DnsLookUpResult	string	Name Resolution Result - Success: succeeded - Failure: failed - NoNeed: not a target (when an IP address is specified)
PingResult	string	Transmission Result - Success: succeeded - Failure: failed - Unexecuted: unexecuted - NoNeed: not a target
SnmpResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - AuthenticationFailed: authentication failed *when you have specified SnmpV3

Parameter	Type	Description
		- CommunicationFailed: communication failed - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
IpmiResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - CommunicationFailed: communication failed - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
SshResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - CommunicationFailed: communication failed - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
HttpsResult	string	Transmission Result - Success: succeeded - PortClosed: port closed - AuthenticationFailed: authentication failed - CommunicationFailed: communication failed - RedfishDisabled: Redfish disabled - Unexecuted: unexecuted - NoAccount: no account - NoNeed: not a target
HttpsStatusCode	string	HTTPS Status Code
NodeType	string	Node Type For the information on node type, refer to [Node Type] in "4.3.1 Node Registration." For not supported or failed to discover, "other" is set.
Model	string	Model Name of a Device
SerialNumber	string	Serial Number of a Device
DomainName	string	FQDN Name of a Device The reversed FQDN name of the IP address discovered from DNS. If it could not be retrieved, null is set. If you specified an FQDN name in manual node discovery, the FQDN name that was specified is set.

Parameter	Type	Description
Chassis	object	Chassis Information PRIMERGY CX server only. For other models, null is set.
Model	string	Model Name of a Chassis
SerialNumber	string	Serial Number of a Chassis
SlotNum	integer	Slot Number in Chassis of a Discovered Device
Accounts	array	Information of Account that succeeded in connection Only account information displayed is registered as account information of a node at the time registration of manually discovered node.
AccountType	string	Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST).
AccountName	string	User Account Name Used when the account type is:. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
PortNum	integer	Port Number used
HasInputPassword	boolean	Status that the password is specified Displays the status that the password for the HTTPS account information is specified at the discovery of PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, PRIMERGY 1WAY M6, or PRIMEQUEST 4000 series. - True: Specified - False: Not specified
HasInputNewPassword	boolean	Status that the changed password is specified Displays the status that the changed password for the HTTPS account information is specified at the discovery of PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, PRIMERGY 1WAY M6, or PRIMEQUEST 4000 series. - True: Specified - False: Not specified
DiscoveredDate	string	Discovered Time
ManualDiscoveryType	string	Manual Discovery Type - Ranges: Discovery with the specified IP address ranges - Csv: Discovery with the specified CSV files
CsvFile	string	CSV File Name

Parameter	Type	Description
		Output when ManualDiscoveryType is "Csv."
ManualDiscoverySetting	object	Information on Setting of Manual Discovery Output when ManualDiscoveryType is "Ranges."
Ranges	array	Range of IP Addresses of Targets for Discovering
IpAddressRange	string	IP Address Range or FQDN Name
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6 - FQDN: FQDN
Accounts	array	Account Information
AccountType	string	Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST).
PortNum	integer	Port Number used
AccountName	string	User Account Name
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Nam
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv."

Parameter	Type	Description
		- MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
ContextName	string	Context Name
EngineId	string	Engine ID

[Precautions]

- Manual node discovery is controlled by each session ID of the user. Discovery results can be retrieved only for requests with the same session ID.
- Nodes whose IP addresses are already registered will not be discovered.

4.4.3 Registration of Manually Discovered Nodes

[Overview]

Registers a node for manually discovered nodes.

[Format]

```
POST /nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Node	object	Node Information
Name	string	Node Name
Type	string	Node Type For the information on node types that can be specified, refer to [Node Type] in "4.3.1 Node Registration." Specify the node type retrieved in the manual discovery result retrieval of nodes. When you want to change it, specify a node type to configure. It may not work normally unless specifying correctly.
Model	string	Model Name Specify the model name retrieved in the manual discovery result retrieval of nodes. When you want to change it, specify the name of model to configure. It may not work normally unless specifying a correct model name.
ModifyIpAddress	object	Device IP Address setting (change) Information Key can be omitted.

Parameter	Type	Description
		When the key is omitted, the setting of device is not executed. Refer to [Precautions].
IpModifyMode	string	IP Address Change Mode It works with NotModifyDevice when not specified. - ModifyDevice: Set (change) IP address of the device. - NotModifyDevice: Do not set the device.
IpAddress	string	IP Address to set for the Device Specify when IpModifyMode is ModifyDevice.
IpVersion	string	IP Version of IP Address to set for the Device Specify when IpModifyMode is ModifyDevice. Specify the same IP version as the discovered IP address. - V4: IPv4 - V6: IPv6
Subnet	string	Subnet of IP Address to set for the Device Specify when IpModifyMode is ModifyDevice. Specify IP address format when IP version is IPv4 and prefix format for IPv6. Example: For IPv4: "255.255.255.0" For IPv6: "64"
Gateway	string	Gateway to set for Device Specify when IpModifyMode is ModifyDevice.
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
Description	string	Description
NodeTagList	array	Node Tag Information Key can be omitted.
NodeTag	string	Node Tag Name
RackInfo	object	Information of Mounting Position in the Rack For PRIMERGY CX servers, it is registered as information on rack installation position of a chassis.
RackId	integer	Rack ID Mounted Specify a mounted Rack ID or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM.
Position	integer	Mounting Position (Unit Number) Specify the unit number at the bottom that a node possesses or null. - When not mounted in a rack

Parameter	Type	Description
		- When the rack in which the node is mounted is not registered in the ISM. When displaying on the GUI, refer to [Precautions].
OccupySize	integer	Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM.
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
Chassis	object	Chassis Information For PRIMERGY CX servers, nodes are registered if the chassis has not been registered. In case that the chassis has been registered, the chassis information is not updated.
Name	string	Node Name of a Chassis
WebUrl	string	Web URL to be used in main Chassis
Description	string	Description of a Chassis
Accounts	array	Account Information Set the information for access to the node.
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST).
PortNum	integer	Port Number used Specify the Port number or null.

Parameter	Type	Description
		When null is specified, sets the standard port number for the protocol.
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
NewPassword	string	Changed password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is Https.
Property	object	Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES

Parameter	Type	Description
		- AES: Encryption by AES
PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
ContextName	string	Context Name
EngineId	string	Engine ID

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
NodeId	integer	Node ID
Name	string	Node Name
Type	string	Node Type For the information on node type, refer to [Node Type] in "4.3.1 Node Registration."
Model	string	Model Name
IpAddress	string	IP Address
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
Description	string	Description
NodeTagList	array	Node Tag Information
NodeTag	string	Node Tag Name
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted
Position	integer	Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses.
OccupySize	integer	Number of Units Occupying Racks
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection

Parameter	Type	Description
		Presently it is not supported.
SlotNum	integer	Slot Number in Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically created. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
ParentFabricId	integer	Node ID of the Fabric Node it belongs to For the fabric switch, it is automatically configured at the time of retrieving node information by the fabric.
ChildNodeList	array	Child Node Information A node as a child node is stored.
NodeId	integer	Node ID of Child Node
Type	string	Node Type of Child Node
SlotNum	integer	Slot Number in Chassis
Fabric	array	Information of Switch Nodes Composing the Fabric
NodeId	integer	Node ID of Switch Node
Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
AlarmStatus	string	Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. - Error: Error - Warning: Warning - Info: Information - Normal: No notification Severity of Status: Normal < Info < Warning < Error
MaintenanceMode	string	Maintenance Mode - Normal: Regular Mode - Maintenance: Maintenance Mode
NodeGroupId	integer	Node Group ID
UniqInfo	string	Specific Information for Internal Control
UpdateDate	string	Last Updated Time

[Precautions]

- Manual node discovery is controlled by each session ID of the user. Manually discovered node can be registered only by the requests with the same session ID.
- IP address of a node is set up with detected values.
- Set the account information used in the discovery as account information of the node.
- When displaying on the GUI, the controls below are executed.
  - Information on the mounting position in a rack

    When the node type is facility, specify 101. Displayed as Rack CDU at the upper position of the rack.

    When the node type is pdu or intelligent-pdu and PDU mount type is 0U, specify 201-204. Displayed as 0U PDU beside the rack.
  - Number of units occupying racks in the information on the mounting position in a rack

    Displayed as nodes of height of 44.5 mm multiplied by the number of units occupying the rack.
- For IP address setting (change) of the device, refer to the following.
  - When the network setting of the device is DHCP setting, the fixed IP address specified is set. When the fixed IP address is already set, IP address cannot be changed.
  - Specify the same IP version as the discovered IP address.
  - The target models are as follows.
    - PRIMERGY server (except CX1430 M1)
    - PRIMEQUEST 3000B

4.4.4 Retrieving Results of Auto Discovery of Nodes

[Overview]

Retrieves all automatically discovered nodes.

[Format]

```
GET /nodes/discovery/auto
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
DiscoveredNodeList	array	Auto Discovery Result of Nodes
DiscoveredNodeId	integer	Automatically Discovered Node ID
DiscoveryType	string	Auto Discovery Type - Upnp: Auto Discovery by Upnp - Redfish: Auto Discovery by Redfish
Ipv4Address	string	Discovered IPv4 Address
Ipv6Address	string	Discovered IPv6 Address When DiscoveryType is Upnp/Redfish, IPv6 link local address is discovered. Node registration cannot be executed for IPv6 link local address.

Parameter		Type	Description
	NodeStatus	string	Auto Discovery Node Status - Success: succeeded (supported) - Not supported: not supported - Error: discovery failed
	NodeType	string	Node Type For the information on node type, refer to [Node Type] in "4.3.1 Node Registration." For not supported or failed to discover, "other" is set.
	Model	string	Model Name of a Device
	SerialNumber	string	Serial Number of a Device
	DomainName	string	FQDN Name of a Device The reversed FQDN name of the IP address discovered from DNS. If it could not be recovered, null is set.
	Chassis	object	Chassis Information PRIMERGY CX server only. For other models, null is set.
	Model	string	Model Name of a Chassis
	SerialNumber	string	Serial Number of a Chassis
	SlotNum	integer	Slot Number in Chassis of a Discovered Device
	DiscoveredDate	string	Discovered Time

[Precautions]

- Corresponding models of Auto Discovery are as follows.
  - Upnp: PSWITCH
  - Redfish: PRIMERGY server, PRIMEQUEST 3000B
- Devices already registered in ISM are not discovered.
- When notification is not received from the device for more than 30 minutes after the device is discovered, it will be deleted from the discovery results. Devices removed from the network will be deleted from the discovery results after 30 minutes.
- After connecting the device to the network, it takes time to display the Auto Discovery results for the time of periodic notification interval at a maximum.

4.4.5 Registration of Automatically Discovered Nodes

[Overview]

Registers a node for automatically discovered node.

[Format]

```
POST /nodes/discovery/auto/{discoverednodeid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Node	object	Node Information
Name	string	Node Name
Type	string	Node Type For the information on node types that can be specified, refer to [Node Type] in "4.3.1 Node Registration." Specify the node type retrieved in the Auto Discovery result retrieval of nodes. When you want to change it, specify a node type to configure. It may not work normally unless specifying correctly.
Model	string	Model Name Specify the model name retrieved in the Auto Discovery result retrieval of nodes. When you want to change it, specify the name of model to configure. It may not work normally unless specifying a correct model name.
IpVersion	string	IP Version of IP Address Specify the IP version to be registered in ISM.
ModifyIpAddress	object	Device IP Address setting (change) Information Key can be omitted. When the key is omitted, the setting of device is not executed. Refer to [Precautions].
IpModifyMode	string	IP Address change Mode It works with NotModifyDevice when not specified. - ModifyDevice: Set (change) IP address of the device - NotModifyDevice: Do not set the device
IpAddress	string	IP Address to set for the Device Specify when IpModifyMode is ModifyDevice.
IpVersion	string	IP Version of IP Address to set for the Device Specify when IpModifyMode is ModifyDevice. - V4: IPv4 - V6: IPv6
Subnet	string	Subnet of IP address to set for the Device Specify when IpModifyMode is ModifyDevice. Specify IP address format when IP version is IPv4 and prefix format for IPv6. Example: For IPv4: "255.255.255.0" For IPv6: "64"
Gateway	string	Gateway to set for Device Specify when IpModifyMode is ModifyDevice.
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
Description	string	Description

Parameter	Type	Description
NodeTagList	array	Node Tag Information Key can be omitted.
NodeTag	string	Node Tag Name
RackInfo	object	Information of Mounting Position in the Rack For PRIMERGY CX servers, it is registered as information on rack installation position of a chassis.
RackId	integer	Rack ID Mounted Specify a mounted Rack ID or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM.
Position	integer	Mounting Position (Unit Number) Specify the unit number at the bottom that a node possesses or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. When displaying on the GUI, refer to [Precautions].
OccupySize	integer	Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases. - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM.
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
Chassis	object	Chassis Information For PRIMERGY CX servers, nodes are registered if the chassis has not been registered. In case that the chassis has been registered, the chassis information is not updated.
Name	string	Node Name of a Chassis

Parameter	Type	Description
WebUrl	string	Web URL to be used in main Chassis
Description	string	Description of a Chassis
Accounts	array	Account Information Set the information for access to the node.
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication via SNMP v1. - SnmpV2: Used for communication via SNMP v2c. - SnmpV3: Used for communication via SNMP v3. - Https: Used for communication via HTTPS (REST).
PortNum	integer	Port Number used Specify the Port number or null. When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
NewPassword	string	New Account Password Specify the factory default password for PRIMERGY M7 series, PRIMERGY RX1440 M2, PRIMERGY RX2450 M2, PRIMERGY 1WAY M6 (iRMC) to be the new account password. If you have already changed the password, you do not need to specify it. Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is Https.
Property	object	Additional Information according to the Account Type

Parameter	Type	Description
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.
CommunityName	string	Community Name
SnmpV3	object	SnmpV3 Information It is used when an account type is SnmpV3.
SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
ContextName	string	Context Name
EngineId	string	Engine ID

[Response Parameter]

Parameter	Type	Description
Node	object	Node Information
NodeId	integer	Node ID
Name	string	Node Name

Parameter	Type	Description
Type	string	Node Type For the information on node types, refer to [Node Type] in "4.3.1 Node Registration."
Model	string	Model Name
IpAddress	string	IP Address
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
Description	string	Description
NodeTagList	array	Node Tag Information
NodeTag	string	Node Tag Name
RackInfo	object	Information of Mounting Position in the Rack
RackId	integer	Rack ID Mounted
Position	integer	Mounting Position (Unit Number) Specify unit number at the bottom that a node possesses.
OccupySize	integer	Number of Units Occupying Racks
MountType	string	PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack
PduPosition	string	Do not use it.
Outlet	array	Summary of PDU Connection Information Presently it is not supported.
PowerSocket	integer	Socket Number Presently it is not supported.
NodeId	integer	Node ID at the Destination of Connection Presently it is not supported.
SlotNum	integer	Slot Number in Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information.
ParentNodeId	integer	Node ID of Parent Node When retrieving node information, it is automatically created. For BX server blade and connection blade, it is set at the time of retrieving node information of BX chassis.
ParentFabricId	integer	Node ID of the Fabric Node it belongs to For the fabric switch, it is automatically configured at the time of retrieving node information by the fabric.
ChildNodeList	array	Child Node Information A node as a child node is stored.
NodeId	integer	Node ID of Child Node

Parameter	Type	Description
Type	string	Node Type of Child Node
SlotNum	integer	Slot Number in Chassis
Fabric	array	Information of Switch Nodes Composing the Fabric
NodeId	integer	Node ID of Switch Node
Status	string	Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During communication
AlarmStatus	string	Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. - Error: Error - Warning: Warning - Info: Information - Normal: No notification Severity of Status: Normal < Info < Warning < Error
MaintenanceMode	string	Maintenance Mode - Normal: Regular Mode - Maintenance: Maintenance Mode
NodeGroupId	integer	Node Group ID
UniqInfo	string	Specific Information for Internal Control
UpdateDate	string	Last Updated Time

[Precautions]

- When displaying on the GUI, the controls below are executed.
  - Information on the mounting position in a rack
    - When the node type is facility

      Only specify 101. Displayed as Rack CDU at the upper position of the rack.
    - When the node type is pdu or intelligent-pdu and PDU mount type is 0U

      Only specify 201-204. Displayed as 0U PDU beside the rack.
  - Number of units occupying racks in the information on the mounting position in a rack

    Displayed as nodes of height of 44.5 mm multiplied by the number of units occupying the rack.
- For IP address setting (change) of the device, refer to the following.
  - The devices cannot be managed by IPv6 link local address. If the discovered IP address is only IPv6 link local address, IP address setting (change) is required.

- PRIMERGY server/ PRIMEQUEST 3000B

  When the network setting of the device is DHCP setting, the fixed IP address specified is set. When the fixed IP address is already set, IP address cannot be changed. Set the correct IP address on the device and detect it.

- PSWITCH

  When the network setting of the device is fixed, the specified fixed IP address is set. For DHCP setting, IP address cannot be changed. Set the correct IP address on the device and detect it.

4.4.6 Execution of Manual Node Discovery by Specifying CSV

[Overview]

Executes manual node discovery with the information in the CSV file.

[Format]

```
POST /nodes/discovery/manual/csv
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
FilePath	string	File names including a folder path name in which the CSV file is stored.
PasswordMode	string	Encryption mode for the password Operates in encryption mode unless specified. - Encrypted: Encryption enabled - Unencrypted: No encryption
FileOption	string	File Options Files are not deleted unless specified. - Delete: Deletes files - NotDelete: Does not delete files

[Response Parameter]

Parameter	Type	Description
ManualDiscoveryId	integer	ID for Manual Node Discovery

[Precautions]

- Manual discovery of nodes by specifying CSV is controlled by each session ID of the user. Discovery results can be retrieved only for requests with the same session IDs.
- Specifying FilePath:

  When saving CSV files in the ISM via FTP forwarding, store the file in the file transfer area and specify the file name including the folder path name under the file transfer area.

  Example for specifying FilePath:

  File transfer area: ftp login route/<User Group Name>/ftp/

- When storing "manualCsv.csv" in the file transfer area: manualCsv.csv
- When creating a folder, (xxx) in the file transfer area and storing "manualCsv.csv" there: xxx/manualCsv.csv

- For the information entered in the CSV file, refer to "2.2.1.6 Discovery of nodes" in "User's Guide."

4.4.7 Retrieving Key Names and Alternatives for the Value of the Keys to be Entered in the CSV File

[Overview]

Outputs a list of key names and alternatives for the keys with alternatives to be entered in the CSV file.

[Format]

```
GET /nodes/discovery/manual/csvitems
```

[Query Parameter]

Parameter	Type	Description
AccountType	string	Account Type Specify when retrieving a key name for the specified account type. Retrieves a key name for all AccountType unless specified. - Ipmi: Specify when retrieving a key name required for IPMI communication. - Ssh: Specify when retrieving a key name required for SSH communication. - SnmpV1: Specify when retrieving a key name required for SNMP v1 communication. - SnmpV2: Specify when retrieving a key name required for SNMP v2c communication. - SnmpV3: Specify when retrieving a key name required for SNMP v3 communication. - Https: Specify when retrieving a key name required for HTTPS communication.

[Response Parameter]

Parameter	Type	Description
CsvItems	object	Information for the CSV file for Manual Discovery
KeyList	array(string)	Key List for the CSV file for Manual Discovery
ValueProperty	object	Information on the value of the keys
SnmpType	object	SnmpType Information
SelectionList	array(string)	Alternatives for the value of the keys (SnmpType) for the CSV file for Manual Discovery
V3SecLevel	object	Information of V3SecLevel
SelectionList	array(string)	Alternatives for the value of the keys (V3SecLevel) for the CSV file for Manual Discovery
V3AuthProtocol	object	Information of V3AuthProtocol

Parameter	Type	Description
SelectionList	array(string)	Alternatives for the value of the keys (V3AuthProtocol) for the CSV file for Manual Discovery
V3PrivProtocol	object	Information of V3PrivProtocol
SelectionList	array(string)	Alternatives for the value of the keys (V3PrivProtocol) for the CSV file for Manual Discovery

[Precautions]

- For the information entered in the CSV file, refer to "2.2.1.6 Discovery of nodes" in "User's Guide."

4.4.8 Canceling Manual Node Discovery

[Overview]

Cancels the process of manual node discovery.

[Format]

```
POST /nodes/discovery/manual/{manualdiscoveryid}/cancel
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- If the command is executed by a user without cancellation privileges or if a nonexistent ID for manual node discovery (manualdiscoveryid) is specified, it will result in an error.

4.4.9 Confirmation of Authentication of Automatically Discovered Nodes (ISM 3.0.0.010 or later)

[Overview]

Checks the authentication information of automatically discovered nodes.

[Format]

```
POST /nodes/discovery/auto/{autonodeid}/authentication/check
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Node	object	Node Information

Parameter	Type	Description
Accounts	array	Account Information Set the information for access to the node.
AccountType	string	Account Type Only relevant information for account type specified is used. - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication via Ssh. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST)
PortNum	integer	Port Number used Specify the port number or null. When null is specified, sets the standard port number for the protocol. - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443)
AccountName	string	User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https
Password	string	Account Password Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3 (only when the security level is "authPriv" or "authNoPriv"), Https For SnmpV3, the length of the string before encryption should be 8 characters at minimum.
Property	object	Property List Additional Information according to the Account Type
Ipmi	string	Ipmi Information Presently it is not supported.
Ssh	string	Ssh Information Presently it is not supported.
SnmpV1	object	SnmpV1 Information It is used when an account type is SnmpV1.
CommunityName	string	Community Name
SnmpV2	object	SnmpV2 Information It is used when an account type is SnmpV2.

Parameter					Type	Description
				CommunityName	string	Community Name
			SnmpV3		object	SnmpV3 Information It is used when an account type is SnmpV3.
				SecurityLevel	string	Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption
				AuthProtocol	string	Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA
				PrivProtocol	string	Privacy Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES
				PrivPassword	string	Privacy Password Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv." The length of the string before encryption should be 8 characters at minimum.
				ContextName	string	Context Name
				EngineId	string	Engine ID

[Response Parameter]

Refer the response parameter described in "4.3.37 Confirmation of Authentication of Manually Registered Nodes (ISM 3.0.0.010 and later)."

4.4.10 Confirmation of authentication of manually Discovered nodes. (ISM 3.0.0.010 or later)

[Overview]

Checks the authentication information of manually discovered nodes.

[Format]

```
POST /nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid}/authentication/check
```

[Query Parameter]

None

[Request Parameter]

Refer the request parameter described in "4.4.9 Confirmation of Authentication of Automatically Discovered Nodes (ISM 3.0.0.010 or later)."

[Response Parameter]

Refer the response parameter described in "4.3.37 Confirmation of Authentication of Manually Registered Nodes (ISM 3.0.0.010 and later)."

4.5 Node Operation

4.5.1 Instruction to Change Power Status

[Overview]

Instructs a change of the power status.

[Format]

```
PATCH /nodes/{nodeid}/power
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Parts		array	List of Power Sources
	Name	string	Name of Power Source Sets PowerManagement.
	PowerStatus	string	Status of Power Sources Configures operation to change a status. Sets a value for any of PowerOn, Reset or Shutdown. For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."

[Response Parameter]

Parameter		Type	Description
Parts		array	List of Power Sources
	Name	string	Name of Power Source Sets PowerManagement.
	PowerStatus	string	Status of Power Sources The value of either On, Off, Standby or Unknown is set. For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."

4.5.2 Retrieval of Node LED Information

[Overview]

Retrieves the LED information of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/led
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Parts		array	List of LEDs
	Name	string	LED Name The LED Name is set. For the LED name, there are Power LED Status, Global Error LED Status, CSS LED Status, and Identify LED Status.
	LedStatus	string	Status of LEDs The value of either On, Off, or Blinking is set.
	LedChoices	array(string)	Options for LED All choices that are operational are set. The choices are On, Off, and Blinking. It becomes an empty list ([ ]) when it is unable to operate.

4.5.3 Instruction to Change Node LED Status

[Overview]

Instructs a change of the status of the identification LED of the specified nodes.

[Format]

```
PATCH /nodes/{nodeid}/led
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Parts		array	List of LEDs
	Name	string	LED Name Sets up Identify LED Status.
	LedStatus	string	Status of LEDs Sets a status you want to change. Sets a value for any of On, Off or Blinking.

[Response Parameter]

Parameter		Type	Description
Parts		array	List of LEDs
	Name	string	LED Name Identify LED Status is set up.
	LedStatus	string	Status of LEDs Sets a status of LED. The value of either On, Off, or Blinking is set.

4.5.4 Output of Power Statuses

[Overview]

Retrieves power status information.

[Format]

```
GET /nodes/{nodeid}/power
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Parts		array	List of Power Sources
	Name	string	Name of Power Source Sets PowerManagement.
	PowerStatus	string	Status of Power Sources The value of either On, Off, Standby or Unknown is set. For details on the node power status, refer to [Response parameters] in "4.3.1 Node Registration."
	PowerChoices	array(string)	Choices of Power Sources All choices that are operational are set. The choices are PowerOn, Reset, and Shutdown. Operational choices other than PowerOn, Reset, and Shutdown are different according to the node. It becomes an empty list ([ ]) when it is unable to operate.

4.5.5 Retrieving iRMC Login Sessions

[Overview]

Retrieves the iRMC login session information and the URL to access for the specified nodes.

[Format]

```
POST /nodes/{nodeid}/irmcloginsession
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
IrmcLogin	object	iRMC Login Information
RoleId	string	Role ID - Administrator - Operator - ReadOnly When the key is omitted, ReadOnly is specified.
UseVideoRedirection	boolean	Specification of AVR use - true: use - false: do not use When the key is omitted, false is specified.
UseRemoteStorage	boolean	Specification of Remote Storage use - true: use - false: do not use When the key is omitted, false is specified.
RelayRouteId	integer	Relay Route Number Specifies the relay route number when accessing iRMC through ISM. When the key is omitted, the default is unspecified. Relay routes are configured in "4.18.25 Updating Relay Route Settings."

[Response Parameter]

Parameter	Type	Description
IrmcLogin	object	iRMC Login Information
X-Auth-Token	string	Token Key
Id	integer	Session ID
Url	string	URL to access

[Precautions]

- An error occurs if:
  - When the value of the user group setting parameter (IrmcLoginSessionEnable) is "Disable"
  - When UseVideoRedirection or UseRemoteStorage is true and RelayRouteId is specified
  - When the IP address set for the specified RelayRouteId is different from the IP address used by the client to communicate with ISM
- If you specify RelayRouteId, you must have already configured a relay route.
- If you specify RelayRouteId, the client certificate must already be imported into the client's browser.

4.6 Detailed Node Information Management

4.6.1 Instruction to Execute Retrieval of Node Information

[Overview]

Retrieves information from machines for the specified nodes.

When OS information is registered, it executes to retrieve information from the OS as well.

[Format]

```
POST /nodes/{nodeid}/inventory/refresh
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
RefreshDate	string	Execution time of instruction for retrieving node information

[Precautions]

- It takes time to retrieve node information. Outputs a message (10020303) in the Operation Log at completion. Check the Operation Log.
- If retrieving the node information failed, the error is output on the Operation Log.
- Progress of retrieval of information of the node can be confirmed by retrieving detailed node information.
- When giving execution instruction to retrieve node information during execution of retrieving node information, it will execute information retrieval after the previous node information retrieval is completed.
- When OS information is registered, retrieves information from the OS also. However, even if retrieving the OS information failed, the node information retrieval continues and it completes normally.
- If retrieving the OS information failed, the error is output on the Operation Log. Check the Operation Log.

4.6.2 List Retrieval for Detailed Node Information

[Overview]

Retrieves detailed information from the nodes managed by the user group that the user belongs to. Query parameters can be used to narrow down the contents to display.

[Format]

```
GET /nodes/inventory
```

[Query Parameter]

Parameter	Type	Description
level	string	Retrieving Process Level Specify if VariableData should be retrieved. Unless specified, it operates with Top.

Parameter	Type	Description
		- Top: No information on VariableData - All: VariableData available It is recommended to use it in combination with a query parameter "target."
target	string	Specifying Detailed Node Information Specify parameters in VariableData. Displays only specified information. Specify All for the retrieving process level. Example of specification: /nodes/inventory?level=All&target=Firmware -> Only Firmware will be displayed in VariableData.

[Response Parameter]

Parameter	Type	Description
Node	array	Detailed Node Information
NodeId	integer	Node ID
ProductName	string	Product Name
Manufacture	string	Vendor Name
SerialNumber	string	Serial Number
Name	string	System Name
MacAddress	string	MAC Address of a Node
Wwnn	string	WWNN
HardwareLogTarget	integer	Node Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable
SoftwareLogTarget	integer	OS Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable
ServerViewLogTarget	integer	ServerView Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable
RaidLogTarget	integer	RAID Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable
Progress	string	Progress of Node Information Retrieval - Updating: During retrieval. Displays the information retrieved last time.

Parameter	Type	Description
		- Complete: Retrieval finished. Displays the most up-to-dated information. - Error: Failed to retrieve information. Information will not be renewed.
VariableData	object	Detailed Information
Slot	string	Slot Number Displayed for PRIMERGY CX servers.
PartitionId	string	Number of Partitions Displayed for PRIMEQUEST partition/expansion partition.
ParentId	string	Number of Parent Partitions Displayed for PRIMEQUEST expansion partition.
PartitioningMode	string	Status of Partitions Displayed for PRIMEQUEST partition/expansion partition. - Enable: Partition is enabled. It is in a status of being able to use with startup of OS. - Disable: Partition is invalid. OS cannot be started.
Fans	array	FAN Information
Name	string	Name
Status	string	Status
Model	string	Model Name
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
ParentName	string	Installation Source Information
Psus	array	PSU Information
Name	string	Name
Status	string	Status
Model	string	Model Name
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
ParentName	string	Installation Source Information
Ports	array	Port Information
Name	string	Port Name
Number	string	Port Number
PortMacAddress	string	Port MAC Address When a virtual address is specified, the virtual address is displayed.
PortWWNN	string	WWNN When a virtual address is specified, the virtual address is displayed.
PortWWPN	string	WWPN

Parameter	Type	Description
		When a virtual address is specified, the virtual address is displayed.
ManufactureMacAddress	string	Physical Port MAC Address
ManufactureWWNN	string	Physical WWNN
ManufactureWWPN	string	Physical WWPN
Category	string	Port Category LAN/ FC/ FCoE/ iSCSI/ IB/ CNA/ Unknown
SubCategory	string	Port Sub-category
TechnologyType	string	Type of Port
InterfaceType	string	Type of Interface
InterfaceDirection	string	Switch Port Link Direction
LinkStatus	string	Status of Link
Speed	object	Communication Speed
Value	string	Value
Unit	string	Unit
Duplex	string	Duplex Unknown/ Half/ Full
VLans	array	VLAN Information
VLanId	integer	VLAN ID
Tag	string	tag: available/unavailable
Ctag	integer	CTag Information
Lldp	string	LLDP Settings Enable/ Disable
NeighborDevices	array	Information of the Destination of Connection
ChassisMacAddress	string	Chassis MAC Address at the Destination of Connection
PortName	string	Name of Port at the Destination of Connection
PortMacAddress	string	Port MAC Address at the Destination of Connection
PortWwpn	string	Port WWPN at the Destination of Connection
Wwnn	string	Port WWNN / Node WWNN at the Destination of Connection
IpAddress	object	IP Address Information
V4	string	IPv4 Address
V6	string	IPv6 Address
Location	object	Location Information
PciSlotId	string	Slot ID
PciVenderId	string	Vendor ID
PciDeviceId	string	Device ID
PciSubVendorId	string	Subvendor ID
PciSubSystemId	string	Subsystem ID
Component	object	Information of Configuration Unit Displays which component it exists on.

Parameter	Type	Description
Type	string	Type of Configuration Unit Example: "PCIe"
Name	string	Name of Configuration Unit Example: PCIe Name of PCIe
ParentName	string	Installation Source Information
DetectedOrder	integer	Detection Number Displayed for PRIMERGY servers.
ModuleType	string	Module Type Example: "Onboard"
PCIes	array	PCIe Information
PortMacAddress	string	Port MAC Address
PortWWPN	string	WWPN
Category	string	Port Category
Name	string	PCIe Name
Model	string	Model Name
Type	string	PCIe Type
SlotId	string	Slot Number of Card
BusNumber	integer	Bus Number of Card
DeviceNumber	integer	Device Number of Card
FunctionNumber	integer	Function Number of Card
Component	object	Information of Configuration Unit Displays which component it exists on.
Type	string	Type of Configuration Unit Example: MMB
Name	string	Name of Configuration Unit Example: MMB Name of MMB
Firmware	array	Firmware Information
PortMacAddress	string	Port MAC Address
PortWWPN	string	WWPN
Category	string	Port Category
Name	string	Firmware Name
SlotId	string	Slot ID
Model	string	Model Name
Type	string	Firmware Type
FirmwareVersion	string	Firmware Version Number
Slot	string	Slot Number
Segment	string	Segment
Bus	string	Bus Number
Device	string	Device Number

Parameter	Type	Description
Function	string	Function Number
Version	string	Version of iRMC Displayed for PRIMERGY servers.
ParentName	string	Installation Source Information
Unified	string	Unified Model
Downloaded	boolean	Download Status - False: Not Ready - True: Ready
SwitchConfigurations	array	Switch
Name	string	Name of Setting
Lag	array	Information of Link Aggregation (LAG)
LagName	string	LAG Name
LinkStatus	string	Status of LAG
LagMode	string	Operation Mode for LAG
LagType	string	LAG Classification
MlagId	string	MLAG ID
CFabricType	string	Type Information of C-Fabric
PortNames	array(string)	Port Number
Mlag	string	MLAG Settings Enable/ Disable
Mlags	array	MLAG Information
Domain	string	MLAG Domain
MlagId	string	MLAG ID
MlagStatus	string	MLAG Status
PeerLinks	array(string)	MLAG Peer Link Port
NeighborDevice	object	Device Information of Other Party
MlagId	string	MLAG ID of Other Party
MlagStatus	string	MLAG Status of Other Party
MacAddress	string	MAC Address of Other Party
PeerLinks	array(string)	MLAG Peer Link Port of Other Party
FcoeMode	string	FCoE Usage Possibility Information
Fcoes	array	FCoE Information
FcoeName	string	FCoE Name
Mode	string	FCoE Mode
LinkStatus	string	FCoE Status
VtepMode	string	Information to determine if Vtep should be used
Vteps	array	Vtep Information
VxlanId	string	VXLAN Interface Name
IpAddress	string	IP Address

Parameter	Type	Description
UdpPort	string	UDP Port Number
BumTraffic	string	Method of BUM Traffic Transfer
MalticastGroup	string	Multi-cast Group
PinGroups	array	PinGroup Information
PinGroupName	string	PinGroup Name
PortList	array	PinGroup Configuration Port List
PortName	string	Port Name
MemoryModules	array	Memory Information
Name	string	Name
Status	string	Status
Model	string	Model Name
Manufacture	string	Vendor Name
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
Frequency	string	Frequency
MemorySize	string	Size
Slot	string	Slot ID
ParentName	string	Installation Source Information
Cpus	array	CPU Information
Name	string	Name
Status	string	Status
Model	string	Model Name
CpuId	string	ID of CPU
Slot	string	Slot ID
Power	string	Power Supply
Core	string	Cores
CoreSpeed	string	Speed of CPU
ConnectSpeed	string	Bus Connection Speed
CacheL1	string	Cache Size 1
CacheL2	string	Cache Size 2
CacheL3	string	Cache Size 3
ParentName	string	Installation Source Information
Disks	array	Disk Information
Status	string	Status
Position	string	Location of Disk
Type	string	Disk Type
Manufacture	string	Vendor Name
Model	string	Model
Health	string	Life Information

Parameter	Type	Description
Drive	string	Drive Name
OwnerNodeName	string	Controller Name
StatusIndicator	string	Status Value
Location	array	Location of Disk
Info	string	Disk Location Information
InfoFormat	string	Format of Disk Location Information
EnclosureNumber	integer	Enclosure Number
EnclosureSlotNumber	integer	Slot Number of Enclosure
Name	string	Disk Name
DiskSize	string	Capacity
DiskSizeUnit	string	Unit of Capacity
MediaType	string	Disk Type
SerialNumber	string	Serial Number
HotspareType	string	Hotspare Type
EncryptionAbility	string	Encryption Function
EncryptionStatus	string	Encryption Status
RotationSpeed	string	Rotation Speed
RotationSpeedUnit	string	Unit of Rotation Speed
BlockSize	string	Block Size
BlockSizeUnit	string	Unit of Block Size
CapableSpeed	string	Maximum Speed
CapableSpeedUnit	string	Unit of Maximum Speed
NegotiatedSpeed	string	Current Usage Speed
NegotiatedSpeedUnit	string	Unit of Current Usage Speed
Controller	object	Information of Controller Card
SlotId	string	PCI Slot Number
BusNumber	integer	Bus Number
SerialNumber	string	Serial Number
Volume	array	Information of Volume
Number	string	Volume Number
Status	string	Status
Type	string	Type of Volume
Capacity	string	Capacity
CapacityUnit	string	Unit of Capacity
VolumeDiskNames	array(string)	Disk Name in the Volume
SizeUsed	string	Capacity Used
Name	string	Volume Name
Aggregate	string	Aggregate Name
Aggregate	array	Aggregate Information

Parameter	Type	Description
Name	string	Aggregate Name
RaidLevel	string	Raid Level
Status	string	Status
PowerStatus	string	Power Status
SizeUsed	string	Capacity Used
SizeAvail	string	Empty Capacity
Size	string	Volume
OwnerNodeName	string	Controller Name
Raid	array	RAID Information
Number	string	RAID Number
Name	string	RAID Name
Status	string	Status
Level	string	RAID Level
Capacity	string	RAID Capacity
TotalCapacity	integer	RAID Capacity
TotalCapacityUnit	string	Unit of RAID Capacity
FreeCapacity	integer	RAID Empty Capacity
FreeCapacityUnit	string	Unit of RAID Empty Capacity
Disks	integer	Number of RAID Disks
VolumeDiskNames	array(string)	Disk Name in the Volume
MMBs	array	MMB Information
Name	string	MMB Name
Role	string	Status Active/ Standby
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
FirmwareVersion	string	Integrated Firmware Version Number
MmbFirmwareVersion	string	MMB Firmware Version Number
ProductName	string	MMB Product Name
ParentName	string	Installation Source Information
SBs	array	SB Information
Name	string	SB Name
Home	string	Home Settings
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
FirmwareVersion	string	Firmware Version Number of SB
BmcFirmwareVersion	string	Firmware Version Number of BMC
BiosFirmwareVersion	string	Firmware Version Number of BIOS
IOUs	array	IOU Information

Parameter	Type	Description
Name	string	IOU Name
Type	string	IOU Type
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
PCI_Boxes	array	PCI_Box Information
Name	string	PCI_Box Name
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
Components	array	Information of Configuration Unit Displays which component it exists on.
LogicalComponent	string	Logical Number
Type	string	Type of Configuration Unit Example: IOU
Name	string	Name of Configuration Unit Example: IOU Name of IOU
DUs	array	DU Information
Name	string	DU Name
PartNumber	string	Parts Number
SerialNumber	string	Serial Number
Component	object	Component
Type	string	Type of Configuration Unit
Name	string	Name of Configuration Unit
FabricInformation	object	Fabric Information Displayed for fabric node
FabricId	string	Fabric ID
VcsConfigMode	string	VCS Settings Mode
VcsMode	string	VCS Mode
VcsGuid	string	VCS GUID
CfabDomainList	array	Domain Information of C-Fabric
DomainType	string	Domain Type
DomainId	integer	Domain ID
Ipv4Address	string	IPv4 Address
Ipv6Address	string	IPv6 Address
FabricSwitchInformation	array	Fabric Switch Information
NodeId	integer	Node ID
Model	string	Model Name
UniqInfo	string	Specific Internal Information
DomainId	integer	Domain ID
SwitchId	integer	Switch ID

Parameter	Type	Description
SwitchPriority	string	VCS Principal Switch null/ Principal
FirmwareVersion	string	Firmware Version Number
SwitchRole	string	C-Fabric Switch Role master/ slave/ unknown
MacAddress	string	MAC Address
FirmwareUpdateMode	string	Update Firmware Mode
PortInformation	array	Port Information
PortName	string	Port Name
PortNumber	string	Port Number
Catergory	string	Port Category
SubCategory	string	Port Subcategory
TechnologyType	string	Type of Port
InterfaceType	string	Type of Interface
LinkStatus	string	Status of Link
Speed	object	Communication Speed
Value	string	Value
Unit	string	Unit
NeighborDevices	array	Information of the Destination of Connection
ChassisMacAddress	string	Chassis MAC Address at the Destination of Connection
PortName	string	Name of Port at the Destination of Connection
PortMacAddress	string	Port MAC Address at the Destination of Connection
FabricInternalInformation	object	Inner-fabric Information Displayed for fabric switch
FabricId	integer	Fabric ID
DomainId	integer	Domain ID
SwitchId	integer	Switch ID
SwitchPriority	string	VCS Principal Switch null/ Principal
SwitchRole	string	C-Fabric Switch Role master/ slave/ unknown
PortInformation	array	Port Information
PortName	string	Port Name
NeighborDevices	array	Information of the Destination of Connection
ChassisMacAddress	string	Chassis MAC Address at the Destination of Connection
PortName	string	Name of Port at the Destination of Connection
PortMacAddress	string	Port MAC Address at the Destination of Connection
VfabInformation	array	VFAB Information

Parameter	Type	Description
VfabId	string	VFAB ID
VfabStatus	string	VFAB Operation Status
VfabMode	string	VFAB Mode
EndPointPortInformation	array	End Point Port Information
IfGroupId	integer	Interface Group ID
VlanInformation	array	VLAN Information
VlanId	integer	VLAN ID
VlanType	string	VLAN Type
CirPortInformation	array	CIR Port Information
IfGroupId	integer	Interface Group ID
VlanInformation	array	VLAN Information
VlanId	integer	VLAN ID
VlanType	string	VLAN Type
TranslateVlanId	integer	Translate VLAN
AmppAreaInformation	array	AMPP Area Information
IfGroupId	integer	Interface Group ID
InterfaceGroupInformation	array	Interface Group Information
IfGroupId	integer	Interface Group ID
PortInformation	array	Port information belonging to the interface group
PortName	string	Port Name
LagInformation	array	LAG information belonging to the interface group
LagName	string	LAG Name
ControllerList	array	Controller Information Displayed for NetApp storage.
Name	string	Controller Name
Ipv4Address	string	IPv4 Address
Ipv6Address	string	IPv6 Address
Model	string	Model Name
Manufacture	string	Vendor Name
SerialNumber	string	Serial Number
NodeVersion	string	Version Number of OS for a Controller
Partner	string	Information of Partners
Uuid	string	UUID
PortList	array	Port Information of Controller
PortName	string	Port Name
DiskShelfList	array	Information of Internal Disk Shelves Displayed for NetApp storage.
Name	string	Disk Shelf Name
ProductName	string	Model Name

Parameter	Type	Description
Manufacture	string	Vendor Name
SerialNumber	string	Serial Number
ModuleType	string	Module Type
ShelfId	string	Shelf ID
StackId	string	Stack ID
NodeName	string	Connection Controller Name
ConnectionBladeList	array	Connection Blade Information
Name	string	Connection Blade Name
ProductName	string	Product Name
Manufacture	string	Vendor Name
SerialNumber	string	Serial Number
SlotNumber	string	Slot Number
EkeyStatusPortOverview	string	EkeyStatusPort Information
NodeConfiguration	object	Node Settings
SnmpV3EngineID	string	SnmpV3 Engine ID Information
HardwareLogTarget	integer	Node Log Collection Availability Information
IpmiOverLan	boolean	IPMI Enabled/Disabled - False: IPMI disabled - True: IPMI enabled
ElcmStatus	object	eLCM Status
EnabledAndLicenced	boolean	Availability or unavailability of license registration - False: Not registered - True: Registered
SDCardMounted	boolean	Availability or unavailability of SD card mounted - False: Not mounted - True: Mounted
EimVersion	string	Version of eIM
SupportedOsList	array	List of Supported OS
OsType	string	OS Type
ElcmOfflineLastSuccessful UpdateCheckDate	string	Date and time of image creation for eLCM OfflineUpdate
Enclosures	array	Enclosure Information
ProductName	string	Product Name
Manufacture	string	Vendor Name
SerialNumber	string	Serial Number
Name	string	System Name
MacAddress	string	MAC Address
UniqInfo	string	Identification Information
EnclosureNumber	integer	Enclosure Number

Parameter	Type	Description
ChassisType	string	Chassis Type
Overview	object	System Overview for iRMC (ISM 3.0.0.010 or later)
SystemInformation	object	System Information
ProductName	string	Model Name
SerialNumber	string	Serial Number
PartNumber	string	Parts Number
Uuid	string	System GUID
BiosVersion	string	BIOS Version
ChassisType	string	Chassis Type
AssetTag	string	Asset Tag
OsInformation	object	Operating System (OS) Information
OperatingSystem	string	OS Type
OperatingSystemVersion	string	OS Version
SystemName	string	Host Name
SystemIps	array(string)	Host IP Address
Description	string	System Information
Location	string	System Location
Contact	string	System Administrator
SystemUpTimeMin	string	OS Up Time (Minutes)
ManagementSoftware	string	Management Software
UpdateDate	string	Last Updated Time
InventoryScheduleTime	string	Scheduled Time for Retrieval of Node Information Displays the time in UTC.

4.6.3 Individual Retrieval of Detailed Node Information

[Overview]

Retrieves detailed information of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/inventory
```

[Query Parameter]

Parameter	Type	Description
level	string	Retrieving Process Level Specify if VariableData should be retrieved. Unless specified, it operates by All. - Top: No information on VariableData - All: VariableData available
target	string	Specifying Detailed Node Information

Parameter	Type	Description
		Specify parameters in VariableData. Displays only specified information. Specify All for the retrieving process level. Example of specification: /nodes/{nodeid}/inventory?level=All&target=Firmware -> Only Firmware will be displayed in VariableData.

[Response Parameter]

Refer to response parameters of "4.6.2 List Retrieval for Detailed Node Information."

4.6.4 Registration of OS Information

[Overview]

Registers the OS information on the specified nodes.

[Format]

```
POST /nodes/{nodeid}/os
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Host	object	OS Information
OsType	string	OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - AzureStackHCI: Azure Stack HCI - VMware: VMware ESXi - IPCOM OS: IPCOM OS
OsVersion	string	OS Version Number - RedHat: 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 6.10/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4/ 7.5/ 7.6/ 7.7/ 7.8/ 7.9/ 8.0/ 8.1/ 8.2/ 8.3/ 8.4/ 8.5/ 8.6/ 8.7/ 8.8/ 8.9/ 8.10/ 9.0/ 9.1/ 9.2/ 9.3/ 9.4 - RedHat: 9.5 (ISM 3.0.0.010 or later) - SUSELinuxEnterprise: 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3/ 12SP4/ 12SP5/ 15/ 15SP1/ 15SP2/ 15SP3/ 15SP4/ 15SP5/ 15SP6 - Windows: 2012/ 2012R2/ 2016/ 2019/ 2022/ 2025 - AzureStackHCI: Auto - VMware: Auto/ 6.0/ 6.5/ 6.7/ 7.0/ 8.0 - IPCOM OS: 1.x

Parameter		Type	Description
	OsIpAddress	string	OS IP Address
	OsIpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
	OsDomain	string	Domain Name Specify a name of FQDN for a realm. Example: ISMDOMAIN.LOCAL
	OsAccount	string	Account Name Specify a account name excluding a realm. Example: ismadmin
	OsPassword	string	Password Encrypt the password with a method described in "2.4 Encryption."
	OsPortNum	integer	Port Number used Specify the Port number or null. When null is specified, sets the standard port number for the protocol. Connecting protocols for respective OS are as follows: - RedHat, SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) - Windows, AzureStackHCI: WinRM (No. 5986) - VMware: CIM (No. 443)
	OsInfoCollectionEnabled	boolean	Enable/disable periodic OS information collection

[Response Parameter]

Parameter		Type	Description
Host		object	OS Information
	NodeId	integer	Node ID
	OsType	string	OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - AzureStackHCI: Azure Stack HCI - VMware: VMware ESXi - IPCOM OS: IPCOM OS
	OsVersion	string	OS Version Number specified by the user
	RefOsMajorVersion	string	Major Version Number obtained from OS
	RefOsMinorVersion	string	Minor Version Number obtained from OS
	OsIpAddress	string	OS IP Address

Parameter	Type	Description
OsIpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
OsDomain	string	Domain Name
OsAccount	string	Account Name
OsPortNum	integer	Port Number used
OsInfoCollectionEnabled	boolean	Enable/disable periodic OS information collection
HostName	string	Host Name Automatically set after retrieving the node information.
MemorySize	string	Memory Capacity as recognized by OS Automatically set after retrieving the node information.
MemorySizeUnit	string	Unit of Memory Capacity as recognized by OS B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
IpAddress	array	IP Address Information Automatically set after retrieving the node information.
DeviceName	string	Port Device Name Automatically set after retrieving the node information.
MacAddress	string	Port MAC Address Automatically set after retrieving the node information.
V4	string	IP Address for IPv4 Automatically set after retrieving the node information.
V4SubMask	string	Subnet Mask for IPv4 Automatically set after retrieving the node information.
V6	string	IP Address for IPv6 Automatically set after retrieving the node information.
V6SubMask	string	Subnet Mask for IPv6 Automatically set after retrieving the node information.
DiskUnits	array	Disk Information Automatically set after retrieving the node information.
MountPosition	string	Volume Name Automatically set after retrieving the node information.
UseSize	string	Volume in Use Automatically set after retrieving the node information.
UseSizeUnit	string	Unit of Volume in Use B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
VolumeSize	string	Capacity of Volume Automatically set after retrieving the node information.

Parameter	Type	Description
VolumeSizeUnit	string	Capacity unit of volume created in OS B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
CmsId	integer	Cloud Management Software ID managed by the OS
UpdateDate	string	Last Updated Time
OsRefreshDate (ISM 3.0.0.010 or later)	string	Retrieval Time/Date of OS Information

[Precautions]

- After registration of the OS information, execute instruction for node information retrieval.
- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

4.6.5 List Retrieval for OSes

[Overview]

Retrieves the OS information of all nodes managed by the user group that the user belongs to.

[Format]

```
GET /nodes/os
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Hosts	array	OS Information
NodeId	integer	Node ID
OsType	string	OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - AzureStackHCI: Azure Stack HCI - VMware: VMware ESXi - IPCOM OS: IPCOM OS
OsVersion	string	OS Version Number specified by the user
RefOsMajorVersion	string	Major Version Number obtained from OS

Parameter		Type	Description
	RefOsMinorVersion	string	Minor Version Number obtained from OS
	OsIpAddress	string	OS IP Address
	OsIpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
	OsDomain	string	Domain Name
	OsAccount	string	Account Name
	OsPortNum	integer	Port Number used
	OsInfoCollectionEnabled	boolean	Enable/disable periodic OS information collection
	HostName	string	Host Name Automatically set after retrieving the node information.
	CmsId	integer	Cloud Management Software ID managed by the OS
	UpdateDate	string	Last Updated Time
	OsRefreshDate (ISM 3.0.0.010 or later)	string	Retrieval Time/Date of OS Information

4.6.6 Individual Retrieval of OS

[Overview]

Retrieves the OS information of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/os
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Host		object	OS Information
	NodeId	integer	Node ID
	OsType	string	OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - AzureStackHCI: Azure Stack HCI - VMware: VMware ESXi - IPCOM OS: IPCOM OS
	OsVersion	string	OS Version Number specified by the user
	RefOsMajorVersion	string	Major Version Number obtained from OS
	RefOsMinorVersion	string	Minor Version Number obtained from OS

Parameter	Type	Description
OsIpAddress	string	OS IP Address
OsIpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
OsDomain	string	Domain Name
OsAccount	string	Account Name
OsPortNum	integer	Port Number used
OsInfoCollectionEnabled	boolean	Enable/disable periodic OS information collection
HostName	string	Host Name Automatically set after retrieving the node information.
MemorySize	string	Memory Capacity as recognized by OS Automatically set after retrieving the node information.
MemorySizeUnit	string	Unit of Memory Capacity as recognized by OS B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
IpAddress	array	IP Address Information Automatically set after retrieving the node information.
DeviceName	string	Port Device Name Automatically set after retrieving the node information.
MacAddress	string	Port MAC Address Automatically set after retrieving the node information.
V4	string	IP Address for IPv4 Automatically set after retrieving the node information.
V4SubMask	string	Subnet Mask for IPv4 Automatically set after retrieving the node information.
V6	string	IP Address for IPv6 Automatically set after retrieving the node information.
V6SubMask	string	Subnet Mask for IPv6 Automatically set after retrieving the node information.
DiskUnits	array	Information of Disk Automatically set after retrieving the node information.
MountPosition	string	Volume Name Automatically set after retrieving the node information.
UseSize	string	Volume in Use Automatically set after retrieving the node information.
UseSizeUnit	string	Unit of Volume in Use B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
VolumeSize	string	Capacity of Volume

Parameter	Type	Description
		Automatically set after retrieving the node information.
VolumeSizeUnit	string	Capacity Unit of Volume created in OS B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
CmsId	integer	Cloud management software ID managed by the OS
UpdateDate	string	Last Updated Time
OsRefreshDate (ISM 3.0.0.010 or later)	string	Retrieval Time/Date of OS Information

4.6.7 Updating of OS Information

[Overview]

Updates the OS information of the specified nodes.

To update OS information for multiple nodes at once, refer to "4.6.17 Batch Updating of OS Information."

[Format]

```
PATCH /nodes/{nodeid}/os
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Host	object	OS Information
OsType	string	OS Type For details on the OS types, refer to "4.6.4 Registration of OS Information."
OsVersion	string	OS Version Number For details on the OS versions, refer to "4.6.4 Registration of OS Information."
OsIpAddress	string	OS IP Address
OsIpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
OsDomain	string	Domain Name Specify a name of FQDN for a realm. Example: ISMDOMAIN.LOCAL
OsAccount	string	Account Name Specify a account name excluding a realm. Example: ismadmin
OsPassword	string	Password

Parameter	Type	Description
		Encrypt the password with a method described in "2.4 Encryption." Omit the key unless updating.
OsPortNum	integer	Port Number used Specify the port number or null. When null is specified, sets the standard port number for the protocol. Connecting protocols for respective OS are as follows: - RedHat, SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) - Windows, AzureStackHCI: WinRM (No. 5986) - VMware: CIM (No. 443)
OsInfoCollectionEnabled	boolean	Enable/disable periodic OS information collection

[Response Parameter]

Parameter	Type	Description
Host	object	OS Information
NodeId	integer	Node ID
OsType	string	OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - AzureStackHCI: Azure Stack HCI - VMware: VMware ESXi - IPCOM OS: IPCOM OS
OsVersion	string	OS Version Number specified by the user
RefOsMajorVersion	string	Major Version Number obtained from OS
RefOsMinorVersion	string	Minor Version Number obtained from OS
OsIpAddress	string	OS IP Address
OsIpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
OsDomain	string	Domain Name
OsAccount	string	Account Name
OsPortNum	integer	Port Number used
OsInfoCollectionEnabled	boolean	Enable/disable periodic OS information collection
HostName	string	Host Name Automatically set after retrieving the node information.
MemorySize	string	Memory Capacity as recognized by OS

Parameter		Type	Description
			Automatically set after retrieving the node information.
MemorySizeUnit		string	Unit of Memory Capacity as recognized by OS B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
IpAddress		array	IP Address Information Automatically set after retrieving the node information.
	DeviceName	string	Port Device Name Automatically set after retrieving the node information.
	MacAddress	string	Port MAC Address Automatically set after retrieving the node information.
	V4	string	IP Address for IPv4 Automatically set after retrieving the node information.
	V4SubMask	string	Subnet Mask for IPv4 Automatically set after retrieving the node information.
	V6	string	IP Address for IPv6 Automatically set after retrieving the node information.
	V6SubMask	string	Subnet Mask for IPv6 Automatically set after retrieving the node information.
DiskUnits		array	Disk Information Automatically set after retrieving the node information.
	MountPosition	string	Volume Name Automatically set after retrieving the node information.
	UseSize	string	Volume in Use Automatically set after retrieving the node information.
	UseSizeUnit	string	Unit of Volume in Use B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
	VolumeSize	string	Capacity of Volume Automatically set after retrieving the node information.
	VolumeSizeUnit	string	Capacity Unit of Volume created in OS B/ KB/ MB/ GB/ TB Automatically set after retrieving the node information.
CmsId		integer	Cloud management software ID managed by the OS
UpdateDate		string	Last Updated Time
OsRefreshDate (ISM 3.0.0.010 or later)		string	Retrieval Time/Date of OS Information

[Precautions]

- After updating of the OS information, execute instruction for node information retrieval.

- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

4.6.8 Deletion of OS Information

[Overview]

Deletes the OS information of the specified nodes.

[Format]

```
DELETE /nodes/{nodeid}/os
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.6.9 Instruction to Execute Retrieval of Virtualization Information

[Overview]

Retrieves information from the cloud management software managed by the user group that the user belongs to.

[Format]

```
POST /resources/inventory/refresh
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
CmsIds	array (integer)	ID of cloud management software Specify this when limiting cloud management software at a destination of retrieval. Retrieves information from all of Cloud Management Software managed by a user group to which users belong, unless specified.

[Response Parameter]

Parameter	Type	Description
RefreshDate	string	Execution time of instruction to retrieve virtual information

[Precautions]

- It takes time to retrieve the virtual information. It outputs a message (10021503) in the Operation Log at completion. Check the Operation Log.
- If there is any cloud management software that failed in retrieving virtual information, an error message will be displayed on the Operation Log.

4.6.10 List Retrieval for Virtual Machines

[Overview]

Retrieves all the virtual machines on the OS of the nodes managed by the user group that the users belongs to.

Query parameters can be used to narrow down the contents to display.

[Format]

```
GET /resources/virtualmachines
```

[Query Parameter]

Parameter	Type	Description
nodeid	integer	Narrowing down by Node ID

[Response Parameter]

Parameter	Type	Description
VirtualMachines	array	Virtual Machine Information
VirtualMachineId	integer	Virtual Machine ID
NodeId	integer	Node ID
CmsId	integer	ID of cloud management software
CmsType	string	Type of cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - OpenStack: OpenStack
CmsVersion	string	Version Number of cloud management software
OperatingSystem	string	OS Information of Virtual Machine
VirtualMachineInstanceId	string	Identification ID of Virtual Machine Displays IDs numbered by cloud management software
VirtualMachineName	string	Virtual Machine Name
VirtualMachinePowerStatus	string	Startup Status of Virtual Machine - ON: Startup status

Parameter	Type	Description
		- OFF: Other than startup status
VirtualCpuCoreNum	integer	The number of virtual CPU cores
VirtualMachineMemoryMax	integer	Setting of Maximum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both.
VirtualMachineMemoryMaxUnit	string	Unit of Maximum Value of Memory Capacity B/ KB/ MB/ GB/ TB
VirtualMachineMemoryMin	integer	Setting of Minimum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both.
VirtualMachineMemoryMinUnit	string	Unit of Minimum Value of Memory Capacity B/ KB/ MB/ GB/ TB
VirtualDiskTotal	integer	Disk Storage Capacity Displays a total value when allocating several disks
VirtualDiskTotalUnit	string	Unit of Disk Storage Capacity B/ KB/ MB/ GB/ TB
VirtualMachineOptionVCenter	object	Additional Information for vCenter
ManagementObjectId	string	ID specified to each ManagementObjectReference
VirtualAdapterInformation	array	Virtual Adapter Information
VirtualAdapterName	string	Virtual Adapter Name
VirtualAdapterNumber	string	Virtual Adapter Number
MacAddress	string	MAC Address
VlanInformation	array	VLAN Information
VlanId	string	VLAN ID For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-). Example: "1-10,21,22,30-45"
VlanType	string	VLAN Type VLAN/ Trunk/ Private-Primary
RemoteVirtualSwitchInformation	object	Information of Virtual Switch at the Destination of Connection Displayed when a virtual adapter is connected with a virtual switch.
SwitchType	string	Virtual Switch Type at the Destination of Connection Standard/ Distributed
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualSwitchPortName	string	Virtual Switch Port Name at the Destination of Connection
RemoteVirtualRouterInformation	object	Information of Virtual Router at the Destination of Connection Displayed when a virtual adapter is connected with a virtual router.

Parameter	Type	Description
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualRouterPortName	string	Virtual Router Port Name at the Destination of Connection
PhysicalAdapterInformation	object	Physical Adapter Information Displayed when a virtual adapter is connected with a physical adapter.
NodeId	integer	Node ID
PhysicalAdapterName	string	Physical Adapter Name
UpdateDate	string	Last Updated Time

[Precautions]

- For displaying the information on a virtual machine, it is required to register a cloud management software and execute "4.6.9 Instruction to Execute Retrieval of Virtualization Information."

4.6.11 Individual Retrieval of Virtual Machine

[Overview]

Retrieves information of the specified virtual machine.

[Format]

```
GET /resources/virtualmachines/{virtualmachineid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
VirtualMachine	object	Virtual Machine Information
VirtualMachineId	integer	Virtual Machine ID
NodeId	integer	Node ID
CmsId	integer	ID of cloud management software
CmsType	string	Type of cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - OpenStack: OpenStack
CmsVersion	string	Version Number of Cloud Management Software
OperatingSystem	string	OS Information of Virtual Machine

Parameter	Type	Description
VirtualMachineInstanceId	string	Identification ID of Virtual Machine Displays IDs numbered by Cloud Management Software
VirtualMachineName	string	Virtual Machine Name
VirtualMachinePowerStatus	string	Startup Status of Virtual Machine - ON: Startup status - OFF: Other than startup status
VirtualCpuCoreNum	integer	Number of Virtual CPU Cores
VirtualMachineMemoryMax	integer	Setting of Maximum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both.
VirtualMachineMemoryMaxUnit	string	Unit of Maximum Value of Memory Capacity B/ KB/ MB/ GB/ TB
VirtualMachineMemoryMin	integer	Setting of Minimum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both.
VirtualMachineMemoryMinUnit	string	Unit of Minimum Value of Memory Capacity B/ KB/ MB/ GB/ TB
VirtualDiskTotal	integer	Disk Storage Capacity Displays a total value when allocating several disks
VirtualDiskTotalUnit	string	Unit of Disk Storage Capacity B/ KB/ MB/ GB/ TB
VirtualMachineOptionVCenter	object	Additional Information for vCenter
ManagementObjectId	string	ID specified to each ManagementObjectReference
VirtualAdapterInformation	array	Virtual Adapter Information
VirtualAdapterName	string	Virtual Adapter Name
VirtualAdapterNumber	string	Virtual Adapter Number
MacAddress	string	MAC Address
VlanInformation	array	VLAN Information
VlanId	string	VLAN ID For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-). Example: "1-10,21,22,30-45"
VlanType	string	VLAN Type VLAN/ Trunk/ Private-Primary
RemoteVirtualSwitchInformation	object	Information of Virtual Switch at the Destination of Connection Displayed when a virtual adapter is connected with a virtual switch.
SwitchType	string	Virtual Switch Type at the Destination of Connection Standard/ Distributed

Parameter	Type	Description
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualSwitchPortName	string	Virtual Switch Port Name at the Destination of Connection
RemoteVirtualRouterInformation	object	Information of Virtual Router at the Destination of Connection Displayed when a virtual adapter is connected with a virtual router.
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualRouterPortName	string	Virtual Router Port Name at the Destination of Connection
PhysicalAdapterInformation	object	Physical Adapter Information Displayed when a virtual adapter is connected with a physical adapter.
NodeId	integer	Node ID
PhysicalAdapterName	string	Physical Adapter Name
UpdateDate	string	Last Updated Time

[Precautions]

- For displaying the information on a virtual machine, it is required to register a cloud management software and execute "4.6.9 Instruction to Execute Retrieval of Virtualization Information."

4.6.12 List Retrieval for Virtual Switches

[Overview]

Retrieves all virtual switches on the OS of the nodes managed by the user group that the users belong to.

[Format]

```
GET /resources/virtualswitches
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
VirtualSwitches	array	Virtual Switch Information
VirtualSwitchId	integer	Virtual Switch ID
VirtualSwitchType	string	Virtual Switch Type Standard/ Distributed
VirtualSwitchInstanceId	string	Virtual Switch Identification ID Displays IDs numbered by cloud management software.
VirtualSwitchName	string	Virtual Switch Name
Nodes	array	Node Information Displays a node in which a virtual switch has been created.
NodeId	integer	Node ID

Parameter	Type	Description
CmsId	integer	ID of cloud management software
VirtualSwitchPortInformation	array	Virtual Switch Port Information
VirtualSwitchPortName	string	Virtual Switch Port Name
VirtualSwitchPortNumber	string	Virtual Switch Port Number
TunnelingInformation	object	Information for when Tunneling between Nodes
TunnelingType	string	Tunneling Type gre/ vxlan
SourceIpAddress	string	Tunneling Connection Source IP Address
TargetIpAddress	string	Tunneling Connection Target IP Address
TunnelingOptions	array	Information of Other Options
TunnelingOptionKey	string	Option Key
TunnelingOptionValue	string	Option Value
VirtualMachineInformation	object	Virtual Machine Information Displayed when a virtual switch port is connected with a virtual machine.
VirtualMachineId	integer	Virtual Machine ID
VirtualAdapterName	string	Virtual Adapter Name
RemoteVirtualSwitchInformation	object	Information of Virtual Switch at the Destination of Connection Displayed when a virtual switch port is connected with a virtual switch.
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualSwitchPortName	string	Virtual Switch Port Name at the Destination of Connection
RemoteVirtualRouterInformation	object	Virtual Router Information at the Destination of Connection Displayed when a virtual switch port is connected with a virtual router.
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualRouterPortName	string	Virtual Router Port Name at the Destination of Connection
PhysicalAdapterInformation	object	Physical Adapter Information Displayed when a virtual switch port is connected with a physical adapter.
NodeId	integer	Node ID
PhysicalAdapterName	string	Physical Adapter Name
VlanInformation	array	VLAN Information
VlanId	string	VLAN ID For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-). Example: "1-10,21,22,30-45"
VlanType	string	VLAN Type VLAN/ Trunk/ Private-Primary
UpdateDate	string	Last Updated Time

[Precautions]

- For displaying the information on a virtual switch, it is required to register a cloud management software and execute "4.6.9 Instruction to Execute Retrieval of Virtualization Information."

4.6.13 Individual Retrieval of Virtual Switch

[Overview]

Retrieves the specified virtual switch information.

[Format]

```
GET /resources/virtualswitches/{virtualswitchid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
VirtualSwitch	object	Virtual Switch Information
VirtualSwitchId	integer	Virtual Switch ID
VirtualSwitchType	string	Virtual Switch Type Standard/ Distributed
VirtualSwitchInstanceId	string	Virtual Switch Identification ID Displays IDs numbered by cloud management software
VirtualSwitchName	string	Virtual Switch Name
Nodes	array	Node Information Displays a node in which a virtual switch has been created
NodeId	integer	Node ID
CmsId	integer	ID of cloud management software
VirtualSwitchPortInformation	array	Virtual Switch Port Information
VirtualSwitchPortName	string	Virtual Switch Port Name
VirtualSwitchPortNumber	string	Virtual Switch Port Number
TunnelingInformation	object	Information for when Tunneling between Nodes
TunnelingType	string	Tunneling Type gre/ vxlan
SourceIpAddress	string	Tunneling Connection Source IP Address
TargetIpAddress	string	Tunneling Connection Target IP Address
TunnelingOptions	array	Information of Other Options
TunnelingOptionKey	string	Option Key
TunnelingOptionValue	string	Option Value
VirtualMachineInformation	object	Virtual Machine Information Displayed when a virtual switch port is connected with a virtual machine.

Parameter	Type	Description
VirtualMachineId	integer	Virtual Machine ID
VirtualAdapterName	string	Virtual Adapter Name
RemoteVirtualSwitchInformation	object	Information of Virtual Switch at the Destination of Connection Displayed when a virtual switch port is connected with a virtual switch.
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualSwitchPortName	string	Virtual Switch Port Name at the Destination of Connection
RemoteVirtualRouterInformation	object	Virtual Router Information at the Destination of Connection Displayed when a virtual switch port is connected with a virtual router.
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualRouterPortName	string	Virtual Router Port Name at the Destination of Connection
PhysicalAdapterInformation	object	Physical Adapter Information Displayed when a virtual switch port is connected with a physical adapter.
NodeId	integer	Node ID
PhysicalAdapterName	string	Physical Adapter Name
VlanInformation	array	VLAN Information
VlanId	string	VLAN ID For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-). Example: "1-10,21,22,30-45"
VlanType	string	VLAN Type VLAN/ Trunk/ Private-Primary
UpdateDate	string	Last Updated Time

[Precautions]

- For displaying the information on a virtual switch, it is required to register a cloud management software and execute "4.6.9 Instruction to Execute Retrieval of Virtualization Information."

4.6.14 List Retrieval for Virtual Routers

[Overview]

Retrieves all virtual routers on the OS of the nodes managed by the user group that the users belong to.

[Format]

```
GET /resources/virtualrouters
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
VirtualRouters	array	Virtual Router Information
VirtualRouterId	integer	Virtual Router ID
VirtualRouterName	string	Virtual Router Name
Nodes	array	List of Node ID
NodeId	integer	Node ID
CmsId	integer	ID of cloud management software
VirtualRouterPortInformation	array	Virtual Router Port Information
VirtualRouterPortName	string	Virtual Router Port Name
VirtualRouterPortNumber	string	Virtual Router Port Number
IpAddress	string	Virtual Router Port IP Address
VirtualMachineInformation	object	Virtual Machine Information Displayed when a virtual router port is connected with a virtual machine.
VirtualMachineId	integer	Virtual Machine ID
VirtualAdapterName	string	Virtual Adapter Name
RemoteVirtualSwitchInformation	object	Information of Virtual Switch at the Destination of Connection Displayed when a virtual router port is connected with a virtual switch.
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualSwitchPortName	string	Virtual Switch Port Name at the Destination of Connection
RemoteVirtualRouterInformation	object	Virtual Router Information at the Destination of Connection Displayed when a virtual router port is connected with a virtual router.
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualRouterPortName	string	Virtual Router Port Name at the Destination of Connection
PhysicalAdapterInformation	object	Physical Adapter Information Displayed when a virtual router port is connected with a physical adapter.
NodeId	integer	Node ID
PhysicalAdapterName	string	Physical Adapter Name
UpdateDate	string	Last Updated Time

[Precautions]

- For displaying the information on a virtual router, it is required to register a cloud management software and execute "4.6.9 Instruction to Execute Retrieval of Virtualization Information."

4.6.15 Individual Retrieval of Virtual Router

[Overview]

Retrieves the specified virtual router information.

[Format]

```
GET /resources/virtualrouters/{virtualrouterid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
VirtualRouter	object	Virtual Router Information
VirtualRouterId	integer	Virtual Router ID
VirtualRouterName	string	Virtual Router Name
Nodes	array	List of Node ID
NodeId	integer	Node ID
CmsId	integer	ID of cloud management software
VirtualRouterPortInformation	array	Virtual Router Port Information
VirtualRouterPortName	string	Virtual Router Port Name
VirtualRouterPortNumber	string	Virtual Router Port Number
IpAddress	string	Virtual Router Port IP Address
VirtualMachineInformation	object	Virtual Machine Information Displayed when a virtual router port is connected with a virtual machine.
VirtualMachineId	integer	Virtual Machine ID
VirtualAdapterName	string	Virtual Adapter Name
RemoteVirtualSwitchInformation	object	Information of Virtual Switch at the Destination of Connection Displayed when a virtual router port is connected with a virtual switch.
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualSwitchPortName	string	Virtual Switch Port Name at the Destination of Connection
RemoteVirtualRouterInformation	object	Virtual Router Information at the Destination of Connection Displayed when a virtual router port is connected with a virtual router.
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualRouterPortName	string	Virtual Router Port Name at the Destination of Connection
PhysicalAdapterInformation	object	Physical Adapter Information Displayed when a virtual router port is connected with a physical adapter.
NodeId	integer	Node ID
PhysicalAdapterName	string	Physical Adapter Name

Parameter		Type	Description
	UpdateDate	string	Last Updated Time

[Precautions]

- For displaying the information on a virtual router, it is required to register a cloud management software and execute "4.6.9 Instruction to Execute Retrieval of Virtualization Information."

4.6.16 Connection Test of Cloud Management Software

[Overview]

Execute a connection test for cloud management software.

[Format]

```
POST /resources/inventory/virtualmachine/test
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
CmsInfo		object	Information of a cloud management software
	CmsId	integer	ID of the cloud management software If this key is omitted, you must specify the Password key.
	CmsType	string	Type of the cloud management software - vCenter: VMware vCenter Server - SystemCenter: Microsoft System Center Virtual Machine Manager
	CmsVersion	string	Version Number of the cloud management software - vCenter: 5.5/ 6.0/ 6.5/ 6.7/ 7.0 - SystemCenter: 2012/ 2012R2/ 2016/ 2019
	IpAddress	string	IP Address of the cloud management software
	IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
	PortNum	integer	Port Number used When null is specified, sets the port number described in the ISM setting file. Connecting protocols for respective cloud management software are as follows: - vCenter: CIM (No. 443) - SystemCenter: WinRM (No. 5986)
	DomainName	string	Domain Name

Parameter		Type	Description
			The following are the domain names set for the cloud management software type. - vCenter, SystemCenter: Windows domain name For Windows domain name, specify a name of FQDN for a realm. Example: ISMDOMAIN.LOCAL For SystemCenter, this must be set.
	AccountName	string	Account Name Specify an account name excluding a realm. Example: ismadmin
	Password	string	Password Encrypt the password with a method described in "2.4 Encryption." If the CmsId key is omitted, this must be set.

[Response Parameter]

Parameter		Type	Description
TestInfo		object	Test Information
	TestResult	string	Status of Test - Success: succeeded - IPaddressFailed: invalid IP address - PortClosed: port closed - IpaddressOrPortFailed: invalid IP address or port closed - AuthenticationFailed: authentication failed - UnspecifiedCMS: not specified CMS - UnexpectedFailed: unexpected failure
	TestDetails	string	Transmission Result For failed: detailed message

4.6.17 Batch Updating of OS Information

[Overview]

Updates the OS information for the specified multiple nodes in a batch operation.

[Format]

```
PATCH /nodes/nodes/os
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Nodes	array	Node Information
NodeId	integer	Node ID
Host	object	OS Information
OsType	string	OS Type For details on the OS types, refer to "4.6.4 Registration of OS Information."
OsVersion	string	OS Version Number For details on the OS versions, refer to "4.6.4 Registration of OS Information."
OsDomain	string	Domain Name Specify a name of FQDN for a realm. Example: ISMDOMAIN.LOCAL
OsAccount	string	Account Name Specify a account name excluding a realm. Example: ismadmin
OsPassword	string	Password Encrypt the password with a method described in "2.4 Encryption." Omit the key unless updating.
OsPortNum	integer	Port Number used Specify the port number or null. When null is specified, sets the standard port number for the protocol. Connecting protocols for respective OS are as follows: - RedHat, SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) - Windows, AzureStackHCI: WinRM (No. 5986) - VMware: CIM (No. 443)

[Response Parameter]

Parameter	Type	Description
Hosts	array	OS Information
NodeId	integer	Node ID
OsType	string	OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - AzureStackHCI: Azure Stack HCI - VMware: VMware ESXi - IPCOM OS: IPCOM OS

Parameter		Type	Description
	OsVersion	string	OS Version Number specified by the user
	OsDomain	string	Domain Name
	OsAccount	string	Account Name
	OsPortNum	integer	Port Number used

[Precautions]

- After updating of the OS information, execute instruction for node information retrieval.
- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

4.6.18 Scheduling Node Information Retrieval

[Overview]

Sets the schedule time for retrieving the node information of the specified multiple nodes in a batch operation.

[Format]

```
PATCH /nodes/schedules
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
NodeIdList		array	Node Information
	NodeId	integer	Node ID
ScheduleEnable		boolean	Enable or disable of schedule settings - false: disabled - true: enabled
TimeZone		string	Time Zone Example: Asia/Tokyo (JST, +0900)
InventoryScheduleTime		string	Scheduled time for retrieving node information Example: 11:45

[Response Parameter]

Parameter		Type	Description
NodeIdList		array	Node Information
	NodeId	integer	Node ID

Parameter	Type	Description
ScheduleEnable	boolean	Enable or disable of schedule settings - false: disabled - true: enabled
TimeZone	string	Time Zone Example: Asia/Tokyo (JST, +0900)
InventoryScheduleTime	string	Scheduled time for retrieving node information Example: 11:45

4.7 Monitoring

4.7.1 List Retrieval for Information on Monitoring Items

[Overview]

Retrieves all the information for the items that can be monitored for the specified nodes.

[Format]

```
GET /nodes/{nodeid}/monitor/itemlist
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Items		array	Monitoring Item List
	ItemName	string	Monitoring Item Name Example: Ambient Temperature
	Type	string	Monitoring Item Type Example: Temperature
	ValueType	string	Shows a type of values. It must be any of the following. - integer - real (decimal) - string
	Unit	string	Unit Example: Degree Celsius

4.7.2 Registration of Monitoring Items

[Overview]

Registers Monitoring items.

[Format]

```
POST /nodes/monitor/items
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
NodeId	integer	Specify Node ID as target.
ItemName	string	Specify Names of Monitoring items.
IsActive	string	Specify a status of performance monitoring. - Enabled: Enabled - Disabled: Disabled
IsThresholdMonitoringActive	string	Specify a Status of Threshold value monitoring. - Enabled: Enabled - Disabled: Disabled In order to enable Threshold value monitoring, performance monitoring (IsActive) should be enabled. For a monitoring item with its value type is string, Enabled cannot be specified.
UpperCritical	object	Designates a Threshold (Upper critical).
Value	string	Specify the Threshold value for the upper critical in either an integer or a decimal.
Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Error) is assigned. Select one of the following. - Error - Warning - Info - Normal
UpperWarning	object	Designates Information on a Threshold (Upper warning).
Value	string	Specify the Threshold value for the upper warning in either an integer or a decimal.
Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Warning) is assigned. Select one of the following. - Error - Warning - Info - Normal
LowerCritical	object	Specify a Threshold (Lower critical).

Parameter		Type	Description
	Value	string	Specify the Threshold value for the lower critical in either an integer or a decimal.
	Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Error) is assigned. Select one of the following. - Error - Warning - Info - Normal
LowerWarning		object	Specify Information on a Threshold (Lower warning).
	Value	string	Specify the Threshold value for the lower warning in either an integer or a decimal.
	Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Warning) is assigned. Select one of the following. - Error - Warning - Info - Normal

[Response Parameter]

Parameter		Type	Description
ItemId		string	Monitoring Item ID
NodeId		integer	Node ID of the Object
ItemName		string	Monitoring Item Name
IsActive		string	Status of Performance Monitoring - Enabled: Enabled - Disabled: Disabled
IsThresholdMonitoringActive		string	Status of Threshold Value Monitoring - Enabled: Enabled - Disabled: Disabled
UpperCritical		object	Information on Threshold (Upper critical)
	Value	string	Threshold value for the upper critical
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
UpperWarning		object	Information on Threshold (Upper warning)

Parameter		Type	Description
	Value	string	Threshold value for the upper warning
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerCritical		object	Information on Threshold (Lower critical)
	Value	string	Threshold value for the lower critical
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerWarning		object	Information on Threshold (Lower warning)
	Value	string	Threshold value for the lower warning
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal

4.7.3 Retrieval of Monitoring Items

[Overview]

Retrieves Monitoring items.

[Format]

```
GET /nodes/monitor/items
```

[Query Parameter]

Parameter	Description
NodeId	Specify a Node ID. Retrieves all Monitoring items as set in specified node IDs. Cannot be used with the ItemId parameter.
ItemId	Specify the Monitoring item ID. Retrieves Monitoring item ID specified. Cannot be used with the NodeId parameter.

[Response Parameter]

Parameter		Type	Description
Items		array	Monitoring Item Information (List)
	ItemId	string	Monitoring Item ID
	NodeId	integer	Node ID of the Object
	ItemName	string	Monitoring Item Name
	ValueType	string	Shows a Type of Values. It must be any of the following. - integer - real (decimal) - string
	Unit	string	Unit
	IsActive	string	Status of Performance Monitoring - Enabled: Enabled - Disabled: Disabled
	IsThresholdMonitoringActive	string	Status of Threshold Value Monitoring - Enabled: Enabled - Disabled: Disabled
UpperCritical		object	Information on Threshold (Upper critical)
	Value	string	Threshold value for the upper critical
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
UpperWarning		object	Information on Threshold (Upper warning)
	Value	string	Threshold value for the upper warning
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerCritical		object	Information on Threshold (Lower critical)
	Value	string	Threshold value for the lower critical
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerWarning		object	Information on Threshold (Lower warning)
	Value	string	Threshold value for the lower warning

Parameter		Type	Description
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal

4.7.4 Updating of Monitoring Items

[Overview]

Updates the specified Monitoring items.

[Format]

```
PATCH /nodes/monitor/items/{itemid}
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
IsActive		string	Specify a Status of Performance Monitoring. - Enable: Enabled - Disable: Disabled
IsThresholdMonitoringActive		string	Specify a Status of Threshold value Monitoring. - Enable: Enabled - Disable: Disabled In order to enable Threshold value monitoring, performance monitoring (IsActive) should be enabled. When a monitoring item with its value type is string, Enabled cannot be specified.
UpperCritical		object	Specify a Threshold (Upper critical).
	Value	string	Specify the Threshold value for the upper critical in either an integer or a decimal.
	Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Error) is assigned. - Error - Warning - Info - Normal
UpperWarning		object	Designates information on a Threshold (Upper warning).
	Value	string	Specify the Threshold value for the upper warning in either an integer or a decimal.

Parameter		Type	Description
	Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Warning) is assigned. - Error - Warning - Info - Normal
LowerCritical		object	Designates a Threshold (Lower critical).
	Value	string	Specify the Threshold value for the lower critical in either an integer or a decimal.
	Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Error) is assigned. - Error - Warning - Info - Normal
LowerWarning		object	Designates information on a Threshold (Lower warning).
	Value	string	Specify the Threshold value for the lower warning in either an integer or a decimal.
	Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Warning) is assigned. - Error - Warning - Info - Normal

[Response Parameter]

Parameter		Type	Description
ItemId		string	Monitoring Item ID
NodeId		integer	Node ID of the Object
ItemName		string	Monitoring Item Name
IsActive		string	Status of Performance Monitoring - Enabled: Enabled - Disabled: Disabled
IsThresholdMonitoringActive		string	Status of Threshold Value Monitoring - Enabled: Enabled - Disabled: Disabled
UpperCritical		object	Information on Threshold (Upper critical)
	Value	string	Threshold value for the upper critical
	Severity	string	Severity of an Event as it exceeds a Threshold Value

Parameter		Type	Description
			- Error - Warning - Info - Normal
UpperWarning		object	Information on Threshold (Upper warning).
	Value	string	Threshold value for the upper warning
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerCritical		object	Information on Threshold (Lower critical)
	Value	string	Threshold value for the lower critical
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerWarning		object	Information on Threshold (Lower warning)
	Value	string	Threshold value for the lower warning
	Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal

4.7.5 Deletion of Monitoring Items

[Overview]

Deletes the specified Monitoring items.

[Format]

```
DELETE /nodes/monitor/items/{itemid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.7.6 Retrieval of Monitoring History

[Overview]

Retrieves Monitoring history.

[Format]

```
GET /nodes/monitor/items/{itemid}/history
```

[Query Parameter]

Parameter	Description
TimeFrom	Used when specifying a duration to output. Returns records after the specified time and date. Specify its format as RFC3339. Example: 2016-04-01T12:34:45Z000 Cannot be used with the "Count" parameter.
TimeTill	Used when specifying a duration to output. Returns records until the specified time and date. Specify its format as RFC3339. Example: 2016-04-02T12:34:45Z000 Cannot be used with the "Count" parameter.
Count	Returns records from the ones of the latest to the nth. Cannot be used with "TimeFrom" and "TimeTill" parameters.

[Response Parameter]

Parameter		Type	Description
Records		array	List of Record Information
	Timestamp	string	Timestamp The format is RFC3339. Example: 2016-04-01T12:34:45Z000
	Value	string	Value

4.7.7 Updating of Common Monitoring Settings of Nodes

[Overview]

Updates the information of the Monitoring settings of the specified nodes.

[Format]

```
PATCH /nodes/{nodeid}/monitor/settings
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Interval	integer	Specify an Interval of Monitoring. The unit is seconds and the lower limit is 60 [seconds].

[Response Parameter]

Parameter	Type	Description
Interval	integer	Interval of Monitoring

4.7.8 Retrieval of Common Monitoring Settings of Nodes

[Overview]

Retrieves the Monitoring settings of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/monitor/settings
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Interval	integer	Interval of Monitoring

4.7.9 Retrieval of Network Monitoring Settings

[Overview]

Retrieves the Network Performance Monitoring settings of the specified nodes.

[Format]

```
GET /nodes/monitor/network
```

[Query Parameter]

Parameter	Description
NodeId	Specify when specifying a node to retrieve. Multiple NodeID can be specified, in which case the information of all corresponding nodes are retrieved.

[Response Parameter]

Parameter	Type	Description
NetworkMonitoringSettingsList	array	Network Performance Monitoring Information (List)
NodeId	string	Node ID
OperationStatus	string	Displays a status of network monitoring. Default status is set to Disabled. For a node unsupported of its network performance monitoring, Unavailable is displayed. Both Off and Disabled

Parameter	Type	Description
		means that the periodical retrieval of the network performance information is stopped, while Off holds a log history, Disabled does not. - Enable: On - Temporarily disabled: Off - Disable: Disabled - Unavailable: Unavailable
Items	array	Monitoring Item Information (List)
ItemName	string	Monitoring Item Name
ValueType	string	Type of Value - integer - real (decimal) - string
Unit	string	Unit
IsThresholdMonitoringActive	string	Status of Threshold Value Monitoring - Enable: Enabled - Disable: Disabled
UpperCritical	object	Information on Threshold (Upper critical)
Value	string	Threshold value for the upper critical
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
UpperWarning	object	Information on Threshold (Upper warning)
Value	string	Threshold value for the upper warning
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerCritical	object	Information on Threshold (Lower critical)
Value	string	Threshold value for the lower critical
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerWarning	object	Information on Threshold (Lower warning)

Parameter	Type	Description
Value	string	Threshold value for the lower warning
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal

4.7.10 Updating of Network Monitoring Settings

[Overview]

Updates (enable/disable) the Network Performance Monitoring settings of the specified nodes.

[Format]

```
PATCH /nodes/{nodeid}/monitor/network
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
NetworkMonitoringSettings	object	Specify a Network Performance Monitoring information.
OperationStatus	string	Specify a status of Network Monitoring. To halt Network Performance Monitoring, specify Off or Disabled. Further, while Off halts by preserving the history of monitoring, Disabled deletes the monitoring history as well. - Enable: On - Temporarily disabled: Off - Disable: Disabled
Items	array	Specify the Information of Monitoring Items.
ItemName	string	Specify the Name of Monitoring Items.
IsThresholdMonitoringActive	string	Specify a status of Threshold value monitoring. - Enable: Enabled - Disable: Disabled
UpperCritical	object	Specify information on a Threshold (Upper critical).
Value	string	Specify the Threshold value for the upper critical in either an integer or a decimal.
Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Error) is assigned. - Error - Warning - Info

Parameter	Type	Description
		- Normal
UpperWarning	object	Specify information on a Threshold (Upper warning).
Value	string	Specify the Threshold value for the upper warning in either an integer or a decimal.
Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Warning) is assigned. - Error - Warning - Info - Normal
LowerCritical	object	Specify information on a Threshold (Lower critical) in either an integer or a decimal.
Value	string	Specify the Threshold value for the lower critical in either an integer or a decimal.
Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Error) is assigned. - Error - Warning - Info - Normal
LowerWarning	object	Specify information on a Threshold (Lower warning).
Value	string	Specify the Threshold value for the lower warning in either an integer or a decimal.
Severity	string	Specify Severity of an event as it exceeds a Threshold value. When specifying null, default value (Warning) is assigned. - Error - Warning - Info - Normal

[Response Parameter]

Parameter	Type	Description
NetworkMonitoringSettings	object	Network Performance Monitoring Information (List)
OperationStatus	string	Displays a Status of Network Monitoring. - On (available) - Off (Temporarily disabled) - Disabled: (invalid)
Items	array	Monitoring Item Information (List)
ItemName	string	Monitoring Item Name

Parameter	Type	Description
ValueType	string	Type of Value - integer - real (decimal) - string
Unit	string	Unit
IsThresholdMonitoringActive	string	Status of Threshold Value Monitoring - Enable: Enabled - Disable: Disabled
UpperCritical	object	Information on Threshold (Upper critical)
Value	string	Threshold value for the upper critical
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
UpperWarning	object	Information on Threshold (Upper warning)
Value	string	Threshold value for the upper warning
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerCritical	object	Information on Threshold (Lower critical)
Value	string	Threshold value for the lower critical
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal
LowerWarning	object	Information on a Threshold (Lower warning)
Value	string	Threshold value for the lower warning
Severity	string	Severity of an Event as it exceeds a Threshold Value - Error - Warning - Info - Normal

4.7.11 Retrieval of Network Monitoring History

[Overview]

Retrieves the Network Performance Monitoring history of the specified nodes.

[Format]

```
GET /nodes/{nodeid}/monitor/network/history
```

[Query Parameter]

Parameter	Description
ItemName	Specify the name of a Monitoring items. More than one name can be specified for an monitoring item.
PortName	Specify the name of a port. Several choices for a port name can be specified.
StartTime	Specify when specifying output time. Returns records after the specified time and date. Specify its format as RFC3339. Example: 2016-04-02T12:34:45Z000
EndTime	Specify when specifying output time. Returns records until the specified time and date. Specify its format as RFC3339. Example: 2016-04-02T12:34:45Z000
Count	Returns records from the ones of the latest to the nth.

[Response Parameter]

Parameter			Type	Description
Items			array	Network Performance Monitoring Information (List)
	NodeId		string	Node ID
	PortName		string	Port Name
	ItemName		string	Monitoring Item Name
	Records		array	List of Record Information
		Timestamp	string	Time Stamp The format is RFC3339. Example: 2016-04-01T12:34:45Z000
		Value	string	Value

4.7.12 Updating of CPU Utilization Prediction Threshold

[Overview]

Updates the threshold used as the criteria for predicting the rise in CPU utilization for anomaly detection.

[Format]

```
PATCH /nodes/monitor/prediction/globalthreshold
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Item		object	Specify the threshold for CPU Utilization Prediction.
	PacketRecieveProcess	integer	Specify the threshold for the packet reception process.
	PacketSendProcess	integer	Specify the threshold for the packet transmission process.
	VirtualCPU	integer	Specify the virtual CPU threshold.

[Response Parameter]

Parameter		Type	Description
Item		object	Threshold for CPU Utilization Prediction
	PacketRecieveProcess	integer	Threshold for the packet reception process
	PacketSendProcess	integer	Threshold for the packet transmission process
	VirtualCPU	integer	Virtual CPU threshold

4.7.13 Retrieval of CPU Utilization Prediction Threshold

[Overview]

Get the threshold used as the criteria for predicting the rise in CPU utilization for anomaly detection.

[Format]

```
GET /nodes/monitor/prediction/globalthreshold
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter		Type	Description
Item		object	Threshold for CPU Utilization Prediction
	PacketRecieveProcess	integer	Threshold for packet reception process
	PacketSendProcess	integer	Threshold for packet transmission process
	VirtualCPU	integer	Virtual CPU threshold

4.8 Event /Alarm

4.8.1 Registration of Action Settings

[Overview]

Registers action settings (settings to define the action to execute when detecting an event to be notified).

[Format]

```
POST /event/actions
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ActionName	string	Specify an Action Name.
ActionType	string	Specify a type of action. Select from the following. - SendMail: Sending Mail - TrapForwarding: Forwarding Trap - SyslogForwarding: Forwarding Syslog - ExecuteRemoteCommand: Remote Script Execution - FirmExecuteRemoteCommand: Script Execution when updating firmware
RemoteCommand	object	Specify the settings of remote script execution. It is required to be filled in when selecting ExecuteRemoteCommand or FirmExecuteRemoteCommand as a type of action.
FileName	string	Specify a file name (full path) of the execution target.
ArgumentList	array(string)	Specify arguments at execution. Up to 25 arguments can be specified and each argument can be specified with 1024 characters at maximum.
MaxTimeOut	integer	Specify the upper limit for the execution time of the script files in units of seconds. When null is specified, the default value (300 seconds) will be set.
Host	object	Specify a host inventory information.
OsType	string	Specify a type of OS. Select from the following. - RedHat - SUSELinuxEnterprise - Windows - AzureStackHCI
OsIpAddress	string	Specify an IP address.
OsIpVersion	string	Specify an IP Version of IP Address. Select from the following. - V4 - V6

Parameter	Type	Description
OsDomain	string	Specify the domain name. Specify null if there is no need.
OsAccount	string	Specify an account name.
OsPassword	string	Specify the password. Encrypt the password with a method described in "2.4 Encryption."
OsPortNum	integer	Specify the port number. When null is specified, the default value will be set. When OsType is a Linux type (RedHat, SUSELinuxEnterprise): 22 When OsType is Windows, AzureStackHCI: 5986
TrapForwarding	object	Specify the settings of trap forwarding. It is required to be filled in when selecting TrapForwarding as a type of action.
SNMPServerId	string	Specify SNMP Server ID at the destination of forwarding.
ForwardingType	string	Specify a Forwarding Type. Select from the following. - PassThrough: Forwards a trap assuming ISM as transmission source. - Transparent: Forward a received trap as it is.
Mail	object	Specify the information of a mail. It is required to be filled when selecting SendMail as a type of action.
Destination	string	Specify a destination address.
Sender	string	Specify a mail address at transmission source.
Subject	string	Specify the name of a mail.
Message	string	Specify the text of a mail.
EncryptionFlag	integer	Specify if encryption is to be executed by S/MIME. Select from the following. - To encrypt: 1 - Not to encrypt: 0
SyslogForwarding	object	Information of the forwarding Syslog destination Specify the information of the forwarding Syslog destination. It is required to be filled when selecting SyslogForwarding as a type of action.
ServerNameType	string	Type of Server Name Specify the type of server name. Select from the following. - IPv4 - IPv6

Parameter	Type	Description
		- FQDN
ServerName	string	Server Name Specify the server name.
PortNumber	integer	Port Number Specify the port number or null. When the key is omitted or null is specified, the port number of 514 (TCP) will be set.
Protocol	string	Protocol Select from the following. - TCP - UDP When the key is omitted, the default value (TCP) is set.

[Response Parameter]

Parameter	Type	Description
ActionId	string	Action ID
ActionName	string	Action Name
ActionType	string	Action Type Selected from the following. - SendMail - TrapForwarding - SyslogForwarding - ExecuteRemoteCommand - FirmExecuteRemoteCommand
RemoteCommand	object	Settings of Remote Script Execution
FileName	string	File Name of the Execution
ArgumentList	array(string)	Arguments at Execution
MaxTimeOut	integer	Maximum Execution Time (seconds)
Host	object	Host Inventory Information
OsType	string	OS Type Selected from the following. - RedHat - SUSELinuxEnterprise - Windows - AzureStackHCI
OsIpAddress	string	IP Address
OsIpVersion	string	IP Version of IP Address Selected from the following. - V4

Parameter	Type	Description
		- V6
OsDomain	string	Domain Name
OsAccount	string	Account Name
OsPortNum	integer	Connection Port Number
TrapForwarding	object	Settings of Trap forwarding
SNMPServerId	string	SNMP Server ID at the destination of forwarding
ForwardingType	string	Forwarding Type Selected from the following. - PassThrough - Transparent
Mail	object	Mail Information
Destination	string	Destination Address
Sender	string	Address of the Origin of Transmission
Subject	string	Mail Subject
Message	string	Mail Text
EncryptionFlag	integer	Mail Encryption Flag
SyslogForwarding	object	Information of the forwarding Syslog Destination
ServerNameType	string	Type of Server Name Selected from the following. - IPv4 - IPv6 - FQDN
ServerName	string	Server Name
PortNumber	integer	Port Number
Protocol	string	Protocol Selected from the following. - TCP - UDP
Facility	string	Facility

4.8.2 List Retrieval for Action Settings

[Overview]

Retrieves a list of action settings.

[Format]

```
GET /event/actions
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Actions	array	List of Action Settings
ActionId	string	Action ID
ActionName	string	Action Name
ActionType	string	Action Type Selected from the following. - SendMail - TrapForwarding - SyslogForwarding - ExecuteRemoteCommand - FirmExecuteRemoteCommand
RemoteCommand	object	Settings of Remote Script Execution
FileName	string	File Name of the Execution
ArgumentList	array(string)	Arguments at Execution
MaxTimeOut	integer	Maximum Execution Time (seconds)
Host	object	Host Inventory Information
OsType	string	OS Type Selected from the following. - RedHat - SUSELinuxEnterprise - Windows - AzureStackHCI
OsIpAddress	string	IP Address
OsIpVersion	string	IP Version of IP Address Selected from the following. - V4 - V6
OsDomain	string	Domain Name
OsAccount	string	Account Name
OsPortNum	integer	Connection Port Number
TrapForwarding	object	Settings of Trap Forwarding
SNMPServerId	string	SNMP Server ID at the Destination of Forwarding
ForwardingType	string	Forwarding Type Selected from the following. - PassThrough - Transparent
Mail	object	Mail Information
Destination	string	Destination Address

Parameter	Type	Description
Sender	string	Address of the Origin of Transmission
Subject	string	Mail Subject
Message	string	Mail Text
EncryptionFlag	integer	Mail Encryption Flag
SyslogForwarding	object	Information of the forwarding Syslog Destination
ServerNameType	string	Type of Server Name Selected from the following. - IPv4 - IPv6 - FQDN
ServerName	string	Server Name
PortNumber	integer	Port Number
Protocol	string	Protocol Selected from the following. - TCP - UDP
Facility	string	Facility

4.8.3 Updating of Action Settings

[Overview]

Updates the settings of the specified action.

[Format]

```
PATCH /event/actions/{actionid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ActionName	string	Specify an Action Name.
RemoteCommand	object	Specify the settings of remote script execution. It is required to be filled in when selecting ExecuteRemoteCommand or FirmExecuteRemoteCommand as a type of action.
FileName	string	Specify a file name (full path) of the execution target.
ArgumentList	array(string)	Specify arguments at execution. Up to 25 arguments can be specified and each argument can be specified with 1024 characters at maximum.
MaxTimeOut	integer	Specify the upper limit for the execution time of the script files in units of seconds.

Parameter	Type	Description
		When null is specified, the default value (300 seconds) will be set.
Host	object	Specify a host inventory information.
OsType	string	Specify a type of OS. Select from the following. - RedHat - SUSELinuxEnterprise - Windows - AzureStackHCI
OsIpAddress	string	Specify an IP address.
OsIpVersion	string	Specify an IP address version. Select from the following. - V4 - V6
OsDomain	string	Specify the domain name. Specify null if there is no need.
OsAccount	string	Specify an account name.
OsPassword	string	Specify the password. Encrypt the password with a method described in "2.4 Encryption."
OsPortNum	integer	Specify the port number. When null is specified, the default value will be set. When OsType is a Linux type (RedHat, SUSELinuxEnterprise): 22 When OsType is Windows, AzureStackHCI: 5986
TrapForwarding	object	Specify the settings of trap forwarding. It is required to be filled in when selecting TrapForwarding as a type of action.
SNMPServerId	string	Specify SNMP Server ID at the destination of forwarding.
ForwardingType	string	Specify a Forwarding Type. Select from the following. - PassThrough: Forwards a trap assuming ISM as transmission source. - Transparent: Forward a received trap as it is.
Mail	object	Specify the information of a mail. It is required to be filled when selecting SendMail as a type of action.
Destination	string	Specify a destination address.
Sender	string	Specify a mail address at transmission source.
Subject	string	Specify the name of a mail.

Parameter		Type	Description
	Message	string	Specify the text of a mail.
	EncryptionFlag	integer	Specify if encryption is to be executed by S/MIME. Select from the following. - When do encrypt: 1 - When do not encrypt: 0
SyslogForwarding		object	Information of forwarding Syslog Destination Specify the information of forwarding Syslog destination. It is required to be filled when selecting SyslogForwarding as a type of action.
	ServerNameType	string	Type of Server Name Specify the type of server name. Select from the following. - IPv4 - IPv6 - FQDN
	ServerName	string	Server Name Specify the server name.
	PortNumber	integer	Port Number Specify the port number or null. When the key is omitted or null is specified, the port number of 514 (TCP) will be set.
	Protocol	string	Protocol Select from the following. - TCP - UDP When the key is omitted, the default value (TCP) is set.

[Response Parameter]

Parameter	Type	Description
ActionId	string	Action ID
ActionName	string	Action Name
ActionType	string	Action Type Selected from the following. - SendMail - TrapForwarding - SyslogForwarding - ExecuteRemoteCommand - FirmExecuteRemoteCommand
RemoteCommand	object	Settings of Remote Script Execution

Parameter	Type	Description
FileName	string	File Name of the Execution
ArgumentList	array(string)	Arguments at Execution
MaxTimeOut	integer	Maximum Execution Time (seconds)
Host	object	Host Inventory Information
OsType	string	OS Type Selected from the following. - RedHat - SUSELinuxEnterprise - Windows - AzureStackHCI
OsIpAddress	string	IP Address
OsIpVersion	string	IP Version of IP Address Selected from the following. - V4 - V6
OsDomain	string	Domain Name
OsAccount	string	Account Name
OsPortNum	integer	Connection Port Number
TrapForwarding	object	Settings of Trap forwarding
SNMPServerId	string	SNMP Server ID at the Destination of Forwarding
ForwardingType	string	Forwarding Type Selected from the following. - PassThrough - Transparent
Mail	object	Mail Information
Destination	string	Destination Address
Sender	string	Address of the Origin of Transmission
Subject	string	Mail Subject
Message	string	Mail Text
EncryptionFlag	integer	Mail Encryption Flag
SyslogForwarding	object	Information of forwarding Syslog Destination
ServerNameType	string	Type of Server Name Selected from the following. - IPv4 - IPv6 - FQDN
ServerName	string	Server Name
PortNumber	integer	Port number

Parameter		Type	Description
	Protocol	string	Protocol Selected from the following. - TCP - UDP
	Facility	string	Facility

4.8.4 Deletion of Action Settings

[Overview]

Deletes the settings of the specified action.

[Format]

```
DELETE /event/actions/{actionid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.8.5 Registration of Alarm Settings

[Overview]

Registers an alarm settings definition (settings at the destination of event notification).

[Format]

```
POST /event/alarms
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
AlarmName		string	Specify an Alarm Name.
Resources		object	Specify the Resource Information.
	ResourceType	string	Specify a type of resource. Select from the following. - Node - System - NodeGroup

Parameter	Type	Description
		- AllNode
ResourceId	array(integer)	Specify the Resource ID. If they are of the identical resource type, it is possible to specify multiple IDs. When the resource type is "System" or "AllNode" specify it with empty.
Events	object	Specify the Event Information. Specify either trap information or the ISM event information: You cannot set two kinds of information for the same alarm settings.
SNMPTrap	object	Specify the information of a trap.
Severity	array(string)	Specify the severity of a trap. It is possible to specify multiple degrees of severity to the trap and to make the traps with the same severity specified the targets for alarm setting at once. Select severity from the following: - Critical - Major - Minor - Informational - Unknown
OID	array(string)	Specify the OID. It is possible to specify multiple symbol names and they can be the targets for alarm settings by trap.
ISMEvent	object	Specify the ISM event information.
Severity	array(string)	Specify priority level of ISM event. It is possible to specify multiple degrees of severity to the ISM event and to make the events with the same severity specified the targets for alarm setting at once. Select severity from the following: - Error - Warning - Info
EventInfo	array	Specify the ISM event information individually.
EventId	string	Specify the ISM event ID. It is possible to specify multiple event IDs and they can be the targets for alarm settings by event.
Actions	array	Specify an Action Settings. It is possible to specify multiple action settings.
ActionId	string	Specify an Action ID. Action ID whose Action Type is "FirmExecuteRemoteCommand" cannot be specified.

Parameter	Type	Description
IsActive	string	Specify a status of an Action Setting. Select from the following. - Enable: Enabled - Disable: Disabled

[Response Parameter]

Parameter	Type	Description
AlarmId	string	Alarm Settings ID
AlarmName	string	Alarm Name
Resources	object	Resource Information
ResourceType	string	Type of Resource Selected from the following. - Node - System - NodeGroup - AllNode
ResourceId	array(integer)	Resource ID
Events	object	Event Information
SNMPTrap	object	Trap Information
Severity	array(string)	Severity of Trap Selected from the following. - Critical - Major - Minor - Informational - Unknown
OID	array(string)	OID
ISMEvent	object	ISM Event Information
Severity	array(string)	Severity of ISM Event Selected from the following. - Error - Warning - Info
EventInfo	array	ISM Event Information
EventId	string	ISM Event ID
Actions	array	Action Settings
ActionId	string	Action ID
IsActive	string	Status of Action Settings

Parameter	Type	Description
		Selected from the following. - Enable: Enabled - Disable: Disabled

4.8.6 List Retrieval for Alarm Settings

[Overview]

Retrieves all alarm settings definitions (settings at the destination of event notification).

[Format]

```
GET /event/alarms
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Alarms	array	List of Alarm Settings
AlarmId	string	Alarm Settings ID
AlarmName	string	Alarm Name
Resources	object	Resource Information
ResourceType	string	Type of Resource - Node - System - NodeGroup - AllNode
ResourceId	array(integer)	Resource ID
Events	object	Event Information
SNMPTrap	object	Trap Information
Severity	array(string)	Severity of Trap Selected from the following. - Critical - Major - Minor - Informational - Unknown
OID	array(string)	OID
ISMEvent	object	ISM Event Information
Severity	array(string)	Severity of ISM Event Selected from the following.

Parameter	Type	Description
		- Error - Warning - Info
EventInfo	array	ISM Event Information
EventId	string	ISM Event ID
Actions	array	Action Settings
ActionId	string	Action ID
IsActive	string	Status of Action Settings Selected from the following. - Enable: Enabled - Disable: Disabled

4.8.7 Updating of Alarm Settings

[Overview]

Updates an alarm settings definition (settings at the destination of event notification).

[Format]

```
PATCH /event/alarms/{alarmid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
AlarmName	string	Specify an Alarm Name.
Resources	object	Specify the Resource Information.
ResourceType	string	Specify a Type of Resource. Select from the following. - Node - System - NodeGroup - AllNode
ResourceId	array(integer)	Specify the Resource ID. If they are of the identical resource type, it is possible to specify multiple IDs. When the resource type is "System" or "AllNode" specify it with empty.
Events	object	Specify the Event Information. Specify either trap information or the ISM event information: You cannot set two kinds of information for the same alarm settings.

Parameter	Type	Description
SNMPTrap	object	Specify the Information of a Trap.
Severity	array(string)	Specify the Severity of a Trap. It is possible to specify multiple degrees of severity to the trap and to make the traps with the same severity specified the targets for alarm setting at once. Select severity from the following: - Critical - Major - Minor - Informational - Unknown
OID	array(string)	Specify the OID. It is possible to specify multiple symbol names and they can be the targets for alarm settings by trap.
ISMEvent	object	Specify the ISM event information.
Severity	array(string)	Specify the Severity level of ISM Event. It is possible to specify multiple degrees of severity to the ISM event and to make the events with the same severity specified the targets for alarm setting at once. Select severity from the following: - Error - Warning - Info
EventInfo	array	Specify the ISM event information individually.
EventId	string	Specify the ISM event ID. It is possible to specify multiple event IDs and they can be the targets for alarm settings by event.
Actions	array	Specify an Action Settings. It is possible to specify settings of action.
ActionId	string	Specify an Action ID. Action ID whose Action Type is "FirmExecuteRemoteCommand" cannot be specified.
IsActive	string	Specify a status of an Action Setting. Select from the following. - Enable: Enabled - Disable: Disabled

[Response Parameter]

Parameter	Type	Description
AlarmId	string	Alarm Settings ID

Parameter	Type	Description
AlarmName	string	Alarm Name
Resources	object	Resource Information
ResourceType	string	Type of Resource Selected from the following. - Node - System - NodeGroup - AllNode
ResourceId	array(integer)	Resource ID
Events	object	Event Information
SNMPTrap	object	Trap Information
Severity	array(string)	Severity of Trap Selected from the following. - Critical - Major - Minor - Informational - Unknown
OID	array(string)	OID
ISMEvent	object	ISM Event Information
Severity	array(string)	Severity of ISM Event Selected from the following. - Error - Warning - Info
EventInfo	array	ISM Event Information
EventId	string	ISM Event ID
Actions	array	Action Settings
ActionId	string	Action ID
IsActive	string	Status of Action Settings Selected from the following. - Enable: Enabled - Disable: Disabled

4.8.8 Deletion of Alarm Settings

[Overview]

Deletes an alarm settings definition (settings at the destination of event notification).

[Format]

```
DELETE /event/alarms/{alarmid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.8.9 Registration of SMTP Server Settings Information

[Overview]

Registers the settings for SMTP server that transmits during the mail notification action.

[Format]

```
PATCH /system/settings/smtpserver
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
SMTPServer		object	Specify the Information of SMTP Server.
	ServerNameType	string	Specify a Type of Server Name. Selectable from the following. IPv4, IPv6, FQDN
	ServerName	string	Specify the Name of a Server.
	UserName	string	Specify a User Name for SMTP auth. Specify null if not using SMTP auth.
	Password	string	Specify a Password for SMTP auth. Specify null if not using SMTP auth.
	PortNumber	integer	Specify the Number of a Port. When specifying null, default value 25 is assigned.

[Response Parameter]

Parameter		Type	Description
SMTPServer		object	SMTP Server Information
	ServerNameType	string	Type of Server Name One of the following is set. IPv4, IPv6, FQDN

Parameter		Type	Description
	ServerName	string	Server Name
	UserName	string	SMTP auth User Name
	PortNumber	integer	Port Number

4.8.10 Retrieval of SMTP Server Settings Information

[Overview]

Retrieves the settings information for the SMTP server that transmits during the mail notification action.

[Format]

```
GET /system/settings/smtpserver
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
SMTPServer		object	SMTP Server Information
	ServerNameType	string	Type of Server Name One of the following is set. IPv4, IPv6, FQDN
	ServerName	string	Server Name
	UserName	string	User Account at Authentication SMTP auth User Name
	PortNumber	integer	Port Number

4.8.11 Registration of SNMP Server Settings Information

[Overview]

Adds the settings of SNMP server that transmits during the SNMP event notification action.

[Format]

```
POST /event/snmpmanagers
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ServerNameType	string	Specify a Type of Server. Selectable from the following. IPv4, IPv6, FQDN
ServerName	string	Specify the Name of a Server.

Parameter	Type	Description
PortNumber	integer	Specify receive Port Number to be used in SNMP communication. When specifying null, 162 is automatically set.
SNMPVersion	string	Specify the Version of SNMP. Selectable from the following. v1, v2, v3
Community	string	Specify a Community Name. (Only when specifying v1 or v2 in SNMPVersion)
EngineId	string	Specify an Engine ID. (Only when specifying v3 in SNMPVersion)
Context	string	Specify a context name. (Only when specifying v3 in SNMPVersion)
SecurityLevel	string	Specify a Security Level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	Specify the Name of a User. (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Specify authentication protocols. Selectable from the following. MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
AuthPassword	string	Specify a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.
PrivProtocol	string	Specify a privacy protocol. Selectable from the following. DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
PrivPassword	string	Specify a privacy password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.

[Response Parameter]

Parameter	Type	Description
SNMPServerId	string	ID for Settings Management of SNMP
ServerNameType	string	Type of Server Name One of the following is set. IPv4, IPv6, FQDN
ServerName	string	Server Name
PortNumber	integer	Receive Port Number to be used in SNMP Communication
SNMPVersion	string	Version of SNMP One of the following is set. v1, v2, v3
Community	string	Community Name (Only when specifying v1 or v2 in SNMPVersion)
EngineId	string	Engine ID (Only when specifying v3 in SNMPVersion)
Context	string	Context Name (Only when specifying v3 in SNMPVersion)
SecurityLevel	string	Security level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	User Name (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Authentication Protocol MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
PrivProtocol	string	Privacy Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv by SecurityLevel)

4.8.12 List Retrieval for SNMP Server Settings Information

[Overview]

Retrieves all the information for the SNMP server that transmits during the SNMP event notification action.

[Format]

```
GET /event/snmpmanagers
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
SNMPServers		array	SNMP Settings Information
	SNMPServerId	string	SNMP Settings Management ID
	ServerNameType	string	Type of Server Name One of the following is set. IPv4, IPv6, FQDN
	ServerName	string	Server Name
	PortNumber	integer	Receive Port Number to be used in SNMP Communication
	SNMPVersion	string	Version of SNMP One of the following is set. v1, v2, v3
	Community	string	Community Name (Only when specifying v1 or v2 in SNMPVersion)
	EngineId	string	Engine ID (Only when specifying v3 in SNMPVersion)
	Context	string	Context Name (Only when specifying v3 in SNMPVersion)
	SecurityLevel	string	Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
	UserName	string	User Name (Only when specifying v3 in SNMPVersion)
	AuthProtocol	string	Authentication Protocol MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
	PrivProtocol	string	Privacy Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)

4.8.13 Updating of SNMP Server Settings Information

[Overview]

Updates the settings of the SNMP server that transmits during the SNMP event notification action.

[Format]

```
PATCH /event/snmpmanagers/{snmpserverid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ServerNameType	string	Specify a type of server name. Selectable from the following. IPv4, IPv6, FQDN
ServerName	string	Specify the name of a server.
PortNumber	integer	Specify receive port number to be used in SNMP communication. When specifying null, 162 is automatically set.
SNMPVersion	string	Specify the Version of SNMP. Selectable from the following. v1, v2, v3
Community	string	Specify a community name. (Only when specifying v1 or v2 in SNMPVersion)
EngineId	string	Specify an Engine ID. (Only when specifying v3 in SNMPVersion)
Context	string	Specify a context name. (Only when specifying v3 in SNMPVersion)
SecurityLevel	string	Specify a security level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	Specify the name of a user. (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Specify authentication protocols. Selectable from the following. MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
AuthPassword	string	Specify a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.
PrivProtocol	string	Specify a privacy protocol. Selectable from the following. DES, AES (Only when specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
PrivPassword	string	Specify a privacy password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)

Parameter	Type	Description
		The length of the string before encryption should be 8 characters at minimum.

[Response Parameter]

Parameter	Type	Description
SNMPServerId	string	SNMP Settings Management ID
ServerNameType	string	Type of Server Name One of the following is set. IPv4, IPv6, FQDN
ServerName	string	Server Name
PortNumber	integer	Receive Port Number to be used in SNMP Communication
SNMPVersion	string	Version of SNMP One of the following is set. v1, v2, v3
Community	string	Community Name (Only when specifying v1 or v2 in SNMPVersion)
EngineId	string	Engine ID (Only when specifying v3 in SNMPVersion)
Context	string	Context Name (Only when specifying v3 in SNMPVersion)
SecurityLevel	string	Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	User Name (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Authentication Protocol MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
PrivProtocol	string	Privacy Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)

4.8.14 Deletion of SNMP Server Settings Information

[Overview]

Deletes the settings of the SNMP server that transmits during the SNMP event notification action.

[Format]

```
DELETE /event/snmpmanagers/{snmpserverid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.8.15 List Retrieval for Available SNMP Traps

[Overview]

Retrieves all the information of the available SNMP traps.

[Format]

```
GET /event/alarms/traplist
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
SNMPTraps		array	Trap Information List
	TrapType	string	Symbol Name of Trap
	OID	string	OID of Trap
	Description	string	Description of Trap
	MibName	string	MIB Name of Trap
	Severity	string	Severity of Trap Selected from the following: - Critical - Major - Minor - Informational - Unknown
	TargetRemoteReport	boolean	Displays whether it is a target for remote report. - False: Not a target - True: Target

4.8.16 List Retrieval for Available ISM Event IDs

[Overview]

Retrieves a list of the available ISM event IDs.

[Format]

```
GET /event/alarms/eventlist
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
ISMEvents		array	List of Event Information
	EventId	string	Event ID
	EventType	string	Event Type
	Description	string	Description of Event
	Severity	string	Severity of Event
	ResourceType	array(string)	Resource Type to be the Target of the Event Selected from the following. - Node - Facility - NodeGroup - System

4.8.17 List Retrieval for Logs for Received SNMP Traps

[Overview]

Retrieves a list of the reception histories of the SNMP trap.

[Format]

```
GET /event/history/trap
```

[Query Parameter]

Parameter	Type	Description
StartTime	string	Retrieves data after the specified date. The format is RFC3339.
EndTime	string	Retrieves data before the specified date. The format is RFC3339.
ResourceIdType	string	Retrieves data of specified resource types. Usable any of the following. - Node: Specific node - Unknown: ISM unregistered node
ResourceId	string	Can add and specify only when selecting Node in ResourceType. Retrieves all applicable nodes when specifying more than one.
TrapLogId	string	Retrieves data of the specified Trap Log ID. If you specified multiple IDs, all applicable data is retrieved.

[Response Parameter]

Parameter		Type	Description
TrapLogs		array	Trap Log List
	TrapLogId	string	Trap Log ID
	TimeStamp	string	Time/Date of Receiving Trap
	TrapType	string	Symbol Name of Trap
	OID	string	OID
	TrapMessage	string	Message of Trap
	ResourceType	string	Type of Resource at the Origin of Transmission of the Trap. Selected from the following. - Node - Unknown
	ResourceId	integer	Resource ID of Origin of Transmission of the Trap
	Severity	string	Severity of the Trap Selected from the following. - Critical - Major - Minor - Informational - Unknown

4.8.18 Registration of SNMP Traps To Be Excluded

[Overview]

Registers the traps to be excluded in a list.

[Format]

```
POST /event/history/trap/ignore
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ResourceType	string	Specify a type of resource. - Node
ResourceId	integer	Specify the Resource ID.
OID	string	Specify the OID of a trap

[Response Parameter]

Parameter	Type	Description
ResourceType	string	Type of Resource Selected from the following. - Node
ResourceId	integer	Resource ID
OID	string	OID of Trap

4.8.19 List Retrieval for Information on Excluded SNMP Traps

[Overview]

Retrieves a list of the information of the excluded traps.

[Format]

```
GET /event/history/trap/ignore
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
IgnoredSNMPTraps		array	List of Traps for Exclusion
	ResourceType	string	Type of Resource Selected from the following. - Node
	ResourceId	integer	Resource ID
	OID	string	Symbol Name of Trap

4.8.20 Deletion of Excluded SNMP Traps

[Overview]

Deletes excluded traps from the list.

[Format]

```
POST /event/history/trap/ignore/delete
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ResourceType	string	Specify a type of resource. - Node
ResourceId	integer	Specify the Resource ID.

Parameter	Type	Description
OID	string	Specify the OID of a trap.

[Response Parameter]

None

4.8.21 Registration of Shared Alarm Settings

[Overview]

Registers information of the settings commonly used in the alarm settings.

[Format]

```
PATCH /event/alarms/settings
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
InhibitionInterval	integer	Specifies the period for inhibiting trap reception. Inhibits reception of the same trap from the same resource in the period.

[Response Parameter]

Parameter	Type	Description
InhibitionInterval	integer	Duration to Inhibit Trap Reception

4.8.22 Retrieval of Shared Alarm Settings

[Overview]

Retrieves the information of the settings commonly used in the alarm settings.

[Format]

```
GET /event/alarms/settings
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
InhibitionInterval	integer	Duration to Inhibit Trap Reception

4.8.23 Test Execution of Actions

[Overview]

Executes a test of the specified action.

[Format]

```
POST /event/actions/{actionid}/test
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
TestEvent		object	Specify event information as parameters at test run of an action.
	ResourceType	string	Specify a type of resource. Select from the following. - System - Node - Disable When unspecified, it automatically will be substituted by System.
	ResourceId	integer	Specify the Resource ID. When a resource type is specified as Node, a specification is essential.
	EventType	string	Specify an Event Type. Select from the following. - ISMEvent - SNMPTrap When unspecified, it automatically will be substituted by SNMPTrap.

[Response Parameter]

Parameter		Type	Description
TestEvent		object	Parameters at Test Run of an Action
	ResourceType	string	Resource Types
	ResourceId	integer	Resource ID
	EventType	string	Event Type

4.8.24 Adding Information on SNMP Trap Reception Settings

[Overview]

Adds reception settings for the SNMP trap.

[Format]

```
POST /system/settings/snmptrapsettings
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
SNMPVersion	string	Specify the Version of SNMP. Selectable from the following. v1/v2, v3
Community	string	Specify a community name. (Only when specifying v1/v2 in SNMPVersion)
SecurityLevel	string	Specify a security level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	Specify the name of a user. (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Specify authentication protocols. Selectable from the following. MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
AuthPassword	string	Specify a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.
PrivProtocol	string	Specify a privacy protocol. Selectable from the following. DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
PrivPassword	string	Specify a privacy password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.
NodeList	array	Specify node information that uses the SNMP trap reception settings. When SNMPv3, a specification is essential.
NodeId	integer	Specify the Node ID.
EngineId	string	Specify the Engine ID.

[Response Parameter]

Parameter	Type	Description
SNMPTrapSettingsId	string	SNMP Trap Settings ID
SNMPVersion	string	SNMP Version One of the following is set. v1/v2, v3
Community	string	Community Name (Only when specifying v1/v2 in SNMPVersion)
SecurityLevel	string	Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	User Name (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Authentication Protocol MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
PrivProtocol	string	Privacy Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
NodeList	array	Node Information List (Only when specifying v3 in SNMPVersion)
NodeId	integer	Node ID
EngineId	string	Engine ID

4.8.25 Retrieval for Information on SNMP Trap Reception Settings

[Overview]

Retrieves the SNMP trap reception settings.

[Format]

```
GET /system/settings/snmptrapsettings
```

[Query Parameter]

Parameter	Type	Description
nodeid	integer	Specify a node ID. Retrieves all corresponding SNMP trap reception settings when specifying more than one.

[Response Parameter]

Parameter			Type	Description
SNMPTrapSettings			array	
	SNMPTrapSettingsId		string	SNMP Trap Settings ID
	SNMPVersion		string	SNMP Version One of the following is set. v1/v2, v3
	Community		string	Community Name (Only when specifying v1/v2 in SNMPVersion)
	SecurityLevel		string	Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
	UserName		string	User Name (Only when specifying v3 in SNMPVersion)
	AuthProtocol		string	Authentication Protocol MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
	PrivProtocol		string	Privacy Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
	NodeList		array	Node Information List
		NodeId	integer	Node ID
		EngineId	string	Engine ID

4.8.26 Updating Information on SNMP Trap Reception Settings

[Overview]

Updates the SNMP trap reception settings.

[Format]

```
PATCH /system/settings/snmptrapsettings/{snmptrapsettingsid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
SNMPVersion	string	Specify the Version of SNMP. Selectable from the following. v1/v2, v3
Community	string	Specify a community name.

Parameter	Type	Description
		(Only when specifying v1/v2 in SNMPVersion)
SecurityLevel	string	Specify a security level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	Specify the name of a user. (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Specify authentication protocols. Selectable from the following. MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
AuthPassword	string	Specify a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.
PrivProtocol	string	Specify a privacy protocol. Selectable from the following. DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
PrivPassword	string	Specify a privacy password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) The length of the string before encryption should be 8 characters at minimum.
NodeList	array	Specify node information that uses the SNMP trap reception settings. When SNMPv3, a specification is essential.
NodeId	integer	Specify the Node ID.
EngineId	string	Specify the Engine ID.

[Response Parameter]

Parameter	Type	Description
SNMPTrapSettingsId	string	SNMP Trap Settings ID
SNMPVersion	string	SNMP Version One of the following is set. v1/v2, v3
Community	string	Community Name (Only when specifying v1/v2 in SNMPVersion)

Parameter	Type	Description
SecurityLevel	string	Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion)
UserName	string	User Name (Only when specifying v3 in SNMPVersion)
AuthProtocol	string	Authentication Protocol MD5, SHA, SHA-256, SHA-384, SHA-512 (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel)
PrivProtocol	string	Privacy Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel)
NodeList	array	Node Information List (Only when specifying v3 in SNMPVersion)
NodeId	integer	Node ID
EngineId	string	Engine ID

4.8.27 Deletion of Information on SNMP Trap Reception Settings

[Overview]

Deletes the SNMP trap reception settings.

[Format]

```
DELETE /system/settings/snmptrapsettings/{snmptrapsettingsid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.9 Event List Management

4.9.1 Output of Log Type

[Overview]

Retrieves the information on the type of logs that can be used.

[Format]

```
GET /event/history
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
LogTypes		array	Log Type Information
	Name	string	Log Type Name - event: Operation Log - audit: Audit Log - anomaly: Anomaly Detection Log
	Description	string	Description

4.9.2 List Retrieval for Operation Logs

[Overview]

Searches Operation Logs according to the specified requirements.

Query parameters can be used to narrow down the Operation Logs to retrieve.

[Format]

```
GET /event/history/event/show
```

[Query Parameter]

Parameter	Type	Description
loglevel	string	Narrowing down by severity (Level) Multiple severities can be set.
logtype	string	Narrowing down by the Type of Operation Logs (Type)
start	string	Narrowing down by the Start of Date and Time of Occurrence (OccurrenceDate) YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
end	string	Narrowing down by the End of Date and Time of Occurrence (OccurrenceDate) YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
resourceidtype	string	Narrowing down by the Use of Resource ID Type In this narrowing, specifying of the resource ID is required.
resourceid	integer	Narrowing down by Resource ID Can specify more than one resource ID. In this narrowing, specifying of the resource ID is required.

Parameter	Type	Description
messageid	string	Narrowing down by Message ID
extendedmessage	string	Narrowing down by Extended Message
operator	string	Narrowing down by Operator
continuekey	string	Continued Read Key

[Response Parameter]

Parameter	Type	Description
Logs	array	List of Log Information
Id	string	Log ID Range: 1-999999
OccurrenceDate	string	Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
Level	string	Severity
MessageId	string	Message ID
Message	string	Message
Type	string	Types of Operation Logs
TargetInfo	object	Target Information
Name	string	Resource Name
ResourceIdType	string	Type of Resource ID
ResourceId	integer	Resource ID
Operator	string	Operator
LinkLogType	string	Link Log Type - SNMPTrap: SNMP Trap Log - ISMEvent: Operation Log - anomaly: Anomaly Detection Log
LinkLogId	string	Link Log ID
RelationalInfo	object	Related information
TaskId	string	Task ID
SubTaskIdList	string- array	List of SubTask ID
WebUrl	string	WebURL (such as the WebUI of a device) to use in main
LogUrl	string	Log URL
LinkLogType	string	Link Log Type
LinkLogId	string	Link Log ID
FirmwareName	string	Firmware Name
FirmwareVersion	string	Firmware Version
RowCounter	integer	Total Search Queries
ContinueKey	string	Continued Read Key

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can retrieve the all log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only their own log information and the log information of the members in the same group can be searched.
- When the same key has been specified several times in query parameters, the one specified last becomes valid.
- When omitting start time/date and end time/date, all of the log information is to become targets for narrowing.
- When omitting start time/date, log information before the end time/date is to become targets for narrowing. Also, when omitting end time/date, log information after the start time/date becomes targets for narrowing.
- When there is no log information as target output, it outputs 0 for log information.
- When information for logs exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new log registration.
- Without changing conditions for narrowing down, the rest of the log information can be output by specifying the value of the response parameter, "ContinueKey" as a value of query parameter, "continuekey."
- When narrowing down, specify values of corresponding output results of "4.9.2 List Retrieval for Operation Logs" and "4.9.5 Individual Retrieval of Operation Logs" as specified values for query parameters.
- Link Log ID notifies the following log IDs that correspond to the Link Log Type.

Link Log Type	Link Log ID
SNMPTrap	An ID that is specified for "TrapLogId (Trap Log ID key)" in [Query Parameter] in "4.8.17 List Retrieval for Logs for Received SNMP Traps."
ISMEvent	An ID that is specified for {logid} in [Format] in "4.9.5 Individual Retrieval of Operation Logs."

- Related information (RelationalInfo) notifies you when there is information related to log information.

4.9.3 List Retrieval for Audit Logs

[Overview]

Searches Audit Logs according to set requirements.

Query parameters can be used to narrow down the Audit Logs to retrieve.

[Format]

```
GET /event/history/audit/show
```

[Query Parameter]

Parameter	Type	Description
loglevel	string	Narrowing down by Severity (Level) Multiple severities can be set.
logtype	string	Narrowing down by the Type of Audit Logs (Type)
start	string	Narrowing down by the Start of Date and Time of Occurrence (OccurrenceDate) YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
end	string	Narrowing down by the End of Date and Time of Occurrence (OccurrenceDate)

Parameter	Type	Description
		YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
resourceidtype	string	Narrowing down by the Use of Resource ID Type In this narrowing, specifying of the resource ID is required.
resourceid	integer	Narrowing down by Resource ID Can specify more than one resource ID. In this narrowing, specifying of the resource ID is required.
messageid	string	Narrowing down by Message ID
extendedmessage	string	Narrowing down by Extended Message
operator	string	Narrowing down by Operator
continuekey	string	Continued Read Key

[Response Parameter]

Parameter		Type	Description
Logs		array	List of Log Information
	Id	string	Log ID Range: 1-999999
	OccurrenceDate	string	Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
	Level	string	Severity
	MessageId	string	Message ID
	Message	string	Message
	Type	string	Types of Audit Logs
	TargetInfo	object	Target Information
	Name	string	Resource Name
	ResourceIdType	string	Type of Resource ID
	ResourceId	integer	Resource ID
	UserInfo	object	User Information
	IpAddress	string	IP Address at Access Source
	Operator	string	Operator
	UserId	string	User ID
	SessionId	string	Session ID
	RelationalInfo	object	Related information
	TaskId	string	Task ID
	SubTaskIdList	string- array	List of SubTask ID
	WebUrl	string	WebURL (such as the WebUI of a device) to use in main
	LogUrl	string	Log URL
RowCounter		integer	Total Search Queries

Parameter	Type	Description
ContinueKey	string	Continued Read Key

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can search log information.
- When the same key has been specified several times in query parameters, the one specified last becomes valid.
- When omitting start time/date and end time/date, all of the log information is to become targets for narrowing.
- When omitting start time/date, log information before the end time/date is to become targets for narrowing. Also, when omitting end time/date, log information after the start time/date becomes targets for narrowing.
- When there is no log information as target output, it outputs 0 for log information.
- When information for logs exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new log registration.
- Without changing conditions for narrowing down, the rest of the log information can be output by specifying the value of the response parameter, "ContinueKey" as a value of query parameter, "continuekey."
- When narrowing down, narrowing, specify values of corresponding output results of "4.9.3 List Retrieval for Audit Logs" and "4.9.6 Individual Retrieval of Audit Logs" as specified values for query parameters.
- Related information (RelationalInfo) notifies you when there is information related to log information.

4.9.4 List Retrieval for Anomaly Detection Logs

[Overview]

Searches Anomaly Detection Logs according to set requirements.

Query parameters can be used to narrow down the Anomaly Detection Logs to retrieve.

[Format]

```
GET /event/history/anomaly/show
```

[Query Parameter]

Parameter	Type	Description
loglevel	string	Narrowing down by Severity (Level) Multiple severities can be set.
logtype	string	Narrowing down by the Type of Anomaly Detection Logs (Type)
start	string	Narrowing down by the Start of Date and Time of Occurrence (OccurrenceDate) YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
end	string	Narrowing down by the End of Date and Time of Occurrence (OccurrenceDate) YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
resourceidtype	string	Narrowing down by the Use of Resource ID Type In this narrowing, specifying of the resource ID is required.

Parameter	Type	Description
resourceid	integer	Narrowing down by Resource ID Can specify more than one resource ID. In this narrowing, specifying of the resource ID is required.
messageid	string	Narrowing down by Message ID
extendedmessage	string	Narrowing down by Extended Message
operator	string	Narrowing down by Operator
continuekey	string	Continued Read Key

[Response Parameter]

Parameter			Type	Description
Logs			array	List of Log Information
	Id		string	Log ID Range: 1-199999
	OccurrenceDate		string	Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
	Level		string	Severity
	MessageId		string	Message ID
	Message		string	Message
	Type		string	Types of Anomaly Detection Logs
	TargetInfo		object	Target Information
		Name	string	Resource Name
		ResourceIdType	string	Type of Resource ID
		ResourceId	integer	Resource ID
	Operator		string	Operator
	RelationalInfo		object	Related information
		SolutionId	string	Solution ID for Anomaly Detection
		DetectId	string	Detect ID for Anomaly Detection
RowCounter			integer	Total Search Queries
ContinueKey			string	Continued Read Key

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can retrieve the all log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only their own log information and the log information of the members in the same group can be searched.
- When the same key has been specified several times in query parameters, the one specified last becomes valid.
- When omitting start time/date and end time/date, all of the log information is to become targets for narrowing.
- When omitting start time/date, log information before the end time/date is to become targets for narrowing. Also, when omitting end time/date, log information after the start time/date becomes targets for narrowing.
- When there is no log information as target output, it outputs 0 for log information.

- When information for logs exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new log registration.
- Without changing conditions for narrowing down, the rest of the log information can be output by specifying the value of the response parameter, "ContinueKey" as a value of query parameter, "continuekey."
- When narrowing down, specify values of corresponding output results of "4.9.4 List Retrieval for Anomaly Detection Logs" and "4.9.7 Individual Retrieval of Anomaly Detection Logs" as specified values for query parameters.
- Related information (RelationalInfo) notifies you when there is information related to log information.

4.9.5 Individual Retrieval of Operation Logs

[Overview]

Retrieves detailed information of the specified Operation Log number.

[Format]

```
GET /event/history/event/logs/{logid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Logs	object	Log Information
Id	string	Log ID Range: 1-999999
OccurrenceDate	string	Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
Level	string	Severity
MessageId	string	Message ID
Message	string	Message
Type	string	Types of Operation Logs
TargetInfo	object	Target Information
Name	string	Resource Name
ResourceIdType	string	Type of Resource ID
ResourceId	integer	Resource ID
UserGroupId	string	User Group Information
Operator	string	Operator
LinkLogType	string	Link Log Type - SNMPTrap: SNMP Trap Log - ISMEvent: Operation Log
LinkLogId	string	Link Log ID
RelationalInfo	object	Related information
TaskId	string	Task ID

Parameter			Type	Description
		SubTaskIdList	string- array	List of SubTask ID
		WebUrl	string	WebURL (such as the WebUI of a device) to use in main
		LogUrl	string	Log URL
		LinkLogType	string	Link Log Type
		LinkLogId	string	Link Log ID
		FirmwareName	string	Firmware Name
		FirmwareVersion	string	Firmware Version

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can output all of the detailed log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the log information of the members in the same group can be retrieved.
- Link Log ID notifies the following log IDs that are corresponding to the Link Log Type.

Link Log Type	Link Log ID
SNMPTrap	An ID that is specified for "TrapLogId (Trap Log ID key) in [Query Parameter] in "4.8.17 List Retrieval for Logs for Received SNMP Traps."
ISMEvent	An ID that is specified for {logid} in [Format] in "4.9.5 Individual Retrieval of Operation Logs."

- Related information (RelationalInfo) notifies you when there is information related to log information.

4.9.6 Individual Retrieval of Audit Logs

[Overview]

Retrieves detailed information of the specified Audit Log number.

[Format]

```
GET /event/history/audit/logs/{logid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Logs		object	Log Information
	Id	string	Log ID Range: 1-999999
	OccurrenceDate	string	Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
	Level	string	Severity
	MessageId	string	Message ID

Parameter			Type	Description
	Message		string	Message
	Type		string	Types of Audit Logs
	TargetInfo		object	Target Information
		Name	string	Resource Name
		ResourceIdType	string	Type of Resource ID
		ResourceId	integer	Resource ID
	UserGroupId		string	User Group Information
	UserInfo		object	User Information
		IpAddress	string	IP Address at Access Source Presently it is not supported.
		Operator	string	Operator
		UserId	string	User ID
		SessionId	string	Session ID
	RelationalInfo		object	Related information
		TaskId	string	Task ID
		SubTaskIdList	string- array	List of SubTask ID
		WebUrl	string	WebURL (such as the WebUI of a device) to use in main
		LogUrl	string	Log URL

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can output the detailed log information.
- Related information (RelationalInfo) notifies you when there is information related to log information.

4.9.7 Individual Retrieval of Anomaly Detection Logs

[Overview]

Retrieves detailed information of the specified Anomaly Detection Logs number.

[Format]

```
GET /event/history/anomaly/logs/{logid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Logs		object	Log Information
	Id	string	Log ID Range: 1-199999
	OccurrenceDate	string	Date and Time of Occurrence

Parameter			Type	Description
				YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
	Level		string	Severity
	MessageId		string	Message ID
	Message		string	Message
	Type		string	Types of Anomaly Detection Logs
	TargetInfo		object	Target Information
		Name	string	Resource Name
		ResourceIdType	string	Type of Resource ID
		ResourceId	integer	Resource ID
	UserGroupId		string	User Group Information
	Operator		string	Operator
	RelationalInfo		object	Related information
		SolutionId	string	Solution ID for Anomaly Detection
		DetectId	string	Detect ID for Anomaly Detection

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can output all of the detailed log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the log information of the members in the same group can be retrieved.
- Related information (RelationalInfo) notifies you when there is information related to log information.

4.9.8 Export of Operation Logs

[Overview]

Searches Operation Logs according to the set requirements and exports them in ZIP format.

[Format]

```
POST /event/history/event/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
StartTime	string	Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
EndTime	string	Narrowing down by the End of Date and Time of Occurrence

Parameter	Type	Description
		YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)

[Response Parameter]

Parameter			Type	Description
StoreInfo			object	Storing Information
	Url		string	URL of Storage Destination
	Log		object	Log File Information
		Name	string	Stored Log File Name Events_YYYYMMDD-hhmmss_xxx.zip (YYMMDD-hhmmss_xxx displays date of creation as yearmonthday-hourminutesecond_millisecond)
		Size	integer	File Size Unit: byte

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can export all of the log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the log information of the members in the same group can be retrieved.
- When omitting start time/date and end time/date, all of the log information is to become targets for narrowing.
- When omitting start time/date, log information before the end time/date is to become targets for narrowing. Also, when omitting end time/date, log information after the start time/date becomes targets for narrowing.

4.9.9 Export of Audit Logs

[Overview]

Searches Audit Logs according to the set requirements and exports them in ZIP format.

[Format]

```
POST /event/history/audit/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
StartTime	string	Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
EndTime	string	Narrowing down by the End of Date and Time of Occurrence

Parameter	Type	Description
		YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)

[Response Parameter]

Parameter			Type	Description
StoreInfo			object	Storing Information
	Url		string	URL of Storage Destination
	Log		object	Log File Information
		Name	string	Stored Log File Name Audits_YYYYMMDD-hhmmss_xxx.zip (YYMMDD-hhmmss_xxx displays date of creation as yearmonthday-hourminutesecond_millisecond)
		Size	integer	File Size Unit: byte

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can export log information.
- When omitting start time/date and end time/date, all of the log information is to become targets for narrowing.
- When omitting start time/date, log information before the end time/date is to become targets for narrowing. Also, when omitting end time/date, log information after the start time/date becomes targets for narrowing.

4.9.10 Export of Anomaly Detection Logs

[Overview]

Searches Anomaly Detection Logs according to the set requirements and exports them in ZIP format.

[Format]

```
POST /event/history/anomaly/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
StartTime	string	Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
EndTime	string	Narrowing down by the End of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)

[Response Parameter]

Parameter			Type	Description
StoreInfo			object	Storing Information
	Url		string	URL of Storage Destination
	Log		object	Log File Information
		Name	string	Stored Log File Name Anomalies_YYYYMMDD-hhmmss_xxx.zip (YYMMDD-hhmmss_xxx displays date of creation as yearmonthday-hourminutesecond_millisecond)
		Size	integer	File Size Unit: byte

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can export all of the log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the log information of the members in the same group can be retrieved.
- When omitting start time/date and end time/date, all of the log information is to become targets for narrowing.
- When omitting start time/date, log information before the end time/date is to become targets for narrowing. Also, when omitting end time/date, log information after the start time/date becomes targets for narrowing.

4.9.11 Display of Retention Periods

[Overview]

Displays the number of days to retain the log files for Operation Log, Audit Log, or Anomaly Detection Log retrieved by export.

[Format]

```
GET /event/history/retentionperiod/settings
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
StoreTerm	integer	Log Retention Period Setting range: 1-365

4.9.12 Renewal of Retention Periods

[Overview]

Updates the number of days to retain the log files for the Operation Log, Audit Log, or Anomaly Detection Log retrieved by export.

[Format]

```
PATCH /event/history/retentionperiod/settings
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
StoreTerm	integer	Log Retention Period Setting range: 1-365

[Response Parameter]

Parameter	Type	Description
StoreTerm	integer	Log Retention Period Setting range: 1-365

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can update.

4.10 Profile Management

4.10.1 List Retrieval for Profile Categories

[Overview]

Retrieves a profile category list.

[Format]

```
GET /profiles/categories
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Server		array	Classification: Server
	CategoryId	string	Category ID
	CategoryName	string	Category Name - Server-BX: Server PRIMERGY BX series - Server-RX: Server PRIMERGY RX series - Server-TX: Server PRIMERGY TX series - Server-CX: Server PRIMERGY CX series - Server-PRIMEQUEST2000-Partition: Server PRIMEQUEST 2000 series - Server-PRIMEQUEST2000B: Server PRIMEQUEST 2000B

Parameter		Type	Description
			- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B - Server-PRIMEQUEST3000E-Partition: Server PRIMEQUEST 3000E series - Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series - Server: Other
Storage		array	Classification: Storage
	CategoryId	string	Category ID
	CategoryName	string	Category Name - Storage-DX: Storage ETERNUS DX series - Storage-OntapCluster: Storage ETERNUS NR, AX, HX, AC series
Switch		array	Classification: Switch
	CategoryId	string	Category ID
	CategoryName	string	Category Name - Switch-SRX: Server housing switch SR-X series - Switch-CFX: Converged fabric switch CFX series - Switch-VDX: Converged switch VDX series - Switch-PSWITCH: Ethernet switch PSWITCH series
Other		array	Classification: Other
	CategoryId	string	Category ID
	CategoryName	string	Category Name - Other
Monitoring		array	Classification: Monitoring
	CategoryId	string	Category ID
	CategoryName	string	Category Name - Monitoring

4.10.2 Conversion of Profile Categories

[Overview]

Converts profiles into the applicable categories of the profile by using the model name specified.

[Format]

```
POST /profiles/categories
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Model	string	Model

[Response Parameter]

Parameter	Type	Description
CategoryId	string	Category ID
CategoryName	string	Category Name - Server-BX: Server PRIMERGY BX series - Server-RX: Server PRIMERGY RX series - Server-TX: Server PRIMERGY TX series - Server-CX: Server PRIMERGY CX series - Server-PRIMEQUEST2000-Partition: Server PRIMEQUEST 2000 series - Server-PRIMEQUEST2000B: Server PRIMEQUEST 2000B - Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B - Server-PRIMEQUEST3000E-Partition: Server PRIMEQUEST 3000E series - Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series - Storage-DX: Storage ETERNUS DX series - Storage-OntapCluster: Storage ETERNUS NR, AX, HX, AC series - Switch-SRX: server housing switch SR-X series - Switch-CFX: converged fabric switch CFX series - Switch-VDX: converged switch VDX series - Switch-PSWITCH: Ethernet switch PSWITCH series - Other

4.10.3 Adding Profiles

[Overview]

Adds a profile.

[Format]

```
POST /profiles/profiles
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProfileName	string	Profile name
Description	string	Description of Profile
CategoryId	string	Category ID
ProfileGroupId	string	Profile Group ID to save
ReferencePolicyList	array	Policy list used in the succession referenced The maximum value is 3000.
PolicyId	string	Policy ID used in the succession referenced
OneTimePasswordKey	string	One-time Encryption Key for Password Information Set the password encrypted with AES256+Base64 and assign the encryption key for all password information in ProfileData.
ProfileData	object	Profile Settings
Server-BX	object	Server PRIMERGY BX series
BIOS	object	BIOS Settings For details, refer to "BIOS" in "C.1 Server-BX."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "iRMC" in "C.1 Server-BX."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-RX	object	Server PRIMERGY RX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings When both this RAID settings and "RaidConfig" of "OSInstallation" have been set, this RAID settings are prioritized. For details, refer to "D.7 RAID."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings

Parameter	Type	Description
		For details, refer to "D.4 OSInstallation."
Server-TX	object	Server PRIMERGY TX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings When both this RAID settings and "RaidConfig" of "OSInstallation" have been set, this RAID settings are prioritized. For details, refer to "D.7 RAID."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-CX	object	Server PRIMERGY CX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings When both this RAID settings and "RaidConfig" of "OSInstallation" have been set, this RAID settings are prioritized. For details, refer to "D.7 RAID."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST2000-Partition	object	Server PRIMEQUEST 2000 series (Partition)
MMB	object	MMB (Management Board) Partition Settings

Parameter	Type	Description
		For details, refer to "D.5 MMB."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST2000B	object	Server PRIMEQUEST 2000B
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST3000B	object	Server PRIMEQUEST 3000B
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST3000E-Partition	object	Server PRIMEQUEST 3000E series
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST4000E-Partition	object	Server PRIMEQUEST 4000E series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings

Parameter	Type	Description
		For details, refer to "D.4 OSInstallation."
Storage-DX	object	Storage ETERNUS DX series disk storage system
StandRaid	object	Raid Settings For details, refer to "StandRaid" in "C.2 Storage-DX."
GHotSpare	object	Hot Spares Settings For details, refer to "GHotSpare" in "C.2 Storage-DX."
HostAffinity	object	Host Affinity Settings For details, refer to "HostAffinity" in "C.2 Storage-DX."
DetailSettings	object	Detail Settings of Profile For details, refer to "DetailSettings" in "C.2 Storage-DX."
Storage-OntapCluster	object	Storage ETERNUS NR, AX, HX, AC series Network Disk Array
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.3 Storage-NetAppCluster"
Ntp	object	Information of Auto Time Adjustment For details, refer to "Ntp" in "C.3 Storage-NetAppCluster."
Switch-SRX	object	Server Housing Switch SR-X series
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.4 Switch-SRX."
AutoTime	object	Automatic Time Setting Information For details, refer to "AutoTime" in "C.4 Switch-SRX."
Account	object	Information on Password of the Administrator of the Device For details, refer to "Account" in "C.4 Switch-SRX."
Stp	object	STP For details, refer to "Stp" in "C.4 Switch-SRX."
Switch-CFX	object	Converged Fabric Switch CFX series
Interface	array	Interface Information Setting available for up to a maximum of 256. For details, refer to "Interface" in "C.5 Switch-CFX."
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.5 Switch-CFX."
AutoTime	object	Automatic Time Setting Information

Parameter	Type	Description
		For details, refer to "AutoTime" in "C.5 Switch-CFX."
Account	object	Information on Password of the Administrator of the Device For details, refer to "Account" in "C.5 Switch-CFX."
Aaa	object	AAA Information For details, refer to "Aaa" in "C.5 Switch-CFX."
Switch-VDX	object	Converged switch VDX series
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.6 Switch-VDX."
AutoTime	object	Automatic Time Setting Information For details, refer to "AutoTime" in "C.6 Switch-VDX."
Account	object	Account Information For details, refer to "Account" in "C.6 Switch-VDX."
Switch-PSWITCH	object	Ethernet Switch PSWITCH series
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.7 Switch-PSWITCH."
AutoTime	object	Automatic Time Setting Information For details, refer to "AutoTime" in "C.7 Switch-PSWITCH."
Account	object	Account Information For details, refer to "Account" in "C.7 Switch-PSWITCH."

[Response Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID
ProfileName	string	Profile Name

4.10.4 List Retrieval for Profiles

[Overview]

Retrieves a profile list.

[Format]

```
GET /profiles/profiles
```

[Query Parameter]

Parameter	Type	Description
status	string	Assigned Status - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile, which is for other than OS, is edited and takes on unassigned status (there is a finite difference between the profile and the device) - mismatch os: only an assigned OS profile is edited (cannot be re-assigned) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed When 'assigned' is specified, a list of profiles assigned to the nodes is output.
verifystatus	string	Verified Status - invalid: out of the target for verification - match: status of matching - mismatch: status of mismatching - processing: verifying the target - unknown: failed to verify the target - canceling: verification is being canceled - canceled: verification was canceled
categoryid	string	Category ID The profile list belonging to the specified category is output.
profilegroupid	string	Profile Group ID The profile list belonging to the specified profile group is output.
referencepolicyid	string	Policy ID using the succession referenced The profile list using the specified policy in the referential succession is output.
assignednodeid	integer	Assigned Node ID The profile list for specified assigned Node ID is output.
modelname	string	Model Name The list of profiles for each model of specified model name is output.

[Response Parameter]

Parameter	Type	Description
ProfileList	array	Profile List

Parameter	Type	Description
		The maximum value is 2000.
ProfileId	string	Profile ID
ProfileName	string	Profile Name
Description	string	Description of Profile
CategoryId	string	Category ID
CategoryName	string	Category Name For details, refer to "CategoryName" in "4.10.2 Conversion of Profile Categories."
ProfileGroupId	string	Profile Group ID that it currently belongs to
PathName	string	Path Name for this profile group
ReferencePolicyList	array	Policy List used in the succession referenced The maximum value is 3000.
PolicyId	string	Policy ID used in the succession referenced
AssignedNodeId	integer	Node ID Assigned Null when unassigned.
Status	string	Displays assigned Status. - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile, which is for other than OS, is edited and takes on unassigned status (there is a finite difference between the profile and the device) - mismatch os: only an assigned OS profile is edited (cannot be re-assigned) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed
InternalStatus	object	Internal Status
BiosStatus	string	Displays the Assignment Status for BIOS Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process
IrmcStatus	string	Displays the Assignment Status for iRMC Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete

Parameter	Type	Description
		- reassign: profile update available - processing: assignment in process Output when the CategoryId is: - 1 (Server-BX) - 2 (Server-CX) - 3 (Server-RX) - 5 (Server-PRIMEQUEST3000B) - 7 (Server-TX) - 9 (Server-PRIMEQUEST4000E-Partition)
MmbStatus	string	Displays the Assignment Status for MMB Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process Output when the CategoryId is: - 4 (Server-PRIMEQUEST2000-Partition) - 6 (Server-PRIMEQUEST3000E-Partition) - 8 (Server-PRIMEQUEST2000B)
IovStatus	string	Displays the Assignment Status for IOVirtualization profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process
OsStatus	string	Displays the Assignment Status for OS Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process
RaidStatus	string	Displays the RAID configuration status. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process

Parameter	Type	Description
VerifyStatus	string	Displays Verify Status of the profile. - invalid: out of the target for verification - match: status of matching - mismatch: status of mismatching - processing: verifying the target - unknown: failed to verify the target - canceling: verification is being canceled - canceled: verification was canceled
HistoryList	array	When edited during assignment, the Profile ID as it was before editing is returned. The maximum value is 1.
ProfileId	string	Profile ID before editing
VerifyList	array	If "Mismatch" is detected with "Verify," the profile ID of the mismatched node is returned. The maximum value is 1.
ProfileId	string	Profile ID of the mismatched node
TimeStampInfo	object	Time Stamp Information
Register	string	Registration Time
Update	string	Time of Last Updated
Assigned	string	Time of Last Assignment
ModelName	string	Model Name Model name of the profile. It is returned for Profile for each model.

4.10.5 Individual Retrieval of Profiles

[Overview]

Retrieves the individual information of the specified profiles.

[Format]

```
GET /profiles/profiles/{profileid}
```

[Query Parameter]

Parameter	Type	Description
passwordkey	string	Encryption Key for Password Information For all password information in ProfileData, Specify the encryption key for passwords encrypted with AES256+Base64.

[Response Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID
ProfileName	string	Profile Name
Description	string	Description of Profile
CategoryId	string	Category ID
CategoryName	string	Category Name For details, refer to "CategoryName" in "4.10.2 Conversion of Profile Categories."
ProfileGroupId	string	Profile Group ID that it currently belongs to
PathName	string	Path Name for this profile group Absolute path. Everything up to the group name is displayed.
ReferencePolicyList	array	Policy List used in the succession referenced The maximum value is 3000.
PolicyId	string	Policy ID used in the succession referenced
AssignedNodeId	integer	Assigned Node ID Null when unassigned.
Status	string	Displays Assigned Status. - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile, which is for other than OS, is edited and takes on unassigned status (there is a finite difference between the profile and the device) - mismatch os: only an assigned OS profile is edited (cannot be re-assigned) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed
InternalStatus	object	Internal Status
BiosStatus	string	Displays the Assignment Status for BIOS Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process
IrmcStatus	string	Displays the Assignment Status for iRMC Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete

Parameter	Type	Description
		- reassign: profile update available - processing: assignment in process Output when the CategoryId is: - 1 (Server-BX) - 2 (Server-CX) - 3 (Server-RX) - 5 (Server-PRIMEQUEST3000B) - 7 (Server-TX) - 9 (Server-PRIMEQUEST4000E-Partition)
MmbStatus	string	Displays the Assignment Status for MMB Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process Output when the CategoryId is: - 4 (Server-PRIMEQUEST2000-Partition) - 6 (Server-PRIMEQUEST3000E-Partition) - 8 (Server-PRIMEQUEST2000B)
IovStatus	string	Displays the Assignment Status for IOVirtualization Profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process
OsStatus	string	Displays the Assignment Status for OS profiles. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process
RaidStatus	string	Displays the RAID configuration status. - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process

Parameter	Type	Description
VerifyStatus	string	Displays Verify Status of the profile. - invalid:out of the target for verification - match: status of matching - mismatch: status of mismatching - processing: verifying the target - unknown: failed to verify the target - canceling: verification is being canceled - canceled: verification was canceled
HistoryList	array	When edited during assignment, the Profile ID as it was before editing is returned. The maximum value is 1.
ProfileId	string	Profile ID before editing
VerifyList	array	If "Mismatch" is detected with "Verify," the profile ID of the mismatched node is returned. The maximum value is 1.
ProfileId	string	Profile ID of the mismatched node
TimeStampInfo	object	Time Stamp Information
Register	string	Registration Time
Update	string	Time of Last Updated
Assigned	string	Time of Last Assignment
ProfileData	object	Profile Settings
Server-BX	object	Server PRIMERGY BX series
BIOS	object	BIOS Settings For details, refer to "BIOS" in "C.1 Server-BX."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "iRMC" in "C.1 Server-BX."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-RX	object	Server PRIMERGY RX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."

Parameter	Type	Description
RAID	object	RAID Settings For details, refer to "D.7 RAID."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-TX	object	Server PRIMERGY TX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings For details, refer to "D.7 RAID."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-CX	object	Server PRIMERGY CX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings For details, refer to "D.7 RAID."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST2000-Partition	object	Server PRIMEQUEST 2000 series (Partition)
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."

Parameter	Type	Description
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST2000B	object	Server PRIMEQUEST 2000B
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST3000B	object	Server PRIMEQUEST 3000B
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST3000E-Partition	object	Server PRIMEQUEST 3000E series
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Server-PRIMEQUEST4000E-Partition	object	Server PRIMEQUEST 4000E series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
IOVirtualization	object	Virtual IO Settings For details, refer to "D.3 IOVirtualization."
OSInstallation	object	OS Installation Settings For details, refer to "D.4 OSInstallation."
Storage-DX	object	Storage ETERNUS DX series disk storage system

Parameter	Type	Description
StandRaid	object	Raid Settings For details, refer to "StandRaid" in "C.2 Storage-DX."
GHotSpare	object	Hot Spares Settings For details, refer to "GHotSpare" in "C.2 Storage-DX."
HostAffinity	object	Host Affinity Settings For details, refer to "HostAffinity" in "C.2 Storage-DX."
DetailSettings	object	Detail Settings of Profile For details, refer to "DetailSettings" in "C.2 Storage-DX."
Storage-OntapCluster	object	Storage ETERNUS NR, AX, HX, AC series Network Disk Array
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.3 Storage-NetAppCluster."
Ntp	object	Information of Auto Time Adjustment For details, refer to "Ntp" in "C.3 Storage-NetAppCluster."
Switch-SRX	object	Server Housing Switch SR-X series
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.4 Switch-SRX."
AutoTime	object	Automatic Time Setting Information For details, refer to "AutoTime" in "C.4 Switch-SRX."
Account	object	Device Administrator Password Information For details, refer to "Account" in "C.4 Switch-SRX."
Stp	object	STP For details, refer to "Stp" in "C.4 Switch-SRX."
Switch-CFX	object	Converged Fabric Switch CFX series
Interface	array	Interface Information The maximum value is 256. For details, refer to "Interface" in "C.5 Switch-CFX."
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.5 Switch-CFX."
AutoTime	object	Automatic Time Setting Information For details, refer to "AutoTime" in "C.5 Switch-CFX."
Account	object	Device Administrator Password Information For details, refer to "Account" in "C.5 Switch-CFX."
Aaa	object	AAA Information For details, refer to "Aaa" in "C.5 Switch-CFX."
Switch-VDX	object	Converged Switch VDX series
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.6 Switch-VDX."
AutoTime	object	Automatic Time Setting Information

Parameter	Type	Description
		For details, refer to "AutoTime" in "C.6 Switch-VDX."
Account	object	Account Information For details, refer to "Account" in "C.6 Switch-VDX."
Switch-PSWITCH	object	Ethernet Switch PSWITCH series
Snmp	object	SNMP Function Information For details, refer to "Snmp" in "C.7 Switch-PSWITCH."
AutoTime	object	Automatic Time Setting Information For details, refer to "AutoTime" in "C.7 Switch-PSWITCH."
Account	object	Account Information For details, refer to "Account" in "C.7 Switch-PSWITCH."

4.10.6 Updating Profiles

[Overview]

Updates the specified profiles.

[Format]

```
PATCH /profiles/profiles/{profileid}
```

[Query Parameter]

None

[Request Parameter]

Refer to "4.10.3 Adding Profiles."

[Response Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID
ProfileName	string	Profile Name

4.10.7 Deleting Profiles

[Overview]

Deletes the specified profiles.

[Format]

```
DELETE /profiles/profiles/{profileid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.8 Assigning Profiles to Nodes

[Overview]

Assigns the specified profiles to the specified nodes.

[Format]

```
POST /nodes/{nodeid}/profiles/assign
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID to be assigned Can be omitted when a profile has been assigned to the node.
AssignMode	string	Specifies Assign Mode. - Normal: Normal assignment - Advanced: Advanced assignment When this setting is omitted or null, operations will be performed as Normal.
AdvancedKind	string	Specifies Type of Advanced Assignment. To be specified when the AssignMode is 'Advanced'. - ForcedAssign: Forced assignment - WithoutHardwareAccess: Assignment without hardware access - OnlineAssign: Online assignment - ForcedOnlineAssign: Forced online assignment ForcedAssign and ForcedOnlineAssign cannot be used in the first-time assignment. When IOVirtualization or OSInstallation is included in the AssignRange, OnlineAssign cannot be used.
AssignRange	array	Records Types of Profile for Assignment. If the AssignMode is Advanced, "BIOS," "iRMC," "MMB," "IOVirtualization" and/or "OSInstallation" can be specified either individually or together. Example: ["BIOS,""iRMC"] When this setting is omitted or null, all types of profile in ProfileData are assigned.
FirmwareUpdate	string	Updates the Target Node for Profile Assignment to the latest firmware before assignment. - Disable: Disabled

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.10.9 Cancellation of Assigning Profile to Nodes

[Overview]

Cancels the assignment of a profile to a node by using the specified task ID.

[Format]

```
POST /nodes/profiles/assign/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.10.10 Releasing Profile Assignment to Nodes

[Overview]

Releases the profile assigned to a node by using the specified node ID.

[Format]

```
POST /nodes/{nodeid}/profiles/unassign
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.10.11 Cancellation of Releasing Profile Assignment to Nodes

[Overview]

Cancels the release of a profile assignment to a node by using the specified task ID.

[Format]

```
POST /nodes/profiles/unassign/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.10.12 Adding Profile Groups

[Overview]

Adds profile groups.

[Format]

```
POST /profiles/profiles/groups
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProfileGroupName	string	Profile Group Name
Description	string	Profile Group Description
ParentProfileGroupId	string	Parent Profile Group ID

[Response Parameter]

Parameter	Type	Description
ProfileGroupId	string	Profile Group ID
ProfileGroupName	string	Profile Group Name

4.10.13 List Retrieval for Profile Groups

[Overview]

Retrieves a list of profile groups.

[Format]

```
GET /profiles/profiles/groups
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
ProfileGroupList	array	Profile Group List There is no upper limit.
ProfileGroupId	string	Profile Group ID
ProfileGroupName	string	Profile Group Name
Description	string	Profile Group Description
PathName	string	Path Name (absolute path) for this Profile Group
ProfileGroupList	array	Subordinate Profile Group ID List There is no upper limit.
ProfileGroupId	string	Profile Group ID
ProfileList	array	Subordinate Profile ID List The maximum value is 2000.
ProfileId	string	Profile ID
TimeStampInfo	object	Time Stamp Information
Register	string	Registration Time
Update	string	Update Time

4.10.14 Individual Retrieval of Profile Groups

[Overview]

Retrieves individual information of the specified profile groups.

[Format]

```
GET /profiles/profiles/groups/{groupid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
ProfileGroupId	string	Profile Group ID
ProfileGroupName	string	Profile Group Name
Description	string	Profile Group Description
PathName	string	Path Name (absolute path) for this Profile Group
ProfileGroupList	array	Subordinate Profile Group ID list There is no upper limit.
ProfileGroupId	string	Subordinate Profile Group ID
ProfileList	array	Subordinate Profile ID List

Parameter		Type	Description
			The maximum value is 2000.
	ProfileId	string	Subordinate Profile ID
TimeStampInfo		object	Time Stamp Information
	Register	string	Registration Time
	Update	string	Update Time

4.10.15 Updating Profile Groups

[Overview]

Updates the specified profile groups.

[Format]

```
PATCH /profiles/profiles/groups/{groupid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProfileGroupName	string	Profile Group Name
Description	string	Profile Group Description
ParentProfileGroupId	string	Parent Profile Group ID

[Response Parameter]

Parameter	Type	Description
ProfileGroupId	string	Profile Group ID
ProfileGroupName	string	Profile Group Name

4.10.16 Deleting Profile Groups

[Overview]

Deletes the specified profile groups.

[Format]

```
DELETE /profiles/profiles/groups/{groupid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.17 Adding Policies

[Overview]

Adds policies.

[Format]

```
POST /profiles/policies
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
PolicyName	string	Policy Name
Description	string	Description of Policy
CategoryId	string	Category ID
PolicyGroupId	string	Policy Group ID to be saved
ReferencePolicyList	array	Policy list used in the succession referenced The maximum value is 3000.
PolicyId	string	Policy ID used in the succession referenced
AssignMonitoringPolicyDefault	string	Specifies whether a Monitoring Policy is assigned. - Enabled: Enables Monitoring Policy - Disabled: Disables Monitoring Policy
OneTimePasswordKey	string	One-time Encryption Key for Password Information Set the password encrypted with AES256+Base64 and assign the encryption key for all password information in ProfileData.
ProfileData	object	Policy Setting Details
Server-BX	object	Server PRIMERGY BX series
BIOS	object	BIOS Settings For details, refer to "C.1 Server-BX."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "C.1 Server-BX."
Server-RX	object	Server PRIMERGY RX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."

Parameter	Type	Description
RAID	object	RAID Settings When both this RAID settings and "RaidConfig" of "OSInstallation" has been set, this RAID settings are prioritized. For details, refer to "D.7 RAID."
Server-TX	object	Server PRIMERGY TX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings When both this RAID settings and "RaidConfig" of "OSInstallation" has been set, this RAID settings are prioritized. For details, refer to "D.7 RAID."
Server-CX	object	Server PRIMERGY CX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings When both this RAID settings and "RaidConfig" of "OSInstallation" has been set, this RAID settings are prioritized. For details, refer to "D.7 RAID."
Server-PRIMEQUEST2000-Partition	object	Server PRIMEQUEST 2000 series (Partition)
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
Server-PRIMEQUEST2000B	object	Server PRIMEQUEST 2000B
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
Server-PRIMEQUEST3000B	object	Server PRIMEQUEST 3000B
BIOS	object	BIOS Settings

Parameter	Type	Description
		For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
Server-PRIMEQUEST3000E-Partition	object	Server PRIMEQUEST 3000E series
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
Server-PRIMEQUEST4000E-Partition	object	Server PRIMEQUEST 4000E series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
Server	object	Server
OSInstallation	object	OS Installation Settings OS Installation policy is common to all servers. For details, refer to "D.4 OSInstallation."
Monitoring	object	Monitoring Common Settings
TimeSync	object	Time Settings For details, refer to "D.6 Monitoring."
Snmp	object	SNMP Settings For details, refer to "D.6 Monitoring."

[Response Parameter]

Parameter	Type	Description
PolicyId	string	Policy ID
PolicyName	string	Policy Name

4.10.18 List Retrieval for Policies

[Overview]

Retrieves a list of policies.

[Format]

```
GET /profiles/policies
```

[Query Parameter]

Parameter	Type	Description
categoryid	string	Category ID A list of definitions for the policies belonging to the specified category is output.
policygroupid	string	Policy Group ID A list of definitions for the policies belonging to the specified policy group is output.
policytype	string	Policy Type Specify "BIOS," "iRMC," "MMB," "OSInstallation," or "RAID".
ostype	string	OS Type Specify "Windows," "Linux," or "Vmware."
modelname	string	Model Name A list of definitions for the policy for each model of specified model name is output.

[Response Parameter]

Parameter	Type	Description
PolicyList	array	Policy List The maximum value is 3000.
PolicyId	string	Policy ID
PolicyName	string	Policy Name
Description	string	Description of Policy
CategoryId	string	Category ID
CategoryName	string	Category Name For details, refer to "CategoryName" in "4.10.2 Conversion of Profile Categories."
PolicyType	string	Policy Type Output "BIOS," "iRMC," "MMB," "OSInstallation," or "RAID".
OsType	string	OS Type When PolicyType is "OSInstallation," "Windows," "Linux," or "Vmware" is output. Other than "OSInstallation," "" is output.
PolicyGroupId	string	Policy Group ID that it belongs to
TimeStampInfo	object	Time Stamp Information
Register	string	Registration Time
Update	string	Update Time
ModelName	string	Model Name

Parameter	Type	Description
		Model name of the policy. It is returned for Policy for each model.

4.10.19 Individual Retrieval of Policies

[Overview]

Retrieves the individual information of the specified policies.

[Format]

```
GET /profiles/policies/{policyid}
```

[Query Parameter]

Parameter	Type	Description
passwordkey	string	Encryption Key for Password Information For all password information in ProfileData, Specify the encryption key for passwords encrypted with AES256+Base64.

[Response Parameter]

Parameter	Type	Description
PolicyId	string	Policy ID
PolicyName	string	Policy Name
Description	string	Description of Policy
CategoryId	string	Category ID
CategoryName	string	Category Name For details, refer to "CategoryName" in "4.10.2 Conversion of Profile Categories."
PolicyType	string	Policy Type Outputs "BIOS," "iRMC," "MMB," "OSInstallation," or "RAID".
OsType	string	OS Type When PolicyType is "OSInstallation," "Windows," "Linux," or "Vmware" is output. Other than "OSInstallation," "" is output.
PolicyGroupId	string	Policy Group ID that it belongs to
ReferencePolicyList	array	Policy list used in the succession referenced The maximum value is 3000.
PolicyId	string	Policy ID used in the succession referenced
AssignMonitoringPolicyDefault	string	Specifies whether a Monitoring Policy is assigned. - Enabled: Enables Monitoring Policy - Disabled: Disables Monitoring Policy
TimeStampInfo	object	Time Stamp Information

Parameter	Type	Description
Register	string	Registration Time
Update	string	Time of Update
ProfileData	object	Policy Setting Details
Server-BX	object	Server PRIMERGY BX series
BIOS	object	BIOS Settings For details, refer to "C.1 Server-BX."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "C.1 Server-BX."
Server-RX	object	Server PRIMERGY RX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings For details, refer to "D.7 RAID."
Server-TX	object	Server PRIMERGY TX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings For details, refer to "D.7 RAID."
Server-CX	object	Server PRIMERGY CX series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings

Parameter	Type	Description
		For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
RAID	object	RAID Settings For details, refer to "D.7 RAID."
Server-PRIMEQUEST2000-Partition	object	Server PRIMEQUEST 2000 series (Partition)
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
Server-PRIMEQUEST2000B	object	Server PRIMEQUEST 2000B
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
Server-PRIMEQUEST3000B	object	Server PRIMEQUEST 3000B
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
Server-PRIMEQUEST3000E-Partition	object	Server PRIMEQUEST 3000E series
MMB	object	MMB (Management Board) Partition Settings For details, refer to "D.5 MMB."
Server-PRIMEQUEST4000E-Partition	object	Server PRIMEQUEST 4000E series
BIOS	object	BIOS Settings For details, refer to "D.1 BIOS."
BIOSByModel	object	BIOS (for specific model) Settings For details, refer to "D.8 BIOSByModel."
iRMC	object	iRMC (Integrated Remote Management Controller) Settings For details, refer to "D.2 iRMC."
iRMCByModel	object	iRMC (for specific model) Settings For details, refer to "D.9 iRMCByModel."
Server	object	Server
OSInstallation	object	OS Installation Settings OS Installation policy is common to all servers. For details, refer to "D.4 OSInstallation."
Monitoring	object	Monitoring Common Settings
TimeSync	object	Time Settings

Parameter		Type	Description
			For details, refer to "D.6 Monitoring."
	Snmp	object	SNMP Settings For details, refer to "D.6 Monitoring."

4.10.20 Updating Policies

[Overview]

Renews the specified policies.

[Format]

```
PATCH /profiles/policies/{policyid}
```

[Query Parameter]

None

[Request Parameter]

Refer to "4.10.17 Adding Policies."

[Response Parameter]

Parameter	Type	Description
PolicyId	string	Policy ID
PolicyName	string	Policy Name

4.10.21 Deleting Policies

[Overview]

Deletes the specified policies.

[Format]

```
DELETE /profiles/policies/{policyid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.22 Adding Policy Groups

[Overview]

Adds policy groups.

[Format]

```
POST /profiles/policies/groups
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
PolicyGroupName	string	Policy Group Name
Description	string	Policy Group Description
ParentPolicyGroupId	string	Parent Policy Group ID

[Response Parameter]

Parameter	Type	Description
PolicyGroupId	string	Policy Group ID
PolicyGroupName	string	Policy Group Name

4.10.23 List Retrieval for Policy Groups

[Overview]

Retrieves a list of policy groups.

[Format]

```
GET /profiles/policies/groups
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
PolicyGroupList	array	Policy Group list There is no maximum value.
PolicyGroupId	string	Policy Group ID
PolicyGroupName	string	Policy Group Name
Description	string	Policy Group description
PathName	string	Path Name (absolute path) for this policy Group
PolicyGroupList	array	Subordinate Policy Group ID List There is no maximum value.
PolicyGroupId	string	Policy Group ID
PolicyList	array	Subordinate Policy ID List The maximum number of lists is 3000.
PolicyId	string	Policy ID
TimeStampInfo	object	Time Stamp Information

Parameter			Type	Description
		Register	string	Registration Time
		Update	string	Update Time

4.10.24 Individual Retrieval of Policy Groups

[Overview]

Retrieves individual information of the specified policy groups.

[Format]

```
GET /profiles/policies/groups/{groupid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
PolicyGroupId		string	Policy Group ID
PolicyGroupName		string	Policy Group Name
Description		string	Policy Group Description
PathName		string	Path Name (absolute path) for this Policy Group
PolicyGroupList		array	Subordinate Policy Group ID List There is no maximum value.
	PolicyGroupId	string	Subordinate Policy Group ID
PolicyList		array	Subordinate Policy ID list The maximum value is 3000.
	PolicyId	string	Subordinate Policy ID
TimeStampInfo		object	Time Stamp Information
	Register	string	Registration Time
	Update	string	Update Time

4.10.25 Updating Policy Groups

[Overview]

Updates the specified policy groups.

[Format]

```
PATCH /profiles/policies/groups/{groupid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
PolicyGroupName	string	Policy Group Name
Description	string	Policy Group Description
ParentPolicyGroupId	string	Parent Policy Group ID

[Response Parameter]

Parameter	Type	Description
PolicyGroupId	string	Policy Group ID
PolicyGroupName	string	Policy Group Name

4.10.26 Deleting Policy Groups

[Overview]

Deletes the specified policy groups.

[Format]

```
DELETE /profiles/policies/groups/{groupid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.27 Importing Profiles

[Overview]

Imports the specified profiles.

[Format]

```
POST /profiles/import
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
FilePath	string	File Name, including the relative path from "/<User group name>/ftp/" where the profiles are stored.
ProfileType	string	Profile Type Specify either Profile or Policy.
ProfileGroupId	string	Profile Group ID

Parameter	Type	Description
OneTimePasswordKey	string	Password Encryption Key Set the password encrypted with AES256+Base64 and specify its encryption key for all of password information in profile to import.

[Response Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID
ProfileName	string	Profile Name (policy name)

4.10.28 Exporting Profiles

[Overview]

Exports the specified profiles.

[Format]

```
POST /profiles/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID
PasswordKey	string	Password Encryption Key Encrypts (AES256+Base64) information of all passwords of profile to export by specified encryption key.

[Response Parameter]

Parameter	Type	Description
FilePath	string	File Name, including the relative path from "/<User group name>/ftp/" where the profiles are stored.

4.10.29 DVD Import

[Overview]

Imports from a specified DVD.

[Format]

```
POST /system/settings/repositories/profiles/dvd/import
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
MediaType	string	DVD Media Type Specifies the DVD media type. - ServerView Suite DVD - Azure Stack HCI, Version 23H2 (Microsoft Media) - Azure Stack HCI, Version 22H2 (Microsoft Media) - Azure Stack HCI, Version 21H2 (Microsoft Media) - Azure Stack HCI, Version 20H2 (Microsoft Media) - Windows Server 2025 Datacenter (Fujitsu Media) - Windows Server 2025 Standard (Fujitsu Media) - Windows Server 2025 (Microsoft Media) - Windows Server 2025 (Microsoft VL Media) - Windows Server 2022 Datacenter (Fujitsu Media) - Windows Server 2022 Standard (Fujitsu Media) - Windows Server 2022 (Microsoft Media) - Windows Server 2022 (Microsoft VL Media) - Windows Server 2019 Datacenter (Fujitsu Media) - Windows Server 2019 Standard (Fujitsu Media) - Windows Server 2019 (Microsoft Media) - Windows Server 2019 (Microsoft VL Media) - Windows Server 2016 Datacenter (Fujitsu Media) - Windows Server 2016 Standard (Fujitsu Media) - Windows Server 2016 (Microsoft Media) - Windows Server 2016 (Microsoft VL Media) - Windows Server 2012 R2 Datacenter (Fujitsu Media) - Windows Server 2012 R2 Standard (Fujitsu Media) - Windows Server 2012 R2 (Microsoft Media) - Windows Server 2012 R2 (Microsoft VL Media) - Windows Server 2012 Datacenter (Fujitsu Media) - Windows Server 2012 Standard (Fujitsu Media) - Windows Server 2012 (Microsoft Media) - Windows Server 2012 (Microsoft VL Media) - Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media) - Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media) - Windows Server 2008 R2 Standard + SP1 (Fujitsu Media)

Parameter	Type	Description
		- Windows Server 2008 R2 + SP1 (Microsoft Media) - Windows Server 2008 R2 + SP1 (Microsoft VL Media) - Red Hat Enterprise Linux 9.5 (x86_64) - Red Hat Enterprise Linux 9.4 (x86_64) - Red Hat Enterprise Linux 9.3 (x86_64) - Red Hat Enterprise Linux 9.2 (x86_64) - Red Hat Enterprise Linux 9.1 (x86_64) - Red Hat Enterprise Linux 9.0 (x86_64) - Red Hat Enterprise Linux 8.10 (x86_64) - Red Hat Enterprise Linux 8.9 (x86_64) - Red Hat Enterprise Linux 8.8 (x86_64) - Red Hat Enterprise Linux 8.7 (x86_64) - Red Hat Enterprise Linux 8.6 (x86_64) - Red Hat Enterprise Linux 8.5 (x86_64) - Red Hat Enterprise Linux 8.4 (x86_64) - Red Hat Enterprise Linux 8.3 (x86_64) - Red Hat Enterprise Linux 8.2 (x86_64) - Red Hat Enterprise Linux 8.1 (x86_64) - Red Hat Enterprise Linux 8.0 (x86_64) - Red Hat Enterprise Linux 7.9 (x86_64) - Red Hat Enterprise Linux 7.8 (x86_64) - Red Hat Enterprise Linux 7.7 (x86_64) - Red Hat Enterprise Linux 7.6 (x86_64) - Red Hat Enterprise Linux 7.5 (x86_64) - Red Hat Enterprise Linux 7.4 (x86_64) - Red Hat Enterprise Linux 7.3 (x86_64) - Red Hat Enterprise Linux 7.2 (x86_64) - Red Hat Enterprise Linux 7.1 (x86_64) - Red Hat Enterprise Linux 6.10 (x86_64) - Red Hat Enterprise Linux 6.10 (x86) - Red Hat Enterprise Linux 6.9 (x86_64) - Red Hat Enterprise Linux 6.9 (x86) - Red Hat Enterprise Linux 6.8 (x86_64) - Red Hat Enterprise Linux 6.8 (x86) - Red Hat Enterprise Linux 6.7 (x86_64) - Red Hat Enterprise Linux 6.7 (x86) - Red Hat Enterprise Linux 6.6 (x86_64)

Parameter	Type	Description
		- Red Hat Enterprise Linux 6.6 (x86) - SUSE Linux Enterprise Server 15 SP6 (x86_64) - SUSE Linux Enterprise Server 15 SP5 (x86_64) - SUSE Linux Enterprise Server 15 SP4 (x86_64) - SUSE Linux Enterprise Server 15 SP3 (x86_64) - SUSE Linux Enterprise Server 15 SP2 (x86_64) - SUSE Linux Enterprise Server 15 SP1 (x86_64) - SUSE Linux Enterprise Server 15 (x86_64) - SUSE Linux Enterprise Server 12 SP5 (x86_64) - SUSE Linux Enterprise Server 12 SP4 (x86_64) - SUSE Linux Enterprise Server 12 SP3 (x86_64) - SUSE Linux Enterprise Server 12 SP2 (x86_64) - SUSE Linux Enterprise Server 12 SP1 (x86_64) - SUSE Linux Enterprise Server 12 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86) - VMware ESXi 8.0 Update 3 (Fujitsu Media) - VMware ESXi 8.0 Update 2 (Fujitsu Media) - VMware ESXi 8.0 Update 1 (Fujitsu Media) - VMware ESXi 8.0 (Fujitsu Media) - VMware ESXi 7.0 Update 3 (Fujitsu Media) - VMware ESXi 7.0 Update 2 (Fujitsu Media) - VMware ESXi 7.0 Update 1 (Fujitsu Media) - VMware ESXi 7.0 (Fujitsu Media) - VMware ESXi 6.7 Update 3 (Fujitsu Media) - VMware ESXi 6.7 Update 2 (Fujitsu Media) - VMware ESXi 6.7 Update 1 (Fujitsu Media) - VMware ESXi 6.7 (Fujitsu Media) - VMware ESXi 6.5 Update 3 (Fujitsu Media) - VMware ESXi 6.5 Update 2 (Fujitsu Media) - VMware ESXi 6.5 Update 1 (Fujitsu Media) - VMware ESXi 6.5 (Fujitsu Media) - VMware ESXi 6.0 Update 3 (Fujitsu Media) - VMware ESXi 6.0 Update 2 (Fujitsu Media) - VMware ESXi 6.0 Update 1 (Fujitsu Media) - VMware ESXi 5.5 Update 3 (Fujitsu Media)

Parameter	Type	Description
FilePath	string	File Name including the relative pass from "/<User group name>/ftp/" where the DVD media are stored.
FilePath2	string	File Name including the relative pass from "/<User group name>/ftp/" where the DVD media are stored. Specify when the media type is as follows: - SUSE Linux Enterprise Server 15 (x86_64)
DeleteFtpResource	boolean	For specifying ftp Resource Deletion When "true," it deletes the file specified in FilePath and FilePath2 following the normal termination of the DVD import. When "false," when keys have been missed out, or when the DVD import terminates due to error, the file specified in FilePath and FilePath2 is not deleted.
UnMountResource	boolean	When "true," the shared directory used in the import is unmounted following normal termination of the DVD import. When "false" or when keys have been missed out, the shared directory used in the import is not unmounted.
MountId	string	Shared Directory of Mounting ID Specify when an ISM external shared directory is used in an import.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Precautions]

- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

4.10.30 Canceling DVD Import

[Overview]

Cancels the DVD import using the assigned Task ID.

[Format]

```
POST /system/settings/repositories/profiles/dvd/import/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.10.31 List Retrieval for Registered Repositories

[Overview]

Retrieves a list of registered repositories.

[Format]

```
GET /system/settings/repositories/profiles
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
RepositoryList		array	Repository List There is no maximum value. (Up to the disc's maximum storage capacity)
	RepositoryId	string	Repository ID
	FileName	string	DVD Media File Name When there are two types of files for the media, the file names and media information are output.
	FileName2	string	DVD Media File Name Outputs when there are two types of files for the media.
	MediaType	string	DVD media type Outputs the DVD media type. For information on the DVD media types, refer to "4.10.29 DVD Import."
	RegisterTime	string	Time/Date of Registration
	FileSize	integer	File Size of DVD Media Outputs the file size of FileName.
	FileSize2	integer	File Size of DVD Media Outputs the file size of FileName2 Outputs when there are two types of file for the media.
	Version	string	DVD Media Edition Number Outputs when the DVD media type is ServerView Suite DVD.

[Precautions]

- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

4.10.32 Deleting Registered Repositories

[Overview]

Deletes the specified registered repositories.

[Format]

```
DELETE /system/settings/repositories/profiles/{repositoryid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.33 List Retrieval for Packages and Applications

[Overview]

Retrieves a list of packages and applications with the type and language of the specified Linux OS.

[Format]

```
GET /profiles/packages
```

[Query Parameter]

Parameter	Type	Description
ostype	string	OS Type Outputs the type of the specified Linux OS. - Red Hat Enterprise Linux 9.5 (x86_64) - Red Hat Enterprise Linux 9.4 (x86_64) - Red Hat Enterprise Linux 9.3 (x86_64) - Red Hat Enterprise Linux 9.2 (x86_64) - Red Hat Enterprise Linux 9.1 (x86_64) - Red Hat Enterprise Linux 9.0 (x86_64) - Red Hat Enterprise Linux 8.10 (x86_64)

Parameter	Type	Description
		- Red Hat Enterprise Linux 8.9 (x86_64) - Red Hat Enterprise Linux 8.8 (x86_64) - Red Hat Enterprise Linux 8.7 (x86_64) - Red Hat Enterprise Linux 8.6 (x86_64) - Red Hat Enterprise Linux 8.5 (x86_64) - Red Hat Enterprise Linux 8.4 (x86_64) - Red Hat Enterprise Linux 8.3 (x86_64) - Red Hat Enterprise Linux 8.2 (x86_64) - Red Hat Enterprise Linux 8.1 (x86_64) - Red Hat Enterprise Linux 8.0 (x86_64) - Red Hat Enterprise Linux 7.9 (x86_64) - Red Hat Enterprise Linux 7.8 (x86_64) - Red Hat Enterprise Linux 7.7 (x86_64) - Red Hat Enterprise Linux 7.6 (x86_64) - Red Hat Enterprise Linux 7.5 (x86_64) - Red Hat Enterprise Linux 7.4 (x86_64) - Red Hat Enterprise Linux 7.3 (x86_64) - Red Hat Enterprise Linux 7.2 (x86_64) - Red Hat Enterprise Linux 7.1 (x86_64) - Red Hat Enterprise Linux 6.10 (x86_64) - Red Hat Enterprise Linux 6.10 (x86) - Red Hat Enterprise Linux 6.9 (x86_64) - Red Hat Enterprise Linux 6.9 (x86) - Red Hat Enterprise Linux 6.8 (x86_64) - Red Hat Enterprise Linux 6.8 (x86) - Red Hat Enterprise Linux 6.7 (x86_64) - Red Hat Enterprise Linux 6.7 (x86) - Red Hat Enterprise Linux 6.6 (x86_64) - Red Hat Enterprise Linux 6.6 (x86) - SUSE Linux Enterprise Server 15 SP6 (x86_64) - SUSE Linux Enterprise Server 15 SP5 (x86_64) - SUSE Linux Enterprise Server 15 SP4 (x86_64) - SUSE Linux Enterprise Server 15 SP3 (x86_64) - SUSE Linux Enterprise Server 15 SP2 (x86_64) - SUSE Linux Enterprise Server 15 SP1 (x86_64) - SUSE Linux Enterprise Server 15 (x86_64) - SUSE Linux Enterprise Server 12 SP5 (x86_64)

Parameter	Type	Description
		- SUSE Linux Enterprise Server 12 SP4 (x86_64) - SUSE Linux Enterprise Server 12 SP3 (x86_64) - SUSE Linux Enterprise Server 12 SP2 (x86_64) - SUSE Linux Enterprise Server 12 SP1 (x86_64) - SUSE Linux Enterprise Server 12 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86)
language	string	OS Language Outputs the language of the specified OS - English - German - Japanese

[Response Parameter]

Parameter		Type	Description
Package		object	A list of Package Groups available for installation on the specified OS
	DefaultList	array(string)	A list of Default Installation Packages
	MinimumList	array(string)	A list of Minimum Installation Packages
	FullList	array(string)	A list of Full Installation Packages
ApplicationList		array	A list of Applications available for installation on the specified OS
	Name	string	Application Name
	PackageDependencyList	array(string)	A list of Packages Dependent on Applications

[Precautions]

- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

4.10.34 Backing Up Hardware Settings

[Overview]

Backs up hardware settings of the specified nodes.

The following categories are supported.

- Server-BX: Server PRIMERGY BX series
- Server-RX: Server PRIMERGY RX series

- Server-TX: Server PRIMERGY TX series
- Server-CX: Server PRIMERGY CX series
- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B
- Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series
- Storage-OntapCluster: Storage ETERNUS NR, AX, HX, AC series
- Switch-VDX: Converged switch VDX series

[Format]

```
POST /nodes/{nodeid}/profiles/backup
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BackupType	array	Specifies the Type of Backup. Enabled for the server. Specify "BIOS" or "iRMC" individually or together. Example: ["BIOS,""iRMC"] When this setting is omitted or null, all types that can be backed up are backed up.
Description	string	Description of Backups

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.10.35 Canceling of Backup Hardware Settings

[Overview]

Cancels backup hardware settings using the assigned task ID.

[Format]

```
POST /nodes/profiles/backup/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.10.36 List Retrieval for Registered Backups

[Overview]

Retrieves a list of registered backups.

[Format]

```
GET /profiles/backups
```

[Query Parameter]

Parameter	Type	Description
nodetype	string	Node Type Outputs a list of backups for the specified node type. - Server - Storage - Switch - Other
nodeid	integer	The Node ID that has been backed-up Outputs a list of backups for the specified node ID.
backuptype	string	Backup Type Outputs a list of backups for the specified backup type. - BIOS - iRMC
backupstatus	string	Backup Status Outputs a list of backups for the specified backup status. - Running: Backup in progress - Complete: Backup complete - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete - Error: Error
restorestatus	string	Restoring Status Outputs a list of backups in the specified restoring status. - Running: Restoring in progress - Complete: Restoring complete - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete - Error: Error When restoring is not executed, outputs null.

[Response Parameter]

Parameter	Type	Description
BackupList	array	Backup List The maximum value is 16000. The following are the maximum values for each node type. - Server: 10000 - Storage: 1000 - Switch: 5000
BackupId	string	Backup ID
NodeType	string	Node Type One of the following is output. - Server - Storage - Switch - Other
NodeId	integer	The Node ID that has been backed-up
BackupType	string	Backup Type Output either "BIOS" or "iRMC" for server. If is it other than a server "" is output.
RegisterTime	string	Time/Date of Registration If BackupStatus is 'Complete', 'Cancel-Complete', or 'Error', the date and time is output. Null is output if BackupStatus is 'Running' or 'Cancel-Running'.
BackupStatus	string	Backup Status - Running: Backup in progress - Complete: Backup complete - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete - Error: Error
TaskId	string	Task ID Task ID is output when BackupStatus or RestoreStatus is "Running" or "Cancel-Running." Other than the above," " is output.
RestoreStatus	string	Restoring Status - Running: Restoring in progress - Complete: Restoring complete - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete - Error: Error

Parameter		Type	Description
			When restoring is not executed, outputs null.
	RestoredTime	string	Last Restoring Date and Time Date and time are output when RestoreStatus is "Complete," "Cancel-Complete" or "Error." When RestoreStatus is "Running" or "Cancel-Running," outputs null.
	Description	string	Description of Backups

4.10.37 Deleting Registered Backups

[Overview]

Deletes the specified registered backup.

[Format]

```
DELETE /profiles/backups/{backupid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.38 Exporting Registered Backups

[Overview]

Exports the specified registered backups.

The following categories are supported.

- Server-BX: Server PRIMERGY BX series
- Server-RX: Server PRIMERGY RX series
- Server-TX: Server PRIMERGY TX series
- Server-CX: Server PRIMERGY CX series
- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B
- Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series
- Storage-OntapCluster: Storage ETERNUS NR, AX, HX, AC series
- Switch-VDX: Converged switch VDX series

[Format]

```
POST /profiles/backups/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BackupId	string	Backup ID

[Response Parameter]

Parameter	Type	Description
FilePath	string	File Name, including the relative path from "/<User group name>/ftp/" where the backups are stored.

4.10.39 Adding Profiles from Registered Backups

[Overview]

Converts and add the registered backups specified to profiles.

The following categories are supported.

- Server-BX: Server PRIMERGY BX series
- Server-RX: Server PRIMERGY RX series
- Server-TX: Server PRIMERGY TX series
- Server-CX: Server PRIMERGY CX series
- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B
- Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series

[Format]

```
POST /profiles/backups/profile
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BackupList	array	Backup List for converting/adding to profiles Specify BackupId with one of BIOS or iRMC, or with the combination of BIOS and iRMC for each at a maximum. Enabled for the server.
BackupId	string	Backup ID
ProfileName	string	Profile Name
Description	string	Profile Description
ProfileGroupId	string	Profile Group ID

[Response Parameter]

Parameter	Type	Description
ProfileId	string	Profile ID
ProfileName	string	Profile Name

4.10.40 Adding Policies from Registered Backups

[Overview]

Converts and adds the registered backups to policies.

The following categories are supported.

- Server-BX: Server PRIMERGY BX series
- Server-RX: Server PRIMERGY RX series
- Server-TX: Server PRIMERGY TX series
- Server-CX: Server PRIMERGY CX series
- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B
- Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series

[Format]

```
POST /profiles/backups/policy
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BackupList	array	Backup List for converting/adding to policies Specify BackupId with either BIOS or iRMC. Enabled for the server.
BackupId	string	Backup ID
PolicyName	string	Policy Name
Description	string	Policy Description
PolicyGroupId	string	Policy Group ID

[Response Parameter]

Parameter	Type	Description
PolicyId	string	Policy ID
PolicyName	string	Policy Name

4.10.41 Importing Backups

[Overview]

Imports the specified backups.

The following categories are supported.

- Server-BX: Server PRIMERGY BX series
- Server-RX: Server PRIMERGY RX series
- Server-TX: Server PRIMERGY TX series
- Server-CX: Server PRIMERGY CX series
- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B
- Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series
- Switch-VDX: Converged switch VDX series

[Format]

```
POST /profiles/backups/import
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
FilePath	string	File Name including a relative path from "/<User group name>/ftp/" where backups are stored. Depending on the node type, the extension will be as follows. - Server: No specification - Switch: .cfg
BackupType	string	Backup Type Specify either BIOS or iRMC. Enabled for the server.
Description	string	Backup Descriptions
NodeId	integer	Backed up Node ID

[Response Parameter]

Parameter	Type	Description
BackupId	string	Backup ID

4.10.42 Restoring Hardware Settings

[Overview]

Restores hardware settings to the specified node.

The following categories are supported.

- Server-BX: Server PRIMERGY BX series
- Server-RX: Server PRIMERGY RX series
- Server-TX: Server PRIMERGY TX series
- Server-CX: Server PRIMERGY CX series
- Server-PRIMEQUEST3000B: Server PRIMEQUEST 3000B

- Server-PRIMEQUEST4000E-Partition: Server PRIMEQUEST 4000E series
- Switch-VDX: Converged switch VDX series

[Format]

```
POST /nodes/{nodeid}/profiles/restore
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BackupList	array	Backup List for restoring For server, specify BackupId with either BIOS or iRMC , or with the combination of BIOS and iRMC for each at a maximum. When it is other than a server, specify one BackupId.
BackupId	string	Backup ID

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.10.43 Canceling Restoration of Hardware Settings

[Overview]

Cancels restoring of the hardware settings with the specified task ID.

[Format]

```
POST /nodes/profiles/restore/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.10.44 List Retrieval of Profile Information for Nodes

[Overview]

Retrieves a list of profile information for nodes.

[Format]

```
GET /profiles/profiles/nodes
```

[Query Parameter]

Parameter	Type	Description
listtype	string	List Type Outputs a list of profile information for nodes in the specified list type. - All: All data - Boot: Data of boot information When specified Boot, outputs the list of nodes whose node type is Server.
nodeid	integer	Node ID Outputs a list of profile information for nodes whose Node ID is specified.
nodetype	string	Node Type Outputs a list of profile information for the specified node type. - Server - Storage - Switch - Other When specified "Other," outputs a list of nodes other than porfile assignment target.
categoryid	string	Category ID Outputs a list of profile information for nodes belonging to the specified category.
profileid	string	Profile ID Outputs a list of profile information for nodes whose profile ID is specified.
status	string	Assigned Status Outputs a list of profile information for nodes whose assigned status is specified. - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile, which is for other than OS, is edited and takes on unassigned status (there is a finite difference between the profile and the device) - mismatch os: only an assigned OS profile is edited (cannot be re-assigned) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress

Parameter	Type	Description
		- canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed

[Response Parameter]

Parameter	Type	Description
ProfileNodeList	array	A List of Profile Information for Nodes
NodeId	integer	Node ID
NodeType	string	Node Type One of the following is output. - Server - Storage - Switch - Other Outputs "Other" for nodes other than profile assignment target.
CategoryId	string	Category ID
CategoryName	string	Category Name For details, refer to "CategoryName" in "4.10.2 Conversion of Profile Categories."
ProfileId	string	Profile ID that is assigned When a profile is unassigned, null is output.
Status	string	Assigned Profile ID - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile, which is for other than OS, is edited and takes on unassigned status (there is a finite difference between the profile and the device) - mismatch os: only an assigned OS profile is edited (cannot be re-assigned) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed When the profile is unassigned, it is null.
Boot	object	Boot Information When the node type is other than Server, it is null.
BootType	string	Boot Type - Not assigned: Profile is not assigned

Parameter			Type	Description
				- Local disk: Local disk boot - SAN boot: SAN boot - iSCSI boot: iSCSI boot - PXE boot: PXE boot When assigned a profile with no boot type, it is Local disk.
		Wwpn	string	WWPN WWPN of the storage booted with SAN boot When the boot type is not "SAN boot," it is null.
		Lun	integer	LUN LUN of the storage booted When the boot type is not "SAN boot," it is null.
		AssignedDate	string	Time of Last Assignment When a profile is unassigned, it is null.

4.10.45 Verifying Profiles

[Overview]

Verifies the profile that is assigned to the node.

[Format]

```
POST /nodes/{nodeid}/profiles/verify
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.10.46 Canceling Verification of Profiles

[Overview]

Cancels the verification of the profile with the specified task ID.

[Format]

```
POST /nodes/profiles/verify/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.10.47 Updating eIM to the Latest Version

[Overview]

Updates the eIM of the specified node to the latest version.

[Format]

```
POST /nodes/{nodeid}/profiles/eim/update
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.10.48 Canceling Update of eIM to the Latest Version

[Overview]

Cancels the update to the latest version of eIM with the specified task ID.

[Format]

```
POST /nodes/profiles/eim/update/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

4.11 Firmware Management

4.11.1 Starting Update Firmware/Driver

[Overview]

Starts the firmware/driver update process.

[Format]

```
POST /nodes/firmware/update
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UpdateRequest	array	Update Firmware Request List
NodeId	integer	Node ID
eLCMUpdate	boolean	Specify the following values depending on the firmware update method (Update Mode). - Online Update: false - Offline Update: false - eLCM Offline Update: true - eLCM Offline Update (SimpleUpdate): false - eLCM Online Update: false When omitted, false is set. Do not specify different update modes for the same node. For the procedure for eLCM Offline update, refer to "2.6.3.5.1 Update with Repository Server or Fsas Technologies website firmware data" in "User's Guide."
eLCMSimpleUpdate	boolean	Specify the following values depending on the firmware update method (Update Mode). - Online Update: false - Offline Update: false - eLCM Offline Update: false - eLCM Offline Update (SimpleUpdate): true - eLCM Online Update: false When omitted, false is set. Do not specify different update modes for the same node. For the procedure for eLCM Offline Update (SimpleUpdate), refer to "2.6.3.5.2 Update with firmware data imported into ISM" in "User's Guide."
eLCMSimpleUpdateNextBoot	boolean	Specify whether or not to start the update on the next boot of the target node for eLCM Offline Update (SimpleUpdate), - Start the update on next boot: true - Do not start the update on next boot: false

Parameter	Type	Description
		If this is omitted, false is assumed. Do not specify different options for the same node. To start the update immediately or to start the update at a specific time, specify false (omit). This information is valid for firmware where eLCMSimpleUpdate is true and the response parameter "NextBootSupported" in "4.11.5 List Retrieval for Firmware" is true.
eLCMBootType	string	If the firmware update method (Update Mode) is "eLCM Offline update", specify the boot mode when updating firmware. - UEFI: UEFI boot mode - Legacy: Legacy BIOS compatible mode If this parameter is omitted, the mode will be UEFI boot mode. For update modes other than eLCM Offline Update, omit the parameter.
eLCMOnlineUpdateInfo	object	Only specify firmware update method (Update Mode) for "eLCM Online Update." For the procedure for eLCM Online Update, refer to "2.6.3.6 Online Firmware/Driver Update Using eLCM" in "User's Guide."
eLCMOnlineUpdate	boolean	Specify true.
FWDriverList	array	List of firmware/driver names to update.
FWDriverName	string	Name of the firmware/driver to update.
FWDriverVersion	string	Version after the firmware/driver is updated.
eLCMExecutionMode	string	If the firmware update method (Update Mode) is "eLCM Offline update" or "eLCM Online update", specify the scope of the update. - Execute Preparation: Prepare - Execute Apply: Apply - Execute Preparation and Apply: Both
FirmwareName	string	Firmware Name Specify the firmware name according to the firmware update method (Update Mode). - Online Update: Required - Offline Update: Required - eLCM Offline Update: Not required - eLCM Offline Update (SimpleUpdate): Required - eLCM Online Update: Not required
RepositoryName	string	Repository Name Specify the repository name according to the firmware update method (Update Mode). - Online Update: Required

Parameter	Type	Description
		- Offline Update: Required - eLCM Offline Update: Not required - eLCM Offline Update (SimpleUpdate): Required - eLCM Online Update: Not required
FirmwareVersion	string	Firmware Version Specify the firmware version according to the firmware update method (Update Mode). - Online Update: Required - Offline Update: Required - eLCM Offline Update: Not required - eLCM Offline Update (SimpleUpdate): Required - eLCM Online Update: Not required
OperationMode	string	Supported Modes - Online: Online update - Offline: Offline update Specify the following values according to the firmware update method (Update Mode). - Online Update: Online - Offline Update: Offline - eLCM Offline Update: Offline - eLCM Offline Update (SimpleUpdate): Offline - eLCM Online Update: Online
AfterPowerOn	boolean	If true, the target node is turned on after the firmware update. If false or the key is omitted, the target node is turned off after the firmware update. Valid if OperationMode is Offline and eLCMSimpleUpdateNextBoot is false.
ExecutionDate	string	Execution Time (UTC time) Setting example: 2017-09-23T11:10:00 AM.000Z The update should be started immediately when omitting this setting.
AutoMaintenance	boolean	When true, sets the maintenance mode at updating of the firmware and release maintenance mode after completing the firmware updates. When false and keys are omitted, it does not set and release maintenance mode.
NodeRequest	array	Request List for Nodes
NodeId	integer	Node ID
OfflineBootType	string	Specify the boot mode when executing PXE boot with Offline Update. - UEFI: UEFI boot mode

Parameter			Type	Description
				- Legacy: Legacy BIOS compatible mode If this parameter is omitted, use the following boot mode. Server with iRMC S4 or earlier: Legacy Server with iRMC S5 or later: UEFI
	PreScript		object	Pre Script Information
		ActionId	string	Action ID
		WaitTime	integer	Specify the wait time from the execution of the Pre script until the start of the firmware update in seconds.
	PostScript		object	Post Script Information
		ActionId	string	Action ID
		ForceExecute	boolean	When true, the Post script is executed even if the firmware update fails. When false and keys are omitted, the Post script is not executed when the firmware update fails.
		WaitTime	integer	Specify the wait time from the completion of the firmware update to the execution of the Post script in seconds.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID
CancelUri	string	URI at the Time of Termination
JobId	integer	Job ID Omitted if an execution date for the request parameter has not been set.

4.11.2 Canceling Update Firmware

[Overview]

Cancels the firmware update processing.

[Format]

```
POST /nodes/firmware/update/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- Updating of the firmware cannot be canceled depending on the state of progress of updating process. In that case, the task moves to the status of canceling but the subtasks are not canceled. Moreover, an error of failing to cancel is registered to the Operation Log.
- If not a Update Firmware task, or if the user is not the user who started the task, it will result in an error.

4.11.3 List Retrieval for Firmware Documents

[Overview]

Retrieves a list of firmware documents.

[Format]

```
POST /system/settings/firmware/documents
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Lang		string	Language used - Ja: Japanese - En: English
UpdateRequest		array	Update Firmware Request
	NodeId	integer	Node ID
	FirmwareName	string	Firmware Name
	RepositoryName	string	Repository Name
	FirmwareVersion	string	Firmware Version
	OperationMode	string	Supported Modes - Online: Online update - Offline: Offline update

[Response Parameter]

Parameter		Type	Description
Lang		string	Language used - Ja: Japanese - En: English
ReleaseNoteList		array	Firmware Document
	NodeId	integer	Node ID
	FirmwareType	string	Firmware Type
	RepositoryName	string	Repository Name
	ReleaseNoteUrl	string	Document Display URL
	FileName	string	File Name of Document

4.11.4 List Retrieval for Registered Repositories

[Overview]

Retrieves a list of repositories registered in individual firmware and DVD import.

[Format]

```
GET /system/settings/firmware/repositories
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
RepositoryList		array	Repository List
	RepositoryId	integer	Repository ID
	Name	string	Repository Name
	MediaType	string	Type of Media - Update DVD: ServerView Suite Update DVD - Update Supplement: Update Supplement - Dedicated: Repository for individual import use
	UpdateDVDVersion	string	Import source UpdateDVD version Notifies the following values only when the MediaType is "Update DVD." - Vxx xx is a two-digit number.
	ImportDate	string	Date of Registration
	DiskUsage	string	Disk Capacity used by the repositories (MB)
	ImportStatus	string	Import Status - Running: Execution in progress - Complete: Finished - Cancel-Running: Termination in progress
	TaskId	string	Task ID

4.11.5 List Retrieval for Firmware

[Overview]

Retrieves the summary of the firmware registered to the ISM-VA.

[Format]

```
GET /system/settings/firmware/list
```

[Query Parameter]

Parameter	Type	Description
nodeid	integer	Node ID
modelname	string	Model Name
firmwarename	string	Firmware Name
repositoryid	integer	Repository ID

[Response Parameter]

Parameter	Type	Description
FirmwareList	array	List of Firmware
FirmwareId	integer	Firmware ID
NodeId	integer	Node ID
ModelName	string	Model Name
FirmwareName	string	Firmware Name
RepositoryName	string	Repository Name
FirmwareVersion	string	Firmware Version
SimpleUpdate	boolean	SimpleUpdate availability - true: Firmware can be used for SimpleUpdate. - false: Firmware is not available for SimpleUpdate. When keys are omitted, it is equivalent to false.
OperationMode	string	Applicable Operation Mode
OsType	string	Output for PCI card firmware. Notifies the type of OS that executes the firmware file. - Linux: RedHat, SUSELinuxEnterprise - Windows: Windows
UpdateDVDVersion	string	UpdateDVD version that can be for Offline Update when using PXE Boot or tool version that can be used for eLCM Offline Update (SimpleUpdate). This information is output when OperationMode is "Offline." - Vxx,Vxx,Vxx xx is a two-digit number. For multiple versions, a comma is used as a delimiter between the versions.
FirmwareType	string	Firmware Type
DiskUsage	string	Disk capacity used by the firmware (MB)
RegisterDate	string	Registered Date of the firmware
InitializeAfterFwup	boolean	Initialization after a firmware update Outputs whether the target setting item output in FirmwareType is initialized. - true: Initialized after a firmware update. - false: Not initialized after a firmware update. When keys are omitted, it is equivalent to false.

Parameter			Type	Description
	NextBootSupported		boolean	Whether the firmware supports "Start the update on next boot" for eLCM Offline Update (SimpleUpdate). - true: supported - false: not supported When keys are omitted, it is equivalent to false.
	BaselineInformation		object	Baseline Information This information is output as follows. - Nodes specified in the query parameter - Baseline is allocated to the nodes - Firmware defined in Baseline
		BaselineId	integer	Baseline Model ID
		Version	string	Firmware Version defined in Baseline
		CompareBaseline	string	Version comparison results Outputs the results of comparison between the firmware version of the node and the firmware version defined in the baseline. - Over: larger than the value of the baseline - Equal: equal to the value of the baseline - Under: smaller than the value of the baseline - Impossibility: cannot be judged
		isAllowLargeVersion	boolean	Compatible conditions for baselines Notifies values specified when the baseline is allocated to the nodes. - true: If a firmware version of a node is later than the version of the baseline, it is judged as "compatible." - false: If a firmware version of a node matches the version of the baseline, it is judged as "compatible."

[Precautions]

- You can specify the keys "nodeid," "modelname," "firmwarename" and "repositoryid" as queries. Specifying a key means creating an exclusive connection; only one type of key can be specified each time.
  The same key can be specified multiple times.
- When nodeid is specified, a list of firmware applicable to the devices with NodeId specified from among the firmware managed by the user is output.
- When modelname is specified, a list of firmware applicable to devices corresponding to the ModelName specified from among the firmware managed by the user is output.
- When firmwarename is specified, a list of firmware applicable to devices corresponding to the FirmwareName specified from among the firmware managed by the user is output.
- When repositoryid is specified, a list of firmware stored in repositories with the RepositoryId specified from among the firmware managed by the user is output.
- If the query parameters are omitted, the information of all of the firmware managed by the user is displayed.

4.11.6 Retrieval of Version Number Template Information

[Overview]

Retrieves input method template information for the "Version" to be input when executing individual firmware import.

[Format]

```
GET /system/settings/firmware/template
```

[Query Parameter]

None

[Response Parameter]

Parameter			Type	Description
VersionTemplateList			array	Version Information Template List
	FirmwareType		string	Firmware Type
	ModelList		array	Model List
		Model	string	Model Name
		VersionTemplate	string	Input method template for the "Version" to be input at the time of carrying out individual import firmware.
		VersionExample	string	Example of Version Number Input

[Precautions]

- In a response parameter "VersionTemplate," output of * means any value while % means any alphabet and the value none means any string characters.

4.11.7 DVD Import

[Overview]

Imports the Update DVD and Update Supplement that are used duringUpdate Firmware.

[Format]

```
POST /system/settings/firmware/dvd/import
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Path	string	Relative path from the "/<User group name>/ftp/" of the directory that contains the ISO image of the DVD being imported, or the files on the DVD
Type	string	Type of the DVD being imported Type of Media - Update DVD: ServerView Suite Update DVD - Update Supplement: Update Supplement

Parameter	Type	Description
DeleteFtpResource	boolean	For Specifying ftp Resource Deletion When "true," it deletes the file specified in Path following normal termination of the DVD import. When "false," when keys have been missed out, or when the DVD import terminates due to error, the file specified in Path is not deleted.
UnMountResource	boolean	When "true," the shared directory used in the import is unmounted following normal termination of the DVD import. When "false" or when keys have been missed out, the shared directory used in the import is not unmounted.
MountId	string	Shared Directory of Mounting ID Specify when a shared directory other than ISM is used in an import.
CreateBaseline	boolean	When true, it creates a baseline during DVD import. When false, or when keys are omitted, it does not create a baseline.
LimitedRegistNode	boolean	When true, it creates only a baseline for the firmware on the nodes allocated to the user who executes. When false, or when keys are omitted, it creates baselines for all information existing on the DVD.
AssignNodeAuto	boolean	When true, it allocates the baseline to the nodes which the executing user manages and the baseline can be allocated to. When false, or when keys are omitted, it does not allocate baselines.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID
CancelUri	string	URI at the Time of Termination

[Precautions]

- When specifying the directory containing the files on the DVD for the "Path" request parameter, the configuration of the selected directory must be the same as that of the directory on the DVD.
- When the request parameter, "CreateBaseline" is true and a baseline which is created from the same DVD already exists, it ends with an error.
- When the request parameter, "AssignNodeAuto" is true, and a different baseline exists on the node managed by the executing user, after the allocation is released, a baseline from the DVD will be allocated.

4.11.8 Canceling DVD Import

[Overview]

Cancels the DVD import processes.

[Format]

```
POST /system/settings/firmware/dvd/import/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- If not a DVD import task, or if the user is not the user who executed the import, it will result in an error.

4.11.9 Individual Import Firmware

[Overview]

Imports firmware.

[Format]

```
POST /system/settings/firmware/import
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Path	string	Relative Path from the "/<User group name>/ftp/" of the firmware directory
FirmwareType	string	Firmware Type
Model	string	Firmware Model
Version	string	Firmware Version When the value of AutoAquisitionVersion is "true" this parameter is ignored. When the value of AutoAquisitionVersion is "false" or if there is no setting for AutoAquisitionVersion, this parameter is required.
AutoAcquisitionVersion	boolean	Automatic Judgment of the Firmware Version - true: Automatic judgment is executed for the firmware version. Version is ignored. - false: Automatic judgment is not executed for the firmware version. It is required to specify the version.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID
CancelUri	string	URI at the Time of Termination

[Precautions]

- For request parameter "Path," a directory that contains firmware should be specified.

  For request parameters, refer to "4.11.6 Retrieval of Version Number Template Information."

4.11.10 Canceling Individual Import Firmware

[Overview]

Cancels individual firmware import processes.

[Format]

```
POST /system/settings/firmware/import/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- If not an individual firmware import task, or if the user is not the user who executed the import, it will result in an error.

4.11.11 Deleting Repositories

[Overview]

Deletes repositories.

[Format]

```
DELETE /system/settings/firmware/dvd/{repositoryid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {repositoryid}, enter the repository ID to be deleted.

  Retrieve the repository ID from "4.11.4 List Retrieval for Registered Repositories."

4.11.12 Deleting Individual Firmware

[Overview]

Deletes the firmware imported by individual firmware import.

[Format]

```
DELETE /system/settings/firmware/{firmwareid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {firmwareid}, enter the firmware ID to be deleted.
  Retrieve the firmware ID from "4.11.5 List Retrieval for Firmware."

4.11.13 List Output of Update Firmware Jobs

[Overview]

Displays a list of scheduled Update Firmware jobs.

[Format]

```
GET /system/settings/job/firmwareupdate
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
FirmwareJobList		array	
	JobId	integer	A Notification containing the Job ID is given.
	JobName	string	A Notification containing the Job Name is given.
	TaskId	string	A Notification containing the Task ID is given.
	TaskType	string	A Notification containing the Task Type is given.

Parameter			Type	Description
	ExecutionDate		string	Scheduled Update Time(s)
	DetailedInformation		string	A Notification containing detailed information about the Task is given.
	JobDetailList		array	
		SubTaskId	string	A Notification containing the Subtask ID is given.
		NodeId	integer	A Notification containing the Node ID is given.

[Precautions]

- When there is no job to display, notifications will simply contain the key and "FirmwareJobList."

  Example: "FirmwareJobList":[]

4.11.14 Deleting Update Firmware Jobs

[Overview]

Deletes scheduled Update Firmware jobs.

[Format]

```
DELETE /system/settings/job/firmwareupdate/{JobId}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {JobId}, enter the ID of the Update Firmware job to be deleted.
  Retrieve the Update Firmware Job ID from "4.11.13 List Output of Update Firmware Jobs."

4.11.15 Retrieving Information of Firmware Baseline Creation

[Overview]

Retrieves templates to create baseline definitions.

[Format]

```
GET /system/settings/firmware/baseline/template
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
BaselineTemplateList	array	Baseline Template List
BaseNodeType	string	Node Type Name - server - storage - switch
BaselineModelList	array	Baseline Model List
BaselineModelName	string	Baseline Model Name
FirmwareList	string-array	Firmware List List of firmware that can be defined as a Baseline Model is notified.
FirmwareType	string	Firmware Type
ModelName	string	Model Name of Firmware
FirmwareName	string	Firmware Name
VersionList	string-array	Version List of Firmware All firmware versions of imported firmware are notified in list format. Omitted if no firmware have been imported.
TooltipList	array	The tooltip information corresponding to the version of VersionList. Omitted if no information to notify.
Version	string	Firmware versions in the VersionList
Tooltip	string	Additional information about firmware versions

4.11.16 Creation and Updates of Firmware Baseline

[Overview]

Creates baseline definitions. Also, updates created definitions.

[Format]

```
PATCH /system/settings/firmware/baseline/createupdate
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BaselineName	string	Baseline Name
isUpdate	boolean	Creating/Updating Mode Specify if the request is "updating" or "creating." - true: updating

Parameter	Type	Description
		- false: creating
Description	string	Descriptions of Baseline
BaselineModelList	array	Model List of Baselines
BaselineModelName	string	Model Name of Baseline
FirmwareList	array	List of Firmware Definitions
FirmwareType	string	Firmware Type
ModelName	string	Firmware Model Name
FirmwareName	string	Firmware Name
Version	string	Firmware Version

[Response Parameter]

None

[Precautions]

- For a baseline model name to create, use the baseline model name "BaselineModelName" retrieved in "4.11.15 Retrieving Information of Firmware Baseline Creation."

4.11.17 Deletion of Firmware Baseline

[Overview]

Deletes baseline definitions.

[Format]

```
PATCH /system/settings/firmware/baseline/delete
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
BaselineNameList	array	Baseline Name List
BaselineName	string	Baseline Name

[Response Parameter]

None

4.11.18 Allocation of Firmware Baseline

[Overview]

Allocates baselines to nodes.

[Format]

```
PATCH /system/settings/firmware/baseline/allocate
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
BaselineName		string	Baseline Name
AllocationList		array	List of Allocation Information
	NodeId	integer	Node ID
	isAllowLargeVersion	boolean	Compatible conditions for baselines Specify compatible conditions for baselines. - true: If a firmware version of a node is larger than the version of the baseline, it is judged as "compatible." - false: If a firmware version of a node matches the version of the baseline, it is judged as "compatible."

[Response Parameter]

Parameter		Type	Description
BaselineName		string	Baseline Name
AllocationList		array	List of Allocation results
	NodeId	integer	Node ID
	Result	string	Allocation Results - Support: Baseline has been allocated. - Unsuport: Baseline has not been allocated because the model of the node is not supported. - Nodefinition: Baseline has not been allocated because the model of the node is not defined in the baseline.
	BaselineModel	string	Baseline Model Name If an allocation results "Result" is "Support," an allocated Baseline Model Name will be notified. For all cases other than that, it is omitted.

[Precautions]

- If an already allocated node is specified, an error is notified. When you want to change the baseline allocated to the node, execute "4.11.19 Releasing Firmware Baseline Allocation" first, and then, execute allocation.

4.11.19 Releasing Firmware Baseline Allocation

[Overview]

Releases baselines allocated to nodes.

[Format]

```
PATCH /system/settings/firmware/baseline/allocate/release
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
AllocationReleaseList	integer -array	List of Node IDs Specify node ID to be released.

[Response Parameter]

None

[Precautions]

- Even if one node that you do not have privilege to release is included, it will become an error.

4.11.20 List Retrieval for Firmware Baseline

[Overview]

Retrieves definition contents of baselines and baseline check information of the nodes to which baseline is allocated.

[Format]

```
GET /system/settings/firmware/baseline/list
```

[Query Parameter]

Parameter	Type	Description
definition	boolean	When "true" is specified, it retrieves only baseline definitions. If not specified, it retrieves baseline definitions and baseline check information of the nodes to which the baseline is allocated.
exceptrepositorylist	boolean	When "true" is specified, the imported firmware needed to update firmware to the baseline version are not notified.

[Request Parameter]

None

[Response Parameter]

Parameter			Type	Description
BaselineList			array	Baseline List
	BaselineName		string	Baseline Name
	RegisterDate		string	Registered Date of the Baseline
	UpdateDate		string	Update Date of the Baseline
	Description		string	Description of the Baseline
	BaselineCheckInformation		object	Baseline Check Information If "definition = true" is specified in the query parameter, this check information is not notified.
		AssignNodeCount	integer	Total number of nodes

Parameter	Type	Description
		Notifies of the total number of nodes allocated to the baseline.
NGNodeCount	integer	Number of incompatible nodes Notifies of the number of nodes whose check results are "incompatible."
NANodeCount	integer	Number of non-comparable nodes Notifies the number of nodes whose check results are "non-comparable." Nodes in the following states are considered to be "non-comparable." - Some or all components defined in the baseline are not on the management node - Firmware version is unknown on some or all components of the management node
BaselineModelList	array	Baseline Model List
Id	string	Baseline Model ID
BaselineModelName	string	Baseline Model Name
FirmwareList	string	List of defined firmware information
FirmwareType	string	Firmware Type
ModelName	string	Firmware Model Name
FirmwareName	string	Firmware Name
Version	string	Firmware Version
RepositoryFirmwareIdList	integer-array	Firmware ID List Notifies of the ID list of firmware among the imported firmware whose version match "Version" of the firmware.
NodeList	array	Information of allocated nodes and baseline check information list
NodeId	integer	Node ID
isAllowLargeVersion	boolean	Compatible conditions for baselines Notifies of compatible conditions for baselines. - true: If a firmware version of the node is larger than the version of the baseline, it is judged as "compatible." - false: If a firmware version of the node matches the version of the baseline, it is judged as "compatible."
BaselineCheckInformation	object	Baseline Check Information of the nodes When you specified "definition = true" in the query parameter, omit this information.
CheckResult	string	Results of Baseline Check Notifies if a node is compatible with the baseline. - OK: Compatible with the baseline - NG: Incompatible with the baseline - NA: Non-comparable

Parameter	Type	Description
CheckList	array	Check List of version comparisons Notifies of the check list of version comparisons for each firmware.
FirmwareName	string	Firmware Name
CompareBaseline	string	Version comparison results Outputs the results of comparisons between the firmware version of the node and the firmware version defined in the baseline. - Over: larger than the value of the baseline - Equal: equal to the value of the baseline - Under: smaller than the value of the baseline - Impossibility: cannot be judged
InventoryList	array	List of firmware names and firmware versions for nodes output by "4.6.2 List Retrieval for Detailed Node Information"
InventoryFirmwareName	string	Firmware Name
InventoryFirmwareVersion	string	Firmware Version
FirmwareList	array	Firmware List Notifies of a list of imported firmware needed to update firmware to the version defined in the baseline. This list is notified of when the version comparison results "CompareBaseline" is "Under." Also, when "exceptrepositorylist = true" is specified in the query parameter, this list is omitted.
FirmwareId	integer	Firmware ID
NodeId	integer	Node ID
ModelName	string	Model Name
FirmwareName	string	Firmware Name
RepositoryName	string	Repository Name
FirmwareVersion	string	Firmware Version
SimpleUpdate	boolean	SimpleUpdate availability - true: Firmware can be used for SimpleUpdate. - false: Firmware is not available for SimpleUpdate. When keys are omitted, it is equivalent to false.
OperationMode	string	Applicable Operation Mode
OsType	string	Output for PCI card firmware. Notifies the type of OS that executes the firmware file. - Linux: RedHat, SUSELinuxEnterprise - Windows: Windows

Parameter	Type	Description
UpdateDVDVersion	string	UpdateDVD version that can be for Offline Update when using PXE Boot or tool version that can be used for eLCM Offline Update (SimpleUpdate). This information is output when OperationMode is "Offline." - Vxx,Vxx,Vxx xx is a two-digit number. For multiple versions, a comma is used as a delimiter between the versions.
FirmwareType	string	Firmware Type
DiskUsage	string	Disk capacity used by the firmware (MB)
RegisterDate	string	Registered Date of the firmware
InitializeAfterFwup	boolean	Initialization after a firmware update Outputs whether the target setting item output in FirmwareType is initialized. - true: Initialized after a firmware update. - false: Not initialized after a firmware update. When keys are omitted, it is equivalent to false.
NextBootSupported	boolean	Whether the firmware supports "Start the update on next boot" for eLCM Offline Update (SimpleUpdate). - true: supported - false: not supported When keys are omitted, it is equivalent to false.

4.11.21 Firmware Tool Import

[Overview]

Imports the firmware tool.

[Format]

```
POST /system/settings/firmware/firmtool/import
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ToolKind	integer	Tool Kind 1: eLCM Offline Update (SimpleUpdate) tool
Path	string	Relative Path from the "/<User group name>/ftp/" of the firmware directory

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID
CancelUri	string	URI at the Time of Termination

[Precautions]

- For request parameter "Path," a directory that contains the firmware tool should be specified.

4.11.22 Canceling Firmware Tool Import

[Overview]

Cancels the firmware tool import processes.

[Format]

```
POST /system/settings/firmware/firmtool/import/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- If not a firmware tool import task, or if the user is not the user who executed the import, it will result in an error.

4.11.23 List Retrieval for Firmware Tools

[Overview]

Retrieves a list of firmware tools.

[Format]

```
GET /system/settings/firmware/firmtool/list
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
ToolList		array	
	ToolId	integer	A notification containing the firmware tool ID is given.
	ToolName	string	A notification containing the firmware tool name is given.
	ToolTargetInformation	string	Tool Target Information

Parameter		Type	Description
			For the Simple Update tool, the tool version that can be used for eLCM Offline Update (SimpleUpdate). - Vxx,Vxx,Vxx xx is a two-digit number. For multiple versions, a comma is used as a delimiter between the versions.
	ToolNeedFlag	string	Flag whether firmware data required by this tool has been imported. "true" has been imported, "false" has not been imported. When omitted, false is set.
	ToolVersion	boolean	Tool Version
	RegisterDate	string	Time/Date of tool registration
	DiskUsage	string	Disk capacity used by the firmware (MB)

[Precautions]

- When there is no firmware tool to display, notifications will simply contain the key and "ToolList."

  Example: "ToolList":[]

4.11.24 Deleting Firmware Tools

[Overview]

Deletes the Firmware Tools that you imported in "4.11.21 Firmware Tool Import."

[Format]

```
DELETE /system/settings/firmware/firmtool/{toolid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {toolid}, enter the firmware tool ID to be deleted.
  Retrieve the firmware tool ID from "4.11.23 List Retrieval for Firmware Tools."

4.12 Log Management

4.12.1 Retrieving Log Collection Settings

[Overview]

Retrieves the log collection settings for the specified node ID.

It is possible to specify multiple node IDs in the query parameters.

When no node ID is specified, all node IDs managed by the user group that the users belong to become a target for acquisition.

[Format]

```
GET /nodes/logs/collection/settings
```

[Query Parameter]

Parameter	Type	Description
nodeid	integer	Narrowing down by Node ID

[Response Parameter]

Parameter	Type	Description
LogCollect	object	Log Collection Settings Information
Nodes	array	List of Node Information
NodeId	integer	Node ID
Schedule	object	Scheduling Information
ScheduleEnable	integer	Schedule (enable/disable) - 0: Disable - 1: Enable
ScheduleMethod	string	How to Specify Scheduling - Days: Specifies date - Weeks: Specifies day of the week
Days	array	List of Date Specification Information
Day	integer	Date - 0: Every day - 1-31: 1st to the 31st - 32: End of the month
Time	string	Time (HHmm: hour and minutes) Setting Range: 0000-2359
Weeks	array	List of Day-of-the-week Specification Information
Week	string	Day of the Week - Mon: Monday - Tue: Tuesday - Wed: Wednesday - Thu: Thursday - Fri: Friday - Sat: Saturday - Sun: Sunday
WeekNum	integer	Numbers for Days of the week - 0: Every week

Parameter	Type	Description
		- 1-5: The first - The fifth - 6: Final
Time	string	Time (HHmm: hour and minutes) Setting Range: 0000-2359
NextExecutionDate	string	Next Execution Time and Date YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
ArchivedLogGeneration	integer	The Number of Generations saved Logs Setting Range: 0-366
SecurityLogGeneration	integer	Number of Generations of Node Log (Security Log) saved Setting range: 0-1830
OperationLogGeneration	integer	Number of Generations of Node Log (Operation Log) saved Setting range: 0-1830
EventLogGeneration	integer	Number of Generations of Node Log (Event Log) saved Setting range: 0-1830
HWLogEnable	integer	Subject Hardware Log (enable/disable) - 0: Disable - 1: Enable
OSLogEnable	integer	Subject Operating System Log (enable/disable) - 0: Disable - 1: Enable
SVSLogEnable	integer	Subject ServerView Suite Log (enable/disable) - 0: Disable - 1: Enable
RAIDLogEnable	integer	Subject RAID Log (enable/disable) - 0: Disable - 1: Enable
HWLogPossible	integer	Collection Availability Hardware Log (possible/impossible) - 0: Impossible - 1: Possible
OSLogPossible	integer	Collection Availability Operating System Log (possible/impossible) - 0: Impossible

Parameter	Type	Description
		- 1: Possible
SVSLogPossible	integer	Collection Availability ServerView Suite Log (possible/impossible) - 0: Impossible - 1: Possible
RAIDLogPossible	integer	Collection Availability RAID Log (possible/impossible) - 0: Impossible - 1: Possible

[Precautions]

- Collection availability (HWLogPossible) becomes 1 (possible) for hardware that ISM supports for log collection.
- Collection availability (OSLogPossible) becomes 1 (possible) when the OS information is registered to the target node and detailed node information is retrieved, and the OS is such that ISM supports log collection for it.
- Collection availability (SVSLogPossible) becomes 1 (possible) when ServerView Agents or ServerView Agentless Service is installed to the OS of the target node.
- Collection availability (RAIDLogPossible) becomes 1 (possible) when ServerView RAID Manager is installed to the OS of the target node.

4.12.2 Changing Log Collection Settings

[Overview]

Changes log collection settings for the specified node ID.

Can accept multiple node IDs.

[Format]

```
PATCH /nodes/logs/collection/settings
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
LogCollect	object	Log Collection Settings Information
Nodes	array	List of Node Information
NodeId	integer	Node ID
Schedule	object	Scheduling Information
ScheduleEnable	integer	Schedule (enable/disable) - 0: Disable - 1: Enable
ScheduleMethod	string	How to Specify Scheduling - Days: Specifies date

Parameter	Type	Description
		- Weeks: Specifies day of the week
Days	array	List of Date Specification Information
Day	integer	Date - 0: Every day - 1-31: 1st to the 31st - 32: End of the month
Time	string	Time (HHmm: hour and minutes) Setting range: 0000-2359
Weeks	array	List of Day-of-the-week Specification Information
Week	string	Day of the week - Mon: Monday - Tue: Tuesday - Wed: Wednesday - Thu: Thursday - Fri: Friday - Sat: Saturday - Sun: Sunday
WeekNum	integer	Numbers for Days of the week - 0: Every week - 1-5: The first - The fifth - 6: Final
Time	string	Time (HHmm: hour and minutes) Setting range: 0000-2359
ArchivedLogGeneration	integer	Number of Generations of Archived Logs - Setting range: 0-366 - 0: Archived Log not saved
SecurityLogGeneration	integer	The number of Generation of Node Logs (Security Log) saved - Setting range: 0-1830 - 0: Node logs (Security Log) not saved
OperationLogGeneration	integer	Number of Generations of Node Logs (Operation Log) saved - Setting range: 0-1830 - 0: Node log (Operation Log) not saved
EventLogGeneration	integer	Number of Generations of Node logs (Event Log) saved - Setting range: 0-1830 - 0: Node log (Event Log) not saved
HWLogEnable	integer	Target Hardware Log (enable/disable)

Parameter	Type	Description
		- 0: Disable - 1: Enable
OSLogEnable	integer	Target Operating System Log (enable/disable) - 0: Disable - 1: Enable
SVSLogEnable	integer	Target ServerView Suite Log (enable/disable) - 0: Disable - 1: Enable
RAIDLogEnable	integer	Target RAID Log (available/unavailable) - 0: Disable - 1: Enable

[Response Parameter]

Parameter	Type	Description
LogCollect	object	Log Collection Settings Information
Nodes	array	List of Node Information
NodeId	integer	Node ID
Schedule	object	Scheduling Information
ScheduleEnable	integer	Schedule (enable/disable) - 0: Disable - 1: Enable
ScheduleMethod	string	How to Specify Scheduling - Days: Specifies date - Weeks: Specifies day of the week
Days	array	List of Date Specification Information
Day	integer	Date - 0: Every day - 1-31: 1st to the 31st - 32: End of the month
Time	string	Time (HHmm: hour and minutes) Setting range: 0000-2359
Weeks	array	List of day-of-the-week specification information
Week	string	Day of the week - Mon: Monday - Tue: Tuesday

Parameter	Type	Description
		- Wed: Wednesday - Thu: Thursday - Fri: Friday - Sat: Saturday - Sun: Sunday
WeekNum	integer	Numbers for Days of the week - 0: Every week - 1-5: The first - The fifth - 6: Final
Time	string	Time (HHmm: hour and minutes) Setting range: 0000-2359
NextExecutionDate	string	Next Execution Time and Date YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
ArchivedLogGeneration	integer	Number of Generations of Archived Logs Setting range: 0-366
SecurityLogGeneration	integer	Number of Generation of Node Logs (Security Log) saved Setting range: 0-1830
OperationLogGeneration	integer	Number of Generations of Node Logs (Operation Log) saved Setting range: 0-1830
EventLogGeneration	integer	Number of Generations of Node Logs (Event Log) saved Setting range: 0-1830
HWLogEnable	integer	Target Hardware Log (enable/disable) - 0: Disable - 1: Enable
OSLogEnable	integer	Target Operating System Log (enable/disable) - 0: Disable - 1: Enable
SVSLogEnable	integer	Target ServerView Suite Log (enable/disable) - 0: Disable - 1: Enable
RAIDLogEnable	integer	Target RAID Log (enable/disable) - 0: Disable - 1: Enable

Parameter			Type	Description
		HWLogPossible	integer	Collection Availability Hardware Log (possible/impossible) - 0: Impossible - 1: Possible
		OSLogPossible	integer	Collection Availability Operating System Log (possible/impossible) - 0: Impossible - 1: Possible
		SVSLogPossible	integer	Collection Availability ServerView Suite Log (possible/impossible) - 0: Impossible - 1: Possible
		RAIDLogPossible	integer	Collection Availability RAID Log (possible/impossible) - 0: Impossible - 1: Possible

[Precautions]

- Setup is required for any request parameter other than Days (array) or Weeks (array).
- 'Days' (array) is required to be set if it was specified in ScheduleMethod, or if ScheduleEnable is set to 1.
- 'Weeks' (array) is required to be set if it was specified in ScheduleMethod, or if ScheduleEnable is set to 1.
- When Days (array) and/or Weeks (array) are omitted, their respective schedule settings will not be displayed.
- All settings (both Days (array) and Weeks (array)) should always be executed for the required scheduling settings.
- For Time (string), set it in accordance with the standard time of the environment (local time) where ISM runs.
- Even if specifying 1 (enabled) for the subject of the request parameter (HWLogEnable/OSLogEnable/SVSLogEnable/RAIDLogEnable), if collection availability (HWLogPossible/OSLogPossible/SVSLogPossible/RAIDLogPossible) is 0 (impossible), the subject will automatically be set as 0 (disabled).
- Collection availability (HWLogPossible) becomes 1 (possible) for the hardware that ISM supports for log collection.
- Collection availability (OSLogPossible) becomes 1 (possible) when the OS information is registered to the target node and detailed node information is retrieved, and the OS is such that ISM supports log collection for it.
- Collection availability (SVSLogPossible) becomes 1 (possible) when ServerView Agents or ServerView Agentless Service is installed to the OS of the target node.
- Collection availability (RAIDLogPossible) becomes 1 (possible) when ServerView RAID Manager is installed to the OS of the target node.

4.12.3 Retrieving Log File Information

[Overview]

Retrieves log file information for the specified node ID.

It is possible to specify multiple node IDs in the query parameters.

When no node ID is specified, all node IDs managed by the user group that the users belong to become a target for retrieval.

When no log type is specified, all log types become a target for retrieval.

[Format]

```
GET /nodes/logs/files
```

[Query Parameter]

Parameter	Type	Description
nodeid	integer	Narrowing down by node ID
logtype	string	Narrowing down by Type of Audit Logs - ArchivedLog: Archived Log - Event: Node Log (Event Log) - Security Node Log (Security Log) - Operation: Node Log (Operation Log)
excludekey	string	Displays all information except for items related to specified keys - Files: Omits file information - Size: Omits service information

[Response Parameter]

Parameter	Type	Description
LogCollect	object	Log Collection Information
Nodes	array	List of Node IDs
NodeId	integer	Node ID
ArchivedLog	object	Archived Log Information
Generation	integer	Number of Generations saved
Files	array	File List
FileName	string	File Name
Size	integer	Total Size Unit: MB
Security	object	Node Log (Security Log) Information
Period	object	Duration of Storage
From	string	Start Date (YYYY-MM-DD; Year-Month-Date)
To	string	End Date (YYYY-MM-DD; Year-Month-Date)
Size	integer	Total Size Unit: MB
Operation	object	Node Log (Operation Log) Information
Period	object	Duration of Storage
From	string	Start Date (YYYY-MM-DD; Year-Month-Date)
To	string	End Date (YYYY-MM-DD; Year-Month-Date)
Size	integer	Total Size Unit: MB

Parameter	Type	Description
Event	object	Node Log (Event Log) Information
Period	object	Duration of Storage
From	string	Start Date (YYYY-MM-DD; Year-Month-Date)
To	string	End Date (YYYY-MM-DD; Year-Month-Date)
Size	integer	Total Size Unit: MB

4.12.4 Retrieving Node Statuses

[Overview]

Retrieves node status for the specified node ID.

It is possible to specify multiple node IDs in the query parameters.

When no node ID is specified, all node IDs managed by the user group that the users belong to become a target for retrieval.

[Format]

```
GET /nodes/logs
```

[Query Parameter]

Parameter	Type	Description
nodeid	integer	Narrowing down by Node ID

[Response Parameter]

Parameter	Type	Description
StatusInfo	object	Node Status Information
Nodes	array	Node ID List
NodeId	integer	Node ID
Status	string	Status - Idle: Idle (log collection enabled) - LogCollect: Log collection in progress - LogDelete: Log deletion in progress - Prepare: Under Preparation - Exempt: Out of scope (log collection not possible)

4.12.5 Collecting Logs

[Overview]

Compile log of specified node ID.

Multiple node IDs can be specified.

[Format]

```
POST /nodes/logs/collection/collect
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Nodes	array	List of Node IDs
NodeId	integer	Node ID
HWLogEnable	integer	Subject Hardware Log (enable/disable) - 0: Disable - 1: Enable This item can be omitted. When omitted, log collection is executed as it is set.
OSLogEnable	integer	Subject Operating System Log (enable/disable) - 0: Disable - 1: Enable This item can be omitted. When omitted, log collection is executed as it is set.
SVSLogEnable	integer	Subject ServerView Suite Log (enable/disable) - 0: Disable - 1: Enable This item can be omitted. When omitted, log collection is executed as it is set.
RAIDLogEnable	integer	Subject RAID Log (enable/disable) - 0: Disable - 1: Enable This item can be omitted. When omitted, log collection is executed as it is set.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.12.6 Canceling Log Collection

[Overview]

Cancels the log collection process.

[Format]

```
POST /nodes/logs/collection/collect/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- Log collection cannot be canceled depending on the state of progress of the log collection.
- If not a log collection task, or if executed by a user without cancellation privileges, it will result in an error.

4.12.7 Creating Node Log Download Files

[Overview]

Creates Node Log download files for the Node Log corresponding to the specified node ID and conditions.

[Format]

```
POST /nodes/logs/nodelog/downloadfiles/create
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Nodes		array	List of Node IDs
	NodeId	integer	Node ID
Period		object	Extraction Period
	From	string	Start Date (YYYY-MM-DD; Year-Month-Date)
	To	string	End Date (YYYY-MM-DD; Year-Month-Date)
LogCategory		array(string)	Category - HW: Hardware log - OS: Operating system log
LogType		array(string)	Log Type - Event: Node Log (Event Log) - Security: Node Log (Security Log) - Operation: Node Log (Operation Log)
PasswordEnable		integer	Password Setting to Download File

Parameter	Type	Description
		- 0: Do not set password - 1: Set password
Password	string	Password for the Download File Set an encrypted password when specifying 1 for PasswordEnable. Refer to "2.4 Encryption" for the encryption method.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Precautions]

- When PasswordEnable is 1 (Set password), if the password is not specified or null then it will result in an error.
- For 'Period', specify a date within the Period (duration of storing) range in the response parameter shown in "4.12.3 Retrieving Log File Information."

4.12.8 Canceling Creation of Node Log Download Files

[Overview]

Cancels the creation processing of the Node Log download files.

[Format]

```
POST /nodes/logs/nodelog/downloadfiles/create/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- File creation cannot be canceled depending on the state of progress of the file creation.
- If not a Node Log download file creation task, or if executed by a user without cancellation privileges, it will result in an error.

4.12.9 Creating Archived Log Download Files

[Overview]

Creates Archived Log download files for the Archived Log corresponding to the specified node ID and conditions.

[Format]

```
POST /nodes/logs/archivedlog/downloadfiles/create
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Generation	object	Generation Information of Download File created
Nodes	array	List of Node IDs
NodeId	integer	Node ID
Generation	integer	Number of Generations Setting range: 1-366 Example: When designated as 1, one download file for the latest Archived Log will be created.
File	array	Created Download File Information List
NodeId	integer	Node ID
Files	array	List of File Names
FileName	string	File Name
PasswordEnable	integer	Password Setting to Download File - 0: Do not set password - 1: Set password
Password	string	Password for the Downloaded File Set an encrypted password when specifying 1 for PasswordEnable. Refer to "2.4 Encryption" for the encryption method.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Precautions]

- Specifying the Generation (object) and File (array) request parameters at the same will result in an error. Specify one of them.
- For FileName, set the response parameter FileName (file name) in "4.12.3 Retrieving Log File Information."
- For the number of generations, specify the number you want to download from the log with the newest time and date. For example, by specifying 1, one latest stored log will be downloaded.
- When PasswordEnable is 1 (Set password), if the password is not specified or null, it will result in an error.

4.12.10 Canceling Creation of Archived Log Download Files

[Overview]

Cancels the creation processing of the Archived Log download files.

[Format]

```
POST /nodes/logs/archivedlog/downloadfiles/create/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- Archived Logs download file creation cannot be canceled depending on the state of progress of the file creation.
- If not an Archived Log download file creation task, or if executed by a user without cancellation privileges, it will result in an error.

4.12.11 Retrieving Information on Node Log Download Files

[Overview]

Retrieves information to create Node Log download files.

[Format]

```
GET /nodes/logs/nodelog/downloadfiles
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
DownloadFiles	object	Download File Information
FileCreateStatus	string	Download File Creation Status - Created: Creation complete - Creating: Currently being created - Uncreated: Not created yet - Error: Creation error - Canceled: Creation canceled
TaskId	string	Task ID during and after creation
FileUrl	string	URL of the download File
FileCreated	string	Time Stamp of the Download File YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent UTC in ISO8601 format.)
FileSize	string	Size of the Download File

Parameter		Type	Description
	FileSizeUnit	string	Unit of Download File Size MiB

[Precautions]

- TaskId is output except when the FileCreateStatus is Uncreated (not yet created).
- FileUrl/FileCreated/FileSize/FileSizeUnit is output only when the FileCreateStatus is Created (creation complete).
- Refer to "(4) Download of Archived Logs" in "B.5 Extracting Logs" to download the files in FileUrl.

4.12.12 Retrieving Information on Archived Log Download Files

[Overview]

Retrieves information to create Archived Log download files.

[Format]

```
GET /nodes/logs/archivedlog/downloadfiles
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
DownloadFiles		object	Download File information
	FileCreateStatus	string	Download File Creation Status - Created: Creation complete - Creating: Currently being created - Uncreated: Not created yet - Error: Creation error - Canceled: Creation canceled
	TaskId	string	Task ID during and after creation
	FileUrl	string	URL of the download File
	FileCreated	string	Time Stamp of the Download File YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both delimiters and UTC in ISO8601 format.)
	FileSize	string	Size of the Download File
	FileSizeUnit	string	Unit of the Download File Size MiB

[Precautions]

- TaskId is output except when the FileCreateStatus is Uncreated (not yet created).
- FileUrl/FileCreated/FileSize/FileSizeUnit is output only when the FileCreateStatus is Created (creation complete).

- Refer to "(4) Download of Archived Logs" in "B.5 Extracting Logs" to download the files in FileUrl.

4.12.13 Deleting Log Files

[Overview]

Deletes Node Log and Archived Log files corresponding to specified conditions.

To delete only Node Logs, specify only NodeLog (object).

To delete only Archived Logs, specify only ArchivedLog (object).

Both Generation (object) and File (array) can be specified at the same time for the ArchivedLog (object).

[Format]

```
POST /nodes/logs/files/delete
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
NodeLog	object	Information on the Node Logs of the Deletion Target
Nodes	array	List of Node IDs
NodeId	integer	Node ID
Period	string	Date (YYYY-MM-DD; Year-Month-Date) Deletes Node Logs from before the specified time and date.
LogType	array(string)	Log Type - Security: Node Logs (Security Logs) - Operation: Node Logs (Operation Log) - Event: Node Logs (Event Logs)
ArchivedLog	object	Information on the Archived Logs of the deletion target
Generation	object	Deletion request at specification of the Number of Generations
Nodes	array	List of Node IDs
NodeId	integer	Node ID
Generation	integer	Number of Generations Deletes all generations following that specified. Setting range: 0-366 For 0 and 1, all Archived Logs for the specified node IDs are deleted.
File	array	List of the File Information on the Deletion Target
NodeId	integer	Node ID
Files	array	List of File Names
FileName	string	File Name

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Precautions]

- For 'Period', specify a date within the Period (duration of storing) range in the response parameter shown in "4.12.3 Retrieving Log File Information."
- In the FileName, set the FileName in the response parameter shown in "4.12.3 Retrieving Log File Information."

4.12.14 Canceling Deletion of Log Files

[Overview]

Cancels the deletion processing of the log files.

[Format]

```
POST /nodes/logs/files/delete/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- Log file deletion cannot be canceled depending on the state of deleting process.
- If not a log file deletion task, or if executed by a user without cancellation privileges, it will result in an error.

4.13 Network Management

4.13.1 Retrieving Port Information from All Nodes

[Overview]

Retrieves port information of all nodes. A node to deal with whole retrieval of port information is a server and network switch.

[Format]

```
GET /networks/ports
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
NodeInformation	array	Node Information
NodeId	integer	Node ID
NodeMacAddress	string	MAC Address of a Node
NodeWwnn	string	WWNN of a Node
PortInformation	array	Port Information
PortName	string	Port Name
PortNumber	string	Port Number
Category	string	Port Category Output: LAN, FC, FCoE, iSCSI, IB, CNA, Unknown
SubCategory	string	Port Subcategory Output: Ether, FC, IB, LAN, SAS, LinkAggregation, Mirror, Backup, Backup LA, Peerlink
Technologytype	string	Port Type Output: LAN, FC, FCoE, iSCSI, Unified
LinkStatus	string	Port Link Status Output: Up, Down, Unknown
DetailedInformation	object	Port Detail Information
IpAddress	object	Port IP Address Information
Ipv4Address	string	IPv4 Address
Ipv6Address	string	IPv6 Address
PortMacAddress	string	Port MAC Address
PortWwpn	string	Port WWPN
Speed	object	Information of Port Communication Speed
Value	string	Value of Port Communication Speed
Unit	string	Unit of Port Communication Speed
RemoteInformation	array	Information of the destination of connection
RemoteNodeId	integer	Node ID at the Destination of Connection
RemotePortName	string	Port Name at the Destination of Connection
RemotePortNumber	string	Port Number at the Destination of Connection
RemoteMacAddress	string	MAC Address at the Destination of Connection
RemotePortWwpn	string	WWPN at the Destination of Connection
VirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
VirtualMachineId	integer	Virtual Machine ID at the Destination of Connection
VirtualRouterId	integer	Virtual Router ID at the Destination of Connection
CnaPortInformation	array	CNA Port Information
CnaPortName	string	Split CNA Port Name
VirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
VirtualMachineId	integer	Virtual Machine ID at the Destination of Connection
VirtualRouterId	integer	Virtual Router ID at the Destination of Connection

Parameter	Type	Description
PinGroups	array	Pin Group Information
PinGroupName	string	Pin Group Name
PortList	array	Pin Group Configuration Port List
PortName	string	Port Name

4.13.2 Retrieving Virtual Switch Connection Information from All Nodes

[Overview]

Retrieves virtual switch connection information of all nodes.

[Format]

```
GET /networks/virtualswitches
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
NodeInformation	array	Node Information
NodeId	integer	Node ID
VirtualSwitchInformation	array	Virtual Switch Information
VirtualSwitchId	integer	Virtual Switch ID
ConnectionInformation	array	Connection Information
VirtualPortName	string	Virtual Port Name
RemoteInformation	object	Information of the Destination of Connection
RemoteNodeId	integer	Node ID at the Destination of Connection
RemotePortName	string	Port Name at the Destination of Connection
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualMachineId	integer	Virtual Machine ID at the Destination of Connection
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualPortName	string	Virtual Port Name at the Destination of Connection
VlanId	string	VLAN ID

4.13.3 Retrieving Virtual Machine Connection Information from All Nodes

[Overview]

Retrieves virtual machine connection information of all nodes.

[Format]

```
GET /networks/virtualmachines
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
NodeInformation	array	Node Information
NodeId	integer	Node ID
VirtualMachineInformation	array	Virtual Machine Information
VirtualMachineId	integer	Virtual Machine ID
ConnectionInformation	array	Connection Information
VirtualNetworkAdapterName	string	Name of Virtual Network Adapter
RemoteInformation	object	Information of the Destination of Connection
RemoteNodeId	integer	Node ID at the Destination of Connection
RemotePortName	string	Port Name at the Destination of Connection
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualPortName	string	Virtual Port Name at the Destination of Connection

4.13.4 List Retrieval for Definitions for Manual Connection

[Overview]

Retrieves all definitions for the manual connection. Definition of manual connection is information of the connection to be defined by the ISM administrator.

[Format]

```
GET /networks/connections
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
ConnectionInformation	array	Information of Definitions for Manual Connection
ConnectionType	integer	Type of Definition for Manual Connection
PortInformation	object	Port Information at the Source of Connection
NodeId	integer	Node ID at the Source of Connection
PortName	string	Port Name at the Source of Connection
RemotePortInformation	object	Port Information at the Destination of Connection
RemoteNodeId	integer	Node ID at the Destination of Connection
RemotePortName	string	Port Name at the Destination of Connection

4.13.5 Changing Definitions for Manual Connection

[Overview]

Changes the definitions of manual connection. ISM administrator can change the manual connection definitions.

[Format]

```
PATCH /networks/connections
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ConnectionInformation	array	Information of Definitions for Manual Connection
ConnectionType	integer	Type of Definition for Manual Connection For the purpose of distinguishing types of communication to define, a type of manual connection definition has been prepared. It is possible to specify 0-9 label or null.
PortInformation	object	Port Information at the source of connection
NodeId	integer	Node ID at the Source of Connection Node ID can be retrieved by Node Management. Always needs to set a node ID at the connection source.
PortName	string	Port Name at the Source of Connection A port name can be retrieved by API for retrieval for detailed node information of Detailed Node Information Management. Always needs to set a port name at the connection destination.
RemotePortInformation	object	Port Information at the Destination of Connection
RemoteNodeId	integer	Node ID at the Destination of Connection Node ID can be retrieved by Node Management. Always needs to set a node ID at the destination of connection.
RemotePortName	string	Port Name at the Destination of Connection A port name can be retrieved by API for retrieval for detailed node information of Detailed Node Information Management. Always needs to set a port name at the destination of connection.

[Response Parameter]

Parameter	Type	Description
ConnectionInformation	array	Information of Definitions for Manual Connection
ConnectionType	integer	Type of Definition for Manual Connection
PortInformation	object	Port Information at the Source of Connection
NodeId	integer	Node ID at the Source of Connection
PortName	string	Port Name at the Source of Connection
RemotePortInformation	object	Port Information at the Destination of Connection
RemoteNodeId	integer	Node ID at the Destination of Connection
RemotePortName	string	Port Name at the Destination of Connection

4.13.6 Retrieving Information on Changes in Network Connections

[Overview]

Retrieves change information from the standard position of the network connection information. As for the types of changes, there are "add" and "delete" where "add" refers to an added connection between ports while "delete" means a deleted connection between ports.

[Format]

```
GET /networks/differences
```

[Query Parameter]

None

[Response Parameter]

Parameter			Type	Description
ReferenceTime			string	Completion Time for Setting of a Standard for Information on changes in network connections Output in UTC hours. Example of Output: 2016-06-22T09:09:41.741Z
DifferenceInformation			array	Information on Changes in Network Connections
	Kind		string	Classification of Changes Output: add, delete
	PortInformation		object	Port Information at the Source of Connection
		NodeId	integer	Node ID at the Source of Connection
		PortName	string	Port Name at the Source of Connection
	RemotePortInformation		object	Port Information at the Destination of Connection
		RemoteNodeId	integer	Node ID at the Destination of Connection
		RemotePortName	string	Port Name at the Destination of Connection

4.13.7 Reference Settings for Information on Changes in Network Connections

[Overview]

Sets reference values for information on changes in network connections. Records information on changes (added or deleted connections) from the set reference values. Reference values can only be set by ISM administrators.

[Format]

```
POST /networks/differences
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.13.8 Retrieving Information on Implemented Updates of Network Management Information

[Overview]

Retrieves execution information of "4.13.9 Updating Network Management Information." Outputs start time, end time and results of the immediate "4.13.9 Updating Network Management Information," a mutual reference.

[Format]

```
GET /networks/refresh
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
RefreshInformation		object	
	RefreshStartTime	string	Start Time of Updating of the Network Management Information Output in UTC hours. Example of Output: 2016-06-22T09:09:41.741Z
	RefreshEndTime	string	Completion Time of Updating of the Network Management Information Output in UTC hours. Example of Output: 2016-06-22T09:09:41.741Z
	UpdatedTime	string	Final Updating Time of Updating of the Network Management Information Output in UTC hours. Example of Output: 2016-06-22T09:09:41.741Z
	Status	string	Results of Updating of the Network Management Information Output: successful, failure

4.13.9 Updating Network Management Information

[Overview]

Instructs updates Network Management information. Termination of the update of the Network Management information can be confirmed by acquiring the Operation Log of the Event List Management. In order to re-evolve Network Management information, execute an instruction to retrieve node information of Detailed Node Information Management before updating. Cannot execute respective API for Network Management during the updating.

[Format]

```
POST /networks/refresh
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.13.10 List Retrieval for VLAN Settings

[Overview]

Retrieves all VLAN Settings of the specified nodes. Specify a node ID in {nodeid}. The node ID can be retrieved with Node Management. The node to deal with retrieval of all VLAN settings is network switch.

[Format]

```
GET /networks/nodes/{nodeid}/vlans
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
VlanInformation		array	VLAN Information
	PortName	string	Port Name
	TaggedVlanId	string	Tag VLAN Information
	UntaggedVlanId	string	Port VLAN Information

4.13.11 Batch Modification of VLAN Settings on Multiple Nodes

[Overview]

Changes the VLAN settings of the specified ports of the specified nodes. Specify Node ID and Port name to the NodeId and the PortName, which are respectively the key names of the request parameter. The port name can be retrieved with the API for retrieval of node detailed information of Node Detailed Information Management.

The node that deals with batch changes of VLAN settings is network switch. In case you are specifying both for a machine that is unable to configure tag VLAN and port VLAN onto the same port, the settings of tag VLAN are prioritized.

Not specified nodes and ports cannot be changed.

Settings of VLAN for a device will be implemented in an async manner.

[Format]

```
POST /networks/vlans
```

[Query Parameter]

None

[Request Parameter]

Parameter			Type	Description
NodeInformation			array	Node Information
	NodeId		integer	Node ID
	VlanInformation		array	VLAN Information
		PortName	string	Port Name
		TaggedVlanId	string	Tag VLAN Information Can change settings of multiple tag VLAN IDs. Several VLAN IDs can be specified with "," (comma) or "-" (hyphen).
		UntaggedVlanId	string	Port VLAN Information Only single VLAN ID can be specified as a port VLAN ID. Cannot specify multiple VLAN IDs.

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID

4.13.12 Canceling Batch Modification of VLAN Settings on Multiple Nodes

[Overview]

Cancels batch modification processing of VLAN settings of nodes.

[Format]

```
POST /networks/vlans/cancel
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
TaskId	string	Task ID

[Response Parameter]

None

[Precautions]

- As a batch change process of settings of VLAN for nodes cannot be canceled, it always results in an error reply.

4.13.13 Retrieving of Settings for Link Aggregation

[Overview]

Retrieves link aggregation settings of the specified nodes. Specify a node ID in {nodeid}. The node ID can be retrieved by Node Management.

The node that deals with the whole retrieval of VLAN settings is the network switch.

[Format]

```
GET /networks/nodes/{nodeid}/lags
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
LagInformation	array	Information of Link Aggregation
LagName	string	Name of Link Aggregation
LagMode	string	Operating Mode of Link Aggregation Output: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent
LagType	string	Type of Link Aggregation Output: ISL, peerlink, MLAG
MlagId	string	MLAG ID(vPC ID)
CfabricPortType	string	Port Type of C-Fabric Output: endpoint, cir
PortInformation	array	Port Information of Link Aggregation
PortName	string	Port Name

4.13.14 Changing Settings for Link Aggregation

[Overview]

Changes the link aggregation settings of the specified nodes. Specify a node ID in {nodeid}. The node ID can be retrieved by Node Management.

The node that deals with the whole retrieval of VLAN settings is the network switch.

[Format]

```
PATCH /networks/nodes/{nodeid}/lags
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
LagInformation	array	Information of Link Aggregation
LagName	string	Name of Link Aggregation Be careful as names of link aggregation assignable are different by node.
LagMode	string	Operating Mode of Link Aggregation It is possible to specify Static, LACP algorithm (Active and Passive) or PAgP algorithm (Auto, Desirable, Auto non-silent

Parameter	Type	Description
		and Desirable non-silent). Some algorithms cannot be set depending on the node. Alternatives: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent
LagType	string	Type of Link Aggregation For typical link aggregation, specify null or empty character (""). For MLAG(vPC), specify MLAG, and set MALG ID(vPC ID) for "MlagId" for next parameter if required. Settings cannot be changed for the ISL as well as the Peer-link. Alternatives: ISL, peerlink, MLAG
MlagId	string	MLAG ID Specifies when LagType is MLAG. Set null when MLAG ID(vPC ID) does not exist.
CfabricPortType	string	Port Type of C-Fabric Specifies when specified node is C-Fabric. For all cases other than that, set null. Alternatives: endpoint, cir
PortInformation	array	Port Information of Link Aggregation
PortName	string	Port Name Specify a port name that forms a link aggregation

[Response Parameter]

Parameter	Type	Description
LagInformation	array	Information of Link Aggregation
LagName	string	Name of Link Aggregation
LagMode	string	Operating Mode of Link Aggregation Output: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent
LagType	string	Type of Link Aggregation Output: ISL, peerlink, MLAG
MlagId	string	MLAG ID
CfabricPortType	string	Port Type of C-Fabric Output: endpoint, cir
PortInformation	array	Port Information of Link Aggregation
PortName	string	Port Name

4.13.15 List Retrieval for VFAB Settings

[Overview]

Retrieves all of VFAB Settings of the specified nodes. Specify a node ID in {nodeid}. Node ID can be retrieved with Node Management.

[Format]

```
GET /networks/nodes/{nodeid}/vfabs
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
VfabInformation	array	VFAB Information
VfabId	string	VFAB ID
VfabStatus	string	VFAB Status Output: on, off
VfabMode	string	VFAB Mode Output: host, network, san
EndPointPortInformation	array	End Point Port Information
IfGroupId	integer	ID of Interface Group
VlanInformation	array	VLAN Information
VlanId	integer	VLAN ID
VlanType	string	VLAN Type Output: tagged, untagged
TranslateVlanId	integer	Translate VLAN ID
CirPortInformation	array	CIR Port Information
IfGroupId	integer	ID of Interface Group
VlanInformation	array	VLAN Information
VlanId	integer	VLAN ID
VlanType	string	VLAN Type Output: tagged, untagged
TranslateVlanId	integer	Translate VLAN ID
AmppAreaInformation	array	AMPP Area Information
IfGroupId	integer	ID of Interface Group

4.13.16 List Retrieval for Information on Interface Groups

[Overview]

Retrieves all of Information of the interface group of the specified nodes. Specify a node ID in {nodeid}. Node ID can be retrieved with Node Management.

[Format]

```
GET /networks/nodes/{nodeid}/ifgroups
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
InterfaceGroupInformation	array	Information of Interface Group
IfGroupId	integer	ID of Interface Group
PortInformation	array	Port Information
PortName	string	Port Name
LagInformation	array	Information of Link Aggregation
LagName	string	Name of Link Aggregation It is set in the format of "domain ID/group ID."

4.13.17 Retrieving Virtual Router Connection Information from All Nodes

[Overview]

Retrieves virtual router connection information of all nodes.

[Format]

```
GET /networks/virtualrouters
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
NodeInformation	array	Node Information
NodeId	integer	Node ID
VirtualRouterInformation	string	Virtual Router Information
VirtualRouterId	integer	Virtual Router ID
ConnectionInformation	array	Connection Information
PortName	string	Virtual Port Name
RemoteInformation	object	Information of the Destination of Connection
RemoteNodeId	integer	Node ID at the Destination of Connection
RemotePortName	string	Port Name at the Destination of Connection
RemoteVirtualSwitchId	integer	Virtual Switch ID at the Destination of Connection
RemoteVirtualMachineId	integer	Virtual Machine ID at the Destination of Connection
RemoteVirtualRouterId	integer	Virtual Router ID at the Destination of Connection
RemoteVirtualPortName	string	Virtual Port Name at the Destination of Connection

4.14 Power Capping (Not available from ISM 3.0.0)

This function is not available from ISM 3.0.0.

4.15 Virtual Resource Management

4.15.1 List Retrieval for Storage Pools

[Overview]

Retrieves a list of storage pools managed with ISM.

[Format]

```
GET /resources/storagepools
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
BasicStoragePoolInfo		array	Basic Information of Storage Pools
	PoolId	long	Storage Pool ID
	CmsId	long	IDs of cloud management software (CMS) that the cluster belongs to Output for vSAN or Storage Spaces Direct.
	NodeId	long	Node ID Output for ETERNUS RAID group.
	PoolStatus	string	Status of Storage Pool - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal
	PoolName	string	Name of Storage Pool
	PoolType	string	Type of Storage Pool - VSAN: "VMware Virtual SAN" - S2D: "Microsoft Storage Spaces Direct" - ETERNUS DX: "ETERNUS DX" - ETERNUS AF: "ETERNUS AF"
	TotalCapacity	long	Total Capacity of Storage Pool
	FreeCapacity	long	Free Capacity of Storage Pool
	NotAllocatedCapacity	long	Not Allocated Capacity of Storage Pool Displays for Storage Spaces Direct.
	UsedCapacity	long	Used Capacity of Storage Pool
	UsedRate	short	Used Rate of Storage Pool
	LatestUpdate	string	Time/Date of Latest Acquisition of Information

4.15.2 Individual Retrieval of Storage Pool

[Overview]

Retrieves detailed information on the storage pool of the specified {storagepoolid}.

[Format]

```
GET /resources/storagepools/{storagepoolid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
BasicStoragePoolInfo	object	Basic Information of Storage Pools
PoolId	long	Storage Pool ID
CmsId	long	IDs of the cloud management software (CMS) that the cluster belongs to Output for vSAN or Storage Spaces Direct.
NodeId	long	Node ID Output for ETERNUS RAID group.
PoolStatus	string	Status of Storage Pool - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal
PoolName	string	Name of Storage Pool
PoolType	string	Type of Storage Pool - VSAN: "VMware Virtual SAN" - S2D: "Microsoft Storage Spaces Direct" - ETERNUS DX: "ETERNUS DX" - ETERNUS AF: "ETERNUS AF"
TotalCapacity	long	Total Capacity of Storage Pool
FreeCapacity	long	Free Capacity of Storage Pool
NotAllocatedCapacity	long	Not Allocated Capacity of Storage Pool Output for Storage Spaces Direct.
UsedCapacity	long	Used Capacity of Storage Pool
UsedRate	short	Used Rate of Storage Pool
LatestUpdate	string	Time/Date of Latest Acquisition of Information
VariableData	object	Specific Information by Type of Storage Pools
Url	string	URL of Data Store Output for vSAN.

Parameter		Type	Description
	ManagedObjectId	string	A managed number specified with the cloud management software (VMware Managed Object ID) Output for vSAN.
	Version	string	Version Output for vSAN or Storage Spaces Direct.
	Iops	integer	IOPS Presently, it is not supported.
	Throughput	integer	Throughput Output for vSAN or Storage Spaces Direct. Presently, it is not supported.
	Response	integer	Response Presently, it is not supported.
	AcceptableFailure	integer	The number of Acceptable Failures Output for vSAN. Presently, it is not supported.
	DiskStriping	integer	The number of Disk Striping Output for vSAN. Presently, it is not supported.
	ObjectSpaceReserve	integer	Reservation of Object Spaces Output for vSAN. Presently, it is not supported.
	FlashCache	integer	Cashe amount allocated for reading Flash memory Output for vSAN. Presently, it is not supported.
	Provisioning	boolean	Mandatory Provisioning Output for vSAN. Presently, it is not supported.
	ClusterId	long	ID of Cluster that the Storage Pool belongs to Output for vSAN or Storage Spaces Direct.
	UniqueId	string	ID to show Unique Storage Pool Output for Storage Spaces Direct.
	Deduplication	boolean	Deduplication Output for Strage Spaces Direct.
EquipmentInfo		array	Information of the Node that constitutes the Storage Pool
	NodeId	long	Node ID
	NodeGroupId	long	Node Group ID
	NodeStatus	string	Node Status
	AlarmStatus	string	Alarm Status
	NodeName	string	Node Name

Parameter	Type	Description
Type	string	Node Type
ComputerName	string	Computer Name
Model	string	Model Name
IpAddress	string	IP Address
IpVersion	string	Edition Number of the IP Address ("V4" or "V6")
OS	string	OS Name
MaintenanceMode	integer	Maintenance Mode - 0: Normal Mode - 1: Maintenance Mode
HDD	integer	Number of HDDs Presently, it is not supported.
SSD	integer	Number of SSDs Presently, it is not supported.
Description	string	Nodes Description
DatacenterId	long	ID of the Datacenter on which the node is mounted
DatacenterName	string	Name of the Datacenter on which the node is mounted
FloorId	long	ID of the Floor on which the node is mounted
FloorName	string	Name of the Floor on which the node is mounted
RackId	long	ID of the Rack on which the node is mounted
RackName	string	Name of the Rack on which the node is mounted
RackPosition	integer	Position in the Rack
Firmware	array	Firmware Information
Name	string	Firmware Name
SlotId	string	Slot ID
Model	string	Firmware Model
Type	string	Firmware Type (Card type/iRMC/BIOS)
FirmwareVersion	string	Firmware Version Number
Slot	string	PCI Bus Slot Number
Segment	string	PCI Bus Segment Number
Bus	string	PCI Bus Bus Number
Device	string	PCI Bus Device Number
Function	string	PCI Bus Function Number
Version	string	Version of iRMC
ParentName	string	Name of Parent Device
Unified	string	Unified Model
VirtualDiskInfo	array	Information of Virtual Disk Output for Storage Spaces Direct.
UniqueId	string	ID to show unique Virtual Disk
HealthStatus	string	Status of Virtual Disk

Parameter		Type	Description
			- Healthy: Healthy - Warning: Caution - Unhealthy: Not healthy - Unknown: Not known
	FriendlyName	string	Virtual Disk Name
	TotalCapacity	long	Total Capacity of Virtual Disk
	FreeCapacity	long	Free Capacity of Virtual Disk
	UsedCapacity	long	Capacity Used of Virtual Disk
	UsedRate	short	Capacity Used Rate of Virtual Disk
	FormatType	string	Type of File System

4.15.3 Updating Storage Pool Information

[Overview]

Updates the storage pool information.

[Format]

```
POST /resources/storagepools/refresh
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

4.15.4 List Retrieval for Clusters

[Overview]

Retrieves a list of the cluster information managed with ISM.

[Format]

```
GET /resources/clusters
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
BasicClusterInfo	array	Basic Information of Clusters

Parameter	Type	Description
ClusterId	long	Cluster ID
CmsId	long	IDs of the cloud management software (CMS) that the cluster belongs to Output for vSAN or Storage Spaces Direct.
ClusterType	string	Type of Hypervisor where the Cluster runs - VMware: For VMware vSAN Cluster - Hyper-V: For Microsoft Failover Cluster
ClusterName	string	Name of Cluster
LatestUpdate	string	Time/Date of Last Updated of Information
Status	string	Status of the Cluster - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal
PoolId	array	List of Storage Pool IDs that belong to the cluster
Id	long	ID of the Storage Pool it belongs to
NodeId	array	List of Node IDs that belong to the cluster
Id	object	ID information of Nodes that belong to the cluster
resourceId	long	Cluster ID used for management in the ResourceList service
nodeId	long	Node ID

4.15.5 Individual Retrieval of Cluster

[Overview]

Retrieves cluster information of the specified {clusterid}.

[Format]

```
GET /resources/clusters/{clusterid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
BasicClusterInfo	object	Basic Information of Clusters
ClusterId	long	Cluster ID
CmsId	long	IDs of the cloud management software (CMS) that the cluster belongs to Output for vSAN or Storage Spaces Direct.
ClusterType	string	Type of Hypervisor where the Cluster runs - VMware: VMware vSAN Cluster

Parameter	Type	Description
		- Hyper-V: Microsoft Failover Cluster
ClusterName	string	Name of Cluster
LatestUpdate	string	Time/Date of Last Updated of Information
Status	string	Status of the Cluster - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal
PoolId	lsit	List of Storage Pool IDs that belong to the cluster
Id	long	IDs of the Storage Pool that belong to the cluster
NodeId	array	List of Node IDs that belong to the cluster
Id	object	IDs of Nodes that belong to the cluster
resourceId	long	Cluster ID used for mangement in the ResourceList service
nodeId	long	Node ID
VariableData	object	Information by Type of Clusters
ManagedObjectId	string	Cluster Management ID of the cloud management software (VMware Managed Object ID) Output for VMware Cluster.
Drs	boolean	VMware DRS Function - true: enabled - false: disabled Output for VMware Cluster.
ClusterMode	boolean	Operation Mode of the vSAN Cluster - true: enabled - false: disabled Output for VMware Cluster.
Status	string	Status of Cluster - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal
Deduplication	boolean	Status of Deduplication - true: enabled - false: disabled
Compression	boolean	Status of Compression - true: enabled - false: disabled Output for VMware Cluster.

Parameter	Type	Description
TotalDiskGroupNumber	long	Total Number of Disk Groups in vSAN Cluster Output for VMware Cluster.
Id	string	ID to show unique cluster Output for Microsoft Failover Cluster.
CmsType	string	CMS Type that the Cluster belongs to - MicrosoftFailoverCluster: Microsoft Failover Cluster - MicrosoftFailoverCluster(MAS HCI): Microsoft Failover Cluster (MAS HCI) Output for Microsoft Failover Cluster.
OwnerNode	string	Name of the Owner (primary) Node of the Cluster Output for Microsoft Failover Cluster.
GroupStatus	string	Status of a Cluster Group - Online: Group is operative - Offline: Group is not operative - Pending: Group in action During switching a primary node, it turns to Pending. Returns Offline when unable to communicate. Output for Microsoft Failover Cluster.
EquipmentInfo	array	Information of the node configuring the cluster
NodeId	long	Node ID
NodeGroupId	long	Node Group ID
NodeStatus	string	Node Status
AlarmStatus	string	Alarm Status of a Node
NodeName	string	Node Name
Type	string	Node Types
ComputerName	string	Computer Name (Name of the computer set on OS)
Model	string	Model Name of a Node
IpAddress	string	Node IP Address
IpVersion	string	IP Address Version of a Node "V4" or "V6"
OS	string	Type of OS for Nodes
MaintenanceMode	integer	Maintenance Mode - 0: Normal Mode - 1: Maintenance Mode
HDD	integer	Number of HDDs Presently, it is not supported.
SSD	integer	Number of SSDs Presently, it is not supported.
Condition	string	Status of Nodes

Parameter	Type	Description
		[When cluster's type is VMware Cluster] - Status of Connection: "CONNECTED" - Not connected: "DISCONNECTED" - No Response: "NOTRESPONDING" [When cluster's type is Microsoft Failover Cluster] - Unknown: "Unknown" - Non-operating/Abnormality: "Down" - Normal: "Up" - Part of functions disabled: "Paused" - Embedding to a cluster in progress: "Joining"
DrainStatus	string	Drain Status - NotInitiated: Not Initiated - InProgress: In progress - Completed: Complete - Failed: Failed Output for Microsoft Failover Cluster.
Description	string	Nodes Description
Firmware	array	Firmware Information
Name	string	Firmware Name
SlotId	string	Slot ID
Model	string	Firmware Model
Type	string	Firmware type (Card type/iRMC/BIOS)
FirmwareVersion	string	Firmware Version Number
Slot	string	PCI Bus Slot Number
Segment	string	PCI Bus Segment Number
Bus	string	PCI Bus Bus Number
Device	string	PCI Bus Device Number
Function	string	PCI Bus Function Number
Version	string	Version of iRMC
ParentName	string	Name of Parent Device
Unified	string	Unified Model
DatacenterName	string	Datacenter Name that has been located
DatacenterId	long	Datacenter ID that has been located
FloorName	string	Floor Name that has been located
FloorId	long	Floor ID that has been located
RackName	string	Rack Name that has been mounted
RackId	long	Rack ID that has been mounted
RackPosition	integer	Position in a rack

Parameter			Type	Description
	DiskGroup		array	Disk Group Information Output for VMware Cluster.
		DiskNumber	long	Number of Disks
		DiskGroupCapacity	long	Disk Group Capacity

4.15.6 Migrating Virtual Machines

[Overview]

Migrates a virtual machine to a specified node.

The process results are managed by a task and it is possible to check the completed results by status of "4.16.1 Individual Retrieval of Task" as well as the completion report.

[Format]

```
POST /resources/virtualmachines/{virtualmachineid}/move
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
To	integer	Node ID of host at a migration destination of a virtual machine
Mode	integer	Specifies an Operation Mode of a virtual machine when it was migrated (Applicable only for a case of Microsoft Storage Spaces Direct) - 1: Live - 2: Quick - 3: Shutdown - 4: ShutdownForce - 5: TurnOff When the key is omitted, it is executed with the setting of "1: Live."

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

[Precautions]

- Migration of a VMware virtual machine requires the following conditions.
  - CPUs of node at the migration source and node at the migration destination must be identical.
  - It should be a VM migration within the same data centers.

4.15.7 Turning On Power of Virtual Machines

[Overview]

Connects the power of the specified virtual machine.

The process results are managed by a task and it is possible to check the completed results by status of "4.16.1 Individual Retrieval of Task" as well as the completion report.

[Format]

```
POST /resources/virtualmachines/{virtualmachineid}/power/on
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

4.15.8 Turning Off Power of Virtual Machines

[Overview]

Disconnects the power of the specified virtual machine. The process results are managed by a task and it is possible to check the completed results by status of "4.16.1 Individual Retrieval of Task" as well as the completion report.

[Format]

```
POST /resources/virtualmachines/{virtualmachineid}/power/off
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
OperationType	integer	Specifies how to shut off the power of a virtual machine. - Shutdown: Shutdown - PowerOff: Power is shut off When the key is omitted, it is executed with the setting of "Shutdown."

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

4.15.9 Restarting Nodes

[Overview]

Specify a node that constitutes a storage pool to restart it.

The process results are confirmed according to the completed results of the status of "4.16.1 Individual Retrieval of Task."

[Format]

```
POST /resources/nodes/{nodeid}/restart
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

[Precautions]

- The node to be specified is required to be in the Maintenance mode.

4.15.10 Setting Maintenance Mode on Nodes

[Overview]

Specify a node that constitutes a storage pool to set into maintenance mode.

The process results are managed by a task and it is possible to check the completed results by the status of "4.16.1 Individual Retrieval of Task" as well as the completion report.

[Format]

```
POST /resources/nodes/{nodeid}/cmsmaintenancemode/set
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Mode	integer	Settings of Maintenance Mode operation [For VMware vSAN] - 1: Accessibility security - 2: Migration of all data - 3: No data migration [For Microsoft Storage Spaces Direct] - 1: Migrate all virtual machines to a different host within the cluster.

Parameter	Type	Description
		- 2: Ensure all running virtual machines are in a saved state. When a key is omitted, it runs assuming that 1 has been selected.

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

4.15.11 Releasing Maintenance Mode on Nodes

[Overview]

Specify a node that configures a storage pool to release Maintenance Mode.

Confirm the processing results by referring to the status and the results in "4.16.1 Individual Retrieval of Task."

[Format]

```
POST /resources/nodes/{nodeid}/cmsmaintenancemode/unset
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

4.15.12 Retrieval of Storage Pool History Information

[Overview]

Retrieves the information on the storage pool history of the specified {storagepoolid}.

[Format]

```
POST /resources/storagepools/{storagepoolid}/history
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
UpdateDateList		array	List of dates for the history you want to obtain
	UpdateDate	string	Date for the history you want to obtain (YYYY-MM-DD: Year-Month-Day)

[Response Parameter]

Parameter	Type	Description
StoragePoolInfoList	array	History Information List of Storage Pools
BasicStoragePoolInfo	object	Basic Information of Storage Pools
PoolId	long	Storage Pool ID
CmsId	long	IDs of the cloud management software (CMS) that the cluster belongs to Output for vSAN or Storage Spaces Direct.
NodeId	long	Node ID Output for ETERNUS RAID group.
PoolStatus	string	Status of Storage Pool - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal
PoolName	string	Name of Storage Pool
PoolType	string	Type of Storage Pool - VSAN: "VMware Virtual SAN" - S2D: "Microsoft Storage Spaces Direct" - ETERNUS DX: "ETERNUS DX" - ETERNUS AF: "ETERNUS AF"
TotalCapacity	long	Total Capacity of Storage Pool
FreeCapacity	long	Free Capacity of Storage Pool
NotAllocatedCapacity	long	Not Allocated Capacity of Storage Pool Displays for Storage Spaces Direct.
UsedCapacity	long	Used Capacity of Storage Pool
UsedRate	short	Used Rate of Storage Pool
LatestUpdate	string	Time/Date of Latest Acquisition of Information
VariableData	object	Specific Information by Type of Storage Pools
Url	string	URL of Data Store Output for vSAN.
ManagedObjectId	string	Data Store Management ID of the cloud management software (VMware Managed Object ID) Output for vSAN.
Version	string	Version Output for vSAN or Storage Spaces Direct.
Availability	string	Availability
Iops	integer	IOPS Presently, it is not supported.
Throughput	integer	Throughput

Parameter			Type	Description
				Output for vSAN or Storage Spaces Direct.
		Response	integer	Response Presently, it is not supported.
		AcceptableFailure	integer	Number of Acceptable Failure Output for vSAN. Presently, it is not supported.
		DiskStriping	integer	Number of disk strips Output for vSAN. Presently, it is not supported.
		ObjectSpaceReserve	integer	Reservation of the object space Output for vSAN. Presently, it is not supported.
		FlashCache	integer	The amount of cache allocated for flash reading Output for vSAN. Presently, it is not supported.
		Provisioning	boolean	Forced Provisioning Output for vSAN. Presently, it is not supported.
		ClusterId	long	ID of Cluster that the Storage Pool belongs to Output for vSAN or Storage Spaces Direct.
		UniqueId	string	ID to show Unique Storage Pool Output for Storage Spaces Direct.
		Deduplication	boolean	Deduplication Output for Storage Spaces Direct.

4.15.13 Shutdown of Nodes

[Overview]

Specify a node that configures a storage pool to execute shutdown.

Confirm the processing results by referring to the status and the results in "4.16.1 Individual Retrieval of Task."

[Format]

```
POST /resources/nodes/{nodeid}/shutdown
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	long	Task Management ID

4.16 Task Management

4.16.1 Individual Retrieval of Task

[Overview]

Retrieves detailed information of tasks.

[Format]

```
GET /tasks/{taskid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
TaskId	string	Task ID
ServiceName	string	Service Name at issuer
TaskType	string	Task Type
TimeStampInfo	object	Timestamp Information
Register	string	Time/Date of Task Registration
Update	string	Last Updated Time/Date of a task
ProgressNumerator	integer	Numerator of the Progress of a task
ProgressDenominator	integer	Denominator of the Progress of a task
Status	string	Status of aTask - Wait: Already received - Running: Execution in progress - Complete: Finished - Cancel-Running: Canceling in Process - Cancel-Complete: Cancelling complete
Result	string	Completion Result of Task - Undecided: running - Success: succeeded - Error: failed
CancelUri	string	URI at the Time of Abortion
UserName	string	User Name
SubTaskInfoList	array	List of Sub-task Information
SubTaskId	string	Sub-task ID
TimeStampInfo	object	Timestamp Information

Parameter	Type	Description
Register	string	Registration Time/Date of Sub-task
Update	string	Last Updated Time/Date of Sub-task
ProgressNumerator	integer	Numerator of the Progress of a subtask
ProgressDenominator	integer	Denominator of the Progress of a subtask
Status	string	Status of Sub-task - Running: execution in progress - Complete: finished - Cancel-Running: canceling in Process - Cancel-Complete: canceling complete
Result	string	Completion Result of Sub-task - Undecided: running - Success: succeeded - Error: failed
TargetNode	string	Sub-task Target String
Message	string	Message
Action	string	Contents of Countermeasures
ResourceIdType	string	Type of Resource ID
ResourceId	integer	Resource ID

4.16.2 List Retrieval for Tasks

[Overview]

Retrieves a list of tasks.

[Format]

```
GET /tasks
```

[Query Parameter]

Parameter	Type	Description
servicename	string	Narrowing down by the use of Service Name at issuer
tasktype	string	Narrowing down by Task Type
start	string	Narrowing down by Start Time/Date of the Task registration
end	string	Narrowing down by End Time/Date of the Task registration
taskstatus	string	Narrowing down by Task Status
taskresult	string	Narrowing down by Completion Result of the Task
continuekey	string	Continued Read Key
resourceidtype	string	Narrowing down by the Type of Resource ID
resourceid	integer	Narrowing down by Resource ID

[Response Parameter]

Parameter	Type	Description
TaskInfoList	array	List of Task Information
TaskId	string	Task ID
ServiceName	string	Service name at issuer
TaskType	string	Task Type
TimeStampInfo	object	Timestamp Information
Register	string	Time/Date of Task Registration
Update	string	Last Updated Time/Date of the Task
ProgressNumerator	integer	Numerator of the progress of a Task
ProgressDenominator	integer	Denominator of the progress of a Task
Status	string	Status of Task - Wait: Already received - Running: execution in progress - Complete: finished - Cancel-Running: canceling in Process - Cancel-Complete: canceling complete
Result	string	Completion Result of Task - Undecided: running - Success: succeeded - Error: failed
UserName	string	User Name
ContinueKey	string	Continued Read Key
RowCounter	integer	Total Search Queries

[Precautions]

- When omitting all query parameters, all information of tasks that a user executes become subject for.
- When the same key has been specified several times in query parameters, the one specified lastly becomes valid.
  When narrowing down, specify values of corresponding output results of "4.16.2 List Retrieval for Tasks" and "4.16.1 Individual Retrieval of Task" as specified values for query parameters.
- When there is no task information as a target, it outputs 0 task information.
- When information of task exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new task registration.
- Without changing conditions for narrowing down, the rest of log information can be output by specifying the value of response parameter, "ContinueKey" as a value of query parameter, "continuekey."

4.17 ISM-VA Management

4.17.1 Retrieving and Releasing Privileges for VA Operation

[Overview]

Retrieves and releases privileges for VA operation.

[Format]

```
POST /ismva/privilege
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Mode	string	VA Operation Privilege Mode Specifies retrieve/release of VA operation privilege. - Get: Retrieves VA operating privilege. - Release: Releases VA Operation Privilege.
Password	string	Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 80 characters or less.

[Response Parameter]

Parameter	Type	Description
Result	string	Process Results - OK: - NG:

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- The following API should retrieve VA operation privilege by this API in advance. Unless retrieving VA operation privilege, it becomes a privilege error.
  - 4.2.1 Setting Licenses
  - 4.2.3 Deleting Licenses
  - 4.2.4 Replacing Licenses
  - 4.17.5 Setting ISM-VA System Information
  - 4.17.7 Applying Plug-Ins
  - 4.17.8 Applying Patches
  - 4.17.10 Deleting Plug-Ins
  - 4.17.15 Setting Locales and Keymaps
  - 4.17.19 Setting of Time Information
  - 4.17.22 Creating LVM Volumes
  - 4.17.23 Allocating LVM Volumes to User Groups
  - 4.17.24 Deallocating LVM Volumes from User Groups
  - 4.17.25 Deleting LVM Volumes

- 4.17.26 Expanding LVM Volumes
- 4.17.28 Deploying SSL Certificates
- 4.17.31 Setting up ISM-VA Internal DHCP Server
- 4.17.33 Initializing Domain Settings
- 4.17.34 Adding Domain Settings
- 4.17.35 Going Back to Previous Domain Setting
- 4.17.37 Restarting ISM-VA
- 4.17.38 Stopping ISM-VA
- 4.17.43 Execution of ISM Backup
- 4.17.44 Execution of ISM Restore

- The password specified in the VA operation privilege is identical with the log in password for each user.

4.17.2 Changing Password for the Privilege for VA Operation

[Overview]

Changes the password of the VA operation privilege.

[Format]

```
PATCH /ismva/privilege/settings
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
User		object	User Information
	UserName	string	User Name When a user name is set empty, the following value is set to all users who belong to Administrator group and having Administrator roles.
	PasswordPolicy	string	VA Operation Privilege Mode Specify if VA operation privilege is given to a user at all times. - Disable: Permanently allow VA operation privilege. - Enable: Release permanently set operating privileges.
	Password	string	Password Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. Specify an encrypted character string whose decrypted result is 80 characters or less.

[Response Parameter]

Parameter		Type	Description
User		object	User Information
	UserName	string	User Name
	PasswordPolicy	string	VA Operation Privilege Mode
	Password	string	Password

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Precautions of request parameters are as follows:
  - Omitting a parameter means there is no change in the contents of that parameter.
  - Specifying null to the parameter means to delete all contents of that parameter.
- The output data contains all of the contents including the data relevant to the omitted request parameters.

4.17.3 Display of Information on Privilege for VA Operation

[Overview]

Displays the information of VA operation privilege.

[Format]

```
GET /ismva/privilege/settings
```

[Query Parameter]

Parameter	Type	Description
UserName	string	User Name If no specification, the information of all users in the Administrator group will be displayed.

[Response Parameter]

Parameter		Type	Description
Users		object	User Information
	UserName	string	User Name
	LastAccess	string	Time and date of the last access Time and date of the latest access are output.
	Modified	string	Time/Date of Last Updated Time and date of update are output.
	Status	string	Status The settings of VA operation privilege information is output. - EnternalValid: VA operating privileges are always allowed. - PasswordValid: A password for VA operation privilege is set. - PasswordInValid: A password for VA operation privilege is not set.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.17.4 Display of ISM-VA Information

[Overview]

Displays the ISM-VA information.

[Format]

```
GET /ismva/settings
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
System		object	System Information
	ISM Version	string	Version Information
	GUIPortNumber	string	GUI Port Number
	HostName	string	Host Name for ISM-VA
	Log Level	string	Log Level - small - medium - large
	PluginList	object	Plug-in Information
	Name	string	Plug-in Name
	VL	string	VL
	DebugMode	string	Debugging Mode - Enable: Sets debug mode - Disable: Cancels debug mode (default)
	DebugServiceList	array(string)	Debugging Services Names of services that turn to debug mode are output in array. This key will be omitted unless it is in the debug mode.

[Precautions]

- This API executes the ismadm command below.
  - Display of System Information: ismadm system show

4.17.5 Setting ISM-VA System Information

[Overview]

Sets the system information of ISM-VA.

[Format]

```
PATCH /ismva/settings
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
System		object	System Information
	GUIPortNumber	string	GUI Port Number
	HostName	string	Host Name for ISM-VA
	Log Level	string	Log Level - small - medium - large
	DebugMode	string	Debugging Mode - Enable: Sets debug mode - Disable: Cancels debug mode
	DebugServiceList	array(string)	Debugging Services Specifies names of services that turn to debugging mode in array.

[Response Parameter]

Parameter		Type	Description
System		object	System Information
	ISM Version	string	Version information
	GUIPortNumber	string	GUI Port Number
	HostName	string	Host Name for ISM-VA
	Log Level	string	Log Level - small - medium - large
	PluginList	object	Plug-in Information
	Name	string	Plug-in Name
	VL	string	VL
	DebugMode	string	Debugging Mode - Enable: Sets debug mode - Disable: Cancels debug mode
	DebugServiceList	array(string)	Debugging Services Names of services that turn to debug mode in array.

Parameter	Type	Description
		This key will be omitted unless it is in the debug mode.
Restart	string	Restart Outputs if a restart is required as the result of this API. - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service - null: No need for restarting It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
  - Modification of destination port number of ISM: ismadm service modify
  - Modification of Host Names: ismadm system modify
  - Switching the ISM RAS Log mode: ismadm system set-debug-flag
  - Switching the ISM RAS Log level: ismadm system change-log-level
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.6 Collecting Archived Logs

[Overview]

Collects Archived Log of ISM-VA.

[Format]

```
POST /system/snap
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
MaintenanceData	object	Maintenance Data
Directory	string	Specify a Destination Directory The setting changes depending on the synchronization mode. - Sync Specify a destination of output from the "ftp" directory of the "Administrator" directory. When the key is omitted, "" and null, /Administrator/ftp becomes a destination of output. - Async Specify the relative path from the user group name. The following are the two types of paths that can be specified.

Parameter	Type	Description
		- /<User Group Name>/ftp/... - /<User Group Name>/transfer/...
Mode	string	Mode Specify one of the following. - "Part": (default) - "Full": Outputs detail information For null and "", it assumes that the default value was specified.
SyncMode	string	Synchronization mode If the maintenance data is large, it cannot be retrieved in synchronization mode before the API response has completed, and it will time out. In this case, execute this API in Async mode. - Sync: Synchronized execution (Default) - Async: Asynchronized execution
Period	object	Retrieval period
From	string	Start Date YYYYMMDD: Specify the date in the local time.
To	string	End Date YYYYMMDD: Specify the date in the local time.
Offset	string	Time Zone Specify local time above (difference between UTC time). Example: +0900:Japan, +0000:UTC, -0100, +1030, etc.

[Response Parameter]

Parameter	Type	Description
MaintenanceData	object	Maintenance Data
Path	string	Output File Path The path of the output file is output. - When executing in Synchronized mode /<Directory specified in the request parameter>/ismsnap-YYYYMMDDHHMMSS.zip YYYYMMDDHHMMSS: Local time Example: "Path": "Administrator/ftp/test/ismsnap-20170927170755.zip" - When executing in Asynchronized mode "" is output. For Asynchronized mode, after executing this API, a file with the following name is created after the task processing has been completed.

Parameter		Type	Description
			/<Directory specified in the request parameter>/ismsnap-XXXX-YYYYMMDDHHMMSS.zip YYYYMMDDHHMMSS: Local time XXXX: Task ID Example: "Administrator/transfer/ismsnap-0100-20170927170755.zip"
	Mode	string	Mode The Specified mode will be output.
	SyncMode	string	Synchronized mode The Specified mode will be output.
	TaskId	string	Task ID If you executed in Asynchronized mode, the task ID will be output. Except for that, null will be output.
Restart		string	Restart Outputs if a restart is required as the result of this API. null: No need for restarting

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to Administrator the group.
- This API executes the ismadm command below.
  - Collection of Archived Logs: ismadm system snap

4.17.7 Applying Plug-Ins

[Overview]

Applies a plug-in.

[Format]

```
POST /ismva/settings/plugin/add
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Plugin		object	Plug-in Information
	File	string	Specify a File of plug-in to apply Specify a file path from the "ftp" directory of "Administrator" directory.
	ExecuteFile	string	Executes an optional program within a plug-in file.

Parameter		Type	Description
			When null, " " and keys are omitted, no program is executed.

[Response Parameter]

Parameter		Type	Description
Plugin		object	Plug-in Information
	Result	string	Process Results
	Output	string	Output of the Result of an executed file Outputs the name of path for the result of execution by applied plug-in. /varesult/varesultXXXX XXXX: Time/Date Omits the key when there are no output results.
Restart		string	Restart Outputs if a restart is required as the result of this API. Auto: Will automatically restart after this API is executed.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Application of Plug-in: ismadm system plugin-add
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.8 Applying Patches

[Overview]

Applies patches to ISM-VA.

[Format]

```
POST /ismva/settings/patch/add
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Patch		object	Information of Patch
	File	string	Specify the File of the patches to apply - If MountId is omitted Specify a file path from the "ftp" directory of "Administrator" directory. - If MoundId is specified

Parameter	Type	Description
		Specify a path relative to the mount position.
DeleteFtpResource	boolean	Specify the deletion of the ftp resource file - If MountId is omitted If "true", deletes the file specified by "File" after applying the patches. - If MoundId is specified Does not delete the file specified by "File".
MountId	string	Mount ID of the shared directory Specify to apply the patches on an ISM external shared directory.
Mode	string	Apply Mode - GUICheck: Check mode. Checks the specified file. - GUIApply: Apply mode. Applies the specified file.

[Response Parameter]

Parameter			Type	Description
Patch			object	Information of Patch
	Result		string	Process results
	PatchDetail		object	Patch Contents If the apply mode is GUICheck, outputs the contents of the specified patch file.
		Type	string	Patch Type
		OldVersion	string	Pre-Patch Version
		NewVersion	string	Patched Versions

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.9 Displaying Plug-Ins

[Overview]

Displays information of a plug-in.

[Format]

```
GET /ismva/settings/plugin
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Output		string	Output Results to display
PluginList		object	Plug-in Information
	Name	string	Plug-in Name
	VL	string	VL

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Display of Plug-in: ismadm system plugin-show

4.17.10 Deleting Plug-Ins

[Overview]

Deletes a plug-in.

[Format]

```
POST /ismva/settings/plugin/delete
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Name	string	Plug-in Name Specify the Name of plug-in to delete.

[Response Parameter]

Parameter	Type	Description
Output	string	Output Results to display
Restart	string	Restart Outputs if a restart is required as the result of this API. - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Deletion of Plug-in: ismadm system plugin-del
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.11 Displaying ISM-VA Login Statuses

[Overview]

Retrieves the login status of the ISM-VA system.

[Format]

```
GET /ismva/loginstatus
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
ISMLoginUsers		array	ISM Login Information
	User	string	User Name
SSHLoginUsers		array	ISM Login Information
	User	string	User Name
	IpAddress	string	IP Address
FTPLoginUsers		array	ISM Login Information
	User	string	User Name
	IpAddress	string	IP Address

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.17.12 Displaying Results of Operation Before Restarting

[Overview]

Displays the result of the operation before the restart.

[Format]

```
GET /ismva/settings/result
```

[Query Parameter]

Parameter	Type	Description
Time	string	Time Processing time of results to display Displays the latest result of processing unless specified. Time can be specified for one with a form of yyyy-mm-dd hh:mm:ss. It shows newer results than this setting value.

[Response Parameter]

Parameter	Type	Description
Output	string	Process Results Contents of the results of the following execution are to be output as follows: /varesult/varesultXXXX XXXX: Time/Date

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.17.13 Output of Web Server Logs

[Overview]

Outputs the https communication log of the Web server log.

[Format]

```
POST /ismva/webserverlog/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Directory	string	Destination Directory Specify a path from the "ftp" directory of "Administrator" directory.

[Response Parameter]

Parameter	Type	Description
LogData	object	Log Information
Path	string	Output File Path The path to the stored files in the specified directory will be output. </Directory specified in the request parameter>/ weblogYYYYMMDDHHMMSS.tar.gz
Restart	string	Restart Outputs if a restart is required as the result of this API. null: No need for restarting

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Outputs the logs of the last five weeks.

4.17.14 Displaying Locales and Keymaps

[Overview]

Displays locales/keymaps that are set.

[Format]

```
GET /ismva/settings/locale
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
LocaleSetting		object	Locale Information
	Locale	string	Locale
	Keymap	string	Keymap

[Precautions]

- This API executes the ismadm command below.
  - Display of locales and keymaps: ismadm locale show

4.17.15 Setting Locales and Keymaps

[Overview]

Sets a locale/keymap.

[Format]

```
PATCH /ismva/settings/locale
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
LocaleSetting		object	Locale Information
	Locale	string	Specifies a Locale Specifies a locale to be set. Specifies output results of a list of locale.
	Keymap	string	Specifies Keymap Specifies a Keymap to be set. Specifies output results of a list of keymap.

[Response Parameter]

Parameter		Type	Description
LocaleSetting		object	Locale Information
	Locale	string	Locale
	Keymap	string	Keymap
Restart		string	Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- It is required that either Locale parameter or Keymap parameter is specified.
- This API executes the ismadm commands below.
  - Locale Setting: ismadm locale set-locale
  - Keymap Setting: ismadm locale set-keymap
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.16 Displaying Available Locale Settings

[Overview]

Displays a list of locales that are available for setting.

[Format]

```
GET /ismva/settings/locale/list
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
LocaleList	array(string)	Outputs Locales in array.

[Precautions]

- This API executes the ismadm command below.
  - Display of available locales: ismadm locale list-locales

4.17.17 Displaying Available Keymap Settings

[Overview]

Displays a list of keymaps that are available to be set.

[Format]

```
GET /ismva/settings/locale/keymap/list
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
KeymapList	array(string)	Outputs Keymaps in array.

[Precautions]

- This API executes the ismadm command below.
  - Display of available keymaps: ismadm locale list-keymaps

4.17.18 Displaying Time Information

[Overview]

Displays the ISM time information.

[Format]

```
GET /ismva/settings/time
```

[Query Parameter]

Parameter	Type	Description
OutputMode	string	Output Mode Specifies an output mode. - ALL: Outputs all - VA: Outputs only the current time in a format which includes the day of the week - API (default): Output only the current time in a format which excludes the day of the week

[Response Parameter]

Parameter	Type	Description
Time	object	Time Information
LocalTime	string	Local Time Output takes in the following forms. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds Time Zone Example: Wed 2017-02-01 15:19:50 JST - When OutputMode=API

Parameter		Type	Description
			Year-Month-DayTHours:Minutes:Seconds.nnn Time difference with UTC Example: 2017-02-01T15:19:50.000+09:00
	UniversalTime	string	Time in UTC Outputs time in UTC. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds UTC Example: Wed 2017-02-01 06:19:50 UTC - When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnnZ Example: 2017-02-01T06:19:50.000Z
	Timezone	string	Time Zone Example: Asia/Tokyo (JST, +0900) UTC (UTC, +0000)
NTP		object	NTP Information Output only when OutputMode is All.
	NTPenabled	string	To enable or disable NTP Server Outputs to enable or disable NTP server. - Disabled: Disable NTP server - Enabled: Enable NTP server
	NTPsynchronized	string	Availability or Unavailability of Synchronization with NTP Server Outputs availability or unavailability of synchronization with NTP server. - no: No synchronization - yes: Synchronization enabled
	RTCinlocalTZ	string	Time zone settings of real time clock
	DSTactive	string	Setting of Daylight Saving Time - yes: Period of daylight saving time - no: Other than the period of daylight saving time - n/a: Time zones without settings of daylight saving time
	LastDSTChange	string	Latest Information of Daylight Saving Time change - When DSTactive: yes, it is the time information of when the latest daylight saving time started. Example: DST began at Sun 2017-03-12 01:59:59 CST Sun 2017-03-12 03:00:00 CDT - When DSTactive: no, it is the time information of when the last daylight saving time ended.

Parameter	Type	Description
		Example: DST ended at Sun 2016-11-06 01:59:59 EDT Sun 2016-11-06 01:00:00 EST
NextDSTChange	string	Update Information of the Next Daylight Saving Time - When DSTactive: yes, it is the time information of when the next daylight saving time will end. Example: DST ends (the clock jumps one hour backwards) at Sun 2017-11-05 01:59:59 CDT Sun 2017-11-05 01:00:00 CST - When DSTactive: no, it is the time information of when the next daylight saving time starts. Example: DST begins (the clock jumps one hour forward) at Sun 2017-03-12 01:59:59 EST Sun 2017-03-12 03:00:00 EDT
NTPStatus	string	Status of NTP Server Outputs the following. - When NTP Server is not specified 506 Cannot talk to daemon - When NTP Server is specified 210 Number of sources = n (number of registered servers)
NTPServerList	array	NTP Server
Type	string	Category The following are output as NTP types. - Server: Server
Status	string	Status Notifies the current status. - *: Synchronization target - +: Synchronization target candidates - -: Out of the target for synchronization - ?: Verifying targets
Name	string	Host Name Host Name or IP address
Stratum	string	Hierarchy Hierarchy of NTP Server
Poll	string	Interval of Inquiry Interval of Inquiry (seconds)

Parameter			Type	Description
				The value converted from the original data (Original data: Logarithm base 2 of inquiry interval (seconds). The inquiry interval is equal to 2 to the power of Poll's value.)
		Reach	string	Result of Inquiry Displays if the last 8 queries were successful in octal.
		LastRx	string	Previous Inquiry Displays when the previous inquiry was executed.
		LastSample	string	Gap Gap of time from the last measurement. Inside [] indicates result after subtracting slew adjustment. After +/- is the measurement error margin

[Precautions]

- This API executes the ismadm command below.
  - Display of time settings: ismadm time show

4.17.19 Setting of Time Information

[Overview]

Sets the ISM time information.

[Format]

```
PATCH /ismva/settings/time
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Time		object	Time Information
	Timezone	string	Name of Preset Time Zone Specifies a time zone for setting. Specify from a list of Time Zone. For null, it sets the Default value. If the key is omitted, it does not set a value.
	Time	string	Preset Time Specifies time for setting. If the key is omitted, it does not set a value.
NTP		object	NTP Information
	NTPenabled	string	To enable or disable NTP Server Set to disable or enable NTP server settings. - Disabled: disable NTP server

Parameter	Type	Description
		- Enabled: enable NTP server
NTPServerList	array	NTP Server
Name	string	Host Name Host Name or IP address
Mode	string	Mode Specifies server processing mode which was set in Name. - Add: add a server - Delete: delete a server.

[Response Parameter]

Parameter	Type	Description
Time	object	Time Information
LocalTime	string	Local Time Output takes in the following forms. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds Time Zone Example: Wed 2017-02-01 15:19:50 JST - When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnn Time difference with UTC Example: 2017-02-01T15:19:50.000+09:00
UniversalTime	string	Time in UTC Outputs time in UTC. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds UTC Example: Wed 2017-02-01 06:19:50 UTC - When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnnZ Example: 2017-02-01T06:19:50.000Z
Timezone	string	Time Zone Example: Asia/Tokyo (JST, +0900) UTC (UTC, +0000)
NTP	object	NTP Information Output only when OutputMode is All.
NTPenabled	string	To enable or disable NTP Server Outputs to enable or disable NTP server. - Disabled: sisable NTP server

Parameter	Type	Description
		- Enabled: enable NTP server
NTPsynchronized	string	Availability or unavailability of synchronization with NTP Server Outputs availability or unavailability of synchronization with NTP server. - no: no synchronization - yes: synchronization enabled
RTCinlocalTZ	string	Time Zone Settings of Real Time Clock
DSTactive	string	Setting of Daylight Saving Time - yes: period of daylight saving time - no: other than the period of daylight saving time - n/a: time zones without settings of daylight saving time
LastDSTChange	string	Latest Information of Daylight Saving Time Change - When DSTactive: yes, it is the time information of when the latest daylight saving time started. Example: DST began at Sun 2017-03-12 01:59:59 CST Sun 2017-03-12 03:00:00 CDT - When DSTactive: no, it is the time information of when the last daylight saving time ended. Example: DST ended at Sun 2016-11-06 01:59:59 EDT Sun 2016-11-06 01:00:00 EST
NextDSTChange	string	Update Information of the Next Daylight Saving Time - When DSTactive: yes, it is the time information of when the next daylight saving time will end. Example: DST ends (the clock jumps one hour backwards) at Sun 2017-11-05 01:59:59 CDT Sun 2017-11-05 01:00:00 CST - When DSTactive: no, it is the time information of when the next daylight saving time starts. Example: DST begins (the clock jumps one hour forward) at Sun 2017-03-12 01:59:59 EST Sun 2017-03-12 03:00:00 EDT
NTPStatus	string	Status of NTP Server Outputs the following. - When NTP Server is not specified 506 Cannot talk to daemon - When NTP Server is specified

Parameter			Type	Description
				210 Number of sources = n (number of registered servers)
	NTPServerList		array	NTP Server
		Type	string	Category The following are output as NTP types. - Server: server
		Status	string	Status Notifies the current status. - *: Synchronization target - +: Synchronization target candidates - -: Out of the target for synchronization - ?: Verifying targets
		Name	string	Host Name Host Name or IP address
		Stratum	string	Hierarchy Hierarchy of NTP Server
		Poll	string	Interval of Inquiry Interval of Inquiry (seconds) The value converted from the original data (Original data: Logarithm base 2 of inquiry interval (seconds). The inquiry interval is equal to 2 to the power of Poll's value.)
		Reach	string	Result of Inquiry Displays if the last 8 queries were successful in octal.
		LastRx	string	Previous inquiry Displays when the previous inquiry was executed.
		LastSample	string	Gap Gap of time from the last measurement. Inside [] indicates result after subtracting slew adjustment. After +/- is the measurement error margin
Restart			string	Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
  - Setting of date and time: ismadm time set-time
  - Timezone setting: ismadm time set-timezone
  - Enabling/Disabling of NTP synchronization: ismadm time set-ntp

    - Adding of NTP server: ismadm time add-ntpserver
    - Removal of NTP server: ismadm time del-ntpserver
- To execute this API, it is required to retrieve VA operation privilege in advance.
- If the time settings and the NTP server settings are done at the same time, it may cause an error.

4.17.20 Displaying Available Time Zone Settings

[Overview]

Displays a list of time zones that are available to be set.

[Format]

```
GET /ismva/settings/timezone
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
TimezoneList	array(string)	List of Time Zone Outputs timezones in array.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
    - Display of available time zones: ismadm time list-timezones

4.17.21 Displaying Volume Settings

[Overview]

Displays volume setting information.

[Format]

```
GET /ismva/settings/volume
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
Output	string	Output Result Outputs a result of a command directly.
FilesystemList	object	List of File System Information
Size	string	Whole Size Unit: automatically set for such units as G, M and others.

Parameter		Type	Description
			Sets null for empty disks.
	Used	string	Size used Unit: automatically set for such units as G, M and others. Sets null for empty disks.
	Avail	string	Empty Size Unit: automatically set for such units as G, M and others. Sets null for empty disks.
	UseRate	string	Use Rate, % Sets null for empty disks.
	MountedOn	string	Mount Directory Sets null for empty disks.
	UserGroupName	string	User Group Name When it is allocated to a user group, it is output. When it is not allocated to a user group, it outputs null.
VolumeList		object	List of Volume Information
	DeviceName	string	Disk Name
	VolumeName	string	Volume Name
	DeviceSize	string	Size
FreeDeviceList		array	List of Free Device Information
	DeviceName	string	Disk Name
DirectoryList		object	Directory Information List
	DirectoryType	string	Notifies a Type of Directory. - Log: entire log - IsmLog: entire ISM RAS log - Repository: repository - UserGroup
	DirectoryName	string	Notifies a Directory Name. Notifies a directory as follows. - Log: "ISM-VA Log" - IsmLog: "ISM RasLog" - Repository: "Repository" - User Group Name
	DirectorySize	string	Size of Directory Name above For user group, it is a coincident value with the size under use that is output as details of the user group. It differs from the size shown by Used.

[Precautions]

- This API executes the ismadm command below.
  - Display of volume settings: ismadm volume show

4.17.22 Creating LVM Volumes

[Overview]

Creates an LVM volume.

[Format]

```
POST /ismva/settings/volume
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Volume		object	Information of Volume
	VolumeName	string	Volume Name
	DeviceName	string	Device Name of Virtual Disk ID

[Response Parameter]

Parameter		Type	Description
Volume		object	Information of Volume
	VolumeName	string	Volume Name
	DeviceName	string	Device Name of Virtual Disk ID
Restart		string	Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Adding of LVM volume: ismadm volume add
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.23 Allocating LVM Volumes to User Groups

[Overview]

Allocates the LVM volume to the specified user group.

[Format]

```
POST /ismva/settings/volume/mount
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Volume		object	Information of Volume
	VolumeName	string	Volume Name
	UserGroupName	string	User Group Name

[Response Parameter]

Parameter		Type	Description
Volume		object	Information of Volume
	VolumeName	string	Volume Name
	UserGroupName	string	User Group Name
Restart		string	Outputs if a restart is required as the result of this API. - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service - null: No need for restarting It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Allocation of LVM volume to the user group: ismadm volume mount
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.24 Deallocating LVM Volumes from User Groups

[Overview]

Cancels LVM volume allocation in the specified user group.

[Format]

```
POST /ismva/settings/volume/umount
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserGroupName	string	User Group Name

[Response Parameter]

Parameter		Type	Description
Volume		object	Volume Information that has been specified
	VolumeName	string	Volume Name
	UserGroupName	string	User Group Name
Restart		string	Restart Outputs if a restart is required as the result of this API. - ISM-VA: restart is required for the ISM-VA - ISM-Service: restart is required for the ISM service - null: no need for restarting It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Cancellation of allocation of LVM volume to the user group: ismadm volume umount
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.25 Deleting LVM Volumes

[Overview]

Deletes an LVM volume.

[Format]

```
POST /ismva/settings/volume/delete
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
VolumeName	string	Volume Name

[Response Parameter]

Parameter		Type	Description
Volume		object	Deleted Volume Information
	VolumeName	string	Volume Name
	DeviceName	string	Device Name of Virtual Disk ID

Parameter	Type	Description
Restart	string	Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Removal of LVM volume: ismadm volume delete
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.26 Expanding LVM Volumes

[Overview]

Expands an LVM volume.

[Format]

```
POST /ismva/settings/volume/extend
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Volume		object	Information of Volume
	VolumeName	string	Volume Name When the key is omitted, empty character or null, it is added to the system volume.
	DeviceName	string	Device Name of Virtual Disk ID

[Response Parameter]

Parameter		Type	Description
Volume		object	Information of Volume
	VolumeName	string	Volume Name
	DeviceName	string	Device Name of Virtual Disk ID
Restart		string	Outputs if a restart is required as the result of this API. ISM-VA: restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

- This API executes the ismadm commands below.
  - Extension of LVM volume size: ismadm volume extend
  - Extension of the size of LVM system volume: ismadm volume sysvol-extend
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.27 Displaying SSL Certificates

[Overview]

Displays the SSL certificate.

[Format]

```
GET /ismva/settings/sslcert
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
SSLCert		object	Certificate Information
	Issuer	string	Issuer
	Subject	string	Issued to (subject) (CN part only)
	ValidityNotBefore	string	Start of Validated Period
	ValidityNotAfter	string	End of Validated Period
	Output	string	Outputs Contents of a Certificate (Output results of openssl x509 -text -noout -in).

[Precautions]

- This API executes the ismadm command below.
  - Display of SSL certificates: ismadm sslcert show

4.17.28 Deploying SSL Certificates

[Overview]

Deploys the SSL certificate.

[Format]

```
PATCH /ismva/settings/sslcert
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
SSLCert	object	Certificate Information

Parameter		Type	Description
	KeyFile	string	Specifies a key File for setting.
	CrtFile	string	Specifies a crt File for setting.
	CaFile	string	Specifies a ca File for setting.

[Response Parameter]

Parameter	Type	Description
Output	string	Outputs Contents of a Certificate (Output results of openssl x509 -text -noout -in).
Restart	string	Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API executes the ismadm command below.
  - Deployment of SSL certificates: ismadm sslcert set
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.29 Output of SSL Certificates

[Overview]

Outputs the SSL certificate.

[Format]

```
POST /ismva/settings/sslcert/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Directory	string	Specifies a Destination Directory.

[Response Parameter]

Parameter	Type	Description
Path	string	Output File Outputs a path of output file.
Restart	string	Restart Outputs if a restart is required as the result of this API. ISM-VA: restart is required for the ISM-VA

Parameter	Type	Description
		It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Export of SSL certificates: ismadm sslcert export

4.17.30 Displaying Information on ISM-VA Internal DHCP server

[Overview]

Displays the information on ISM-VA internal DHCP servers.

[Format]

```
GET /ismva/settings/dhcp
```

[Query Parameter]

Parameter	Type	Description
OutputMode	string	Output Mode Specifies an output mode. - Conf: output a Conf file. - Log: output Operation Log. In this case, Line parameters can be specified at the same time. - DHCPMode: specify DHCP server operation mode. - All: output all.
Line	integer	Specifies the Number of Lines of Output. When unspecified, it will output 20 lines.

[Response Parameter]

Parameter		Type	Description
DHCP		object	DHCP Information
	DHCPMode	string	Operation Mode It displays operation mode of DHCP. - local: use ISM internal DHCP Server - remote: uses external DHCP Server
	DHCPConf	string	Content of Conf File
	DHCPLog	string	Contents of Operation Log

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.

- This API executes the ismadm command below.
  - Display of the contents of the currently set DHCP server: ismadm dhcpsrv show-conf
  - Display of the DHCP server message: ismadm dhcpsrv show-msg [-line]

4.17.31 Setting up ISM-VA Internal DHCP Server

[Overview]

Sets up an ISM-VA internal DHCP server.

[Format]

```
PATCH /ismva/settings/dhcp
```

[Query Parameter]

None

[Request Parameter]

Parameter			Type	Description
DHCP			object	DHCP Information
	DHCPMode		string	Operation Mode Specifies operation modes of DHCP. - local: use ISM internal DHCP Server - remote: uses external DHCP Server
	DHCPConf		string	File Path of Conf File Setting up is required when operation mode is set as remote.
	DHCPLog		string	Contents of Operation Log
	Setting		object	Content of DHCP Simple Setting Setting up is required when operation mode is set as local.
		Subnet	string	Specifies an Address of Sub-net Address
		Netmask	string	Specifies Subnet Mask
		Start	string	Specifies a Lease Starting Address
		End	string	Specifies a Lease Ending Address
		Broadcast	string	Specifies a Broadcast Address
		Dns	string	Specifies IP Address of DNS Server
		GateWay	string	Specifies an Address of a Gateway

[Response Parameter]

Parameter		Type	Description
DHCP		object	DHCP Information
	DHCPMode	string	Operation Mode Operation mode of DHCP is displayed. - local: uses ISM internal DHCP Server - remote: uses external DHCP Server

Parameter			Type	Description
	DHCPConf		string	Content of Conf File
	DHCPLog		string	Contents of the Operation Log
	Setting		object	Content of DHCP Simple Setting
		Subnet	string	Sub-net Address
		Netmask	string	Netmask
		Start	string	Lease Starting Address
		End	string	Lease Ending Address
		Broadcast	string	Broadcast Address
		Dns	string	Address of DNS Server
		GateWay	string	Address of a Gateway
Restart			string	Restart Outputs if a restart is required as the result of this API. null: No restarting required

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
  - Setting of ISM-VA internal DHCP Server: ismadm dhcpsrv set-simple, ismadm dhcpsrv set-file
  - Switch of DHCP server: ismadm dhcpsrv show-mode
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.32 Exporting Setting Files for ISM-VA Internal DHCP

[Overview]

Exports a DHCP setting file under use.

[Format]

```
POST /ismva/settings/dhcp/export
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Directory	string	Specify an Output Destination Directory.
ExportMode	string	Export Mode Specify the export mode. - Conf: DHCP setting file in use - Sample: DHCP setting file of a sample

[Response Parameter]

Parameter	Type	Description
Path	string	Output File Path Outputs a path of the output file. - When the ExportMode is Conf /Directory of Request Parameters/dhcpd.conf - When the ExportMode is Sample /Directory of Request Parameters/dhcpd.conf.sample
Restart	string	Restart Outputs if a restart is required as the result of this API. null: No restarting required

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API executes the ismadm commands below.
  - Export of the current setting contents (conf file) to the location where ftp access is possible: ismadm dhcpsrv export-conf -dir
  - Export a sample setting content (conf file) to the location where ftp access is possible: ismadm dhcpsrv export-sample -dir

4.17.33 Initializing Domain Settings

[Overview]

Initializes settings of a domain.

[Format]

```
POST /ismva/settings/kerberos/init
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
Restart	string	Restart Outputs if a restart is required as the result of this API. ISM-VA: restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Initialization of the domain setting information: ismadm kerberos init

- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.34 Adding Domain Settings

[Overview]

Adds settings of a domain.

[Format]

```
POST /ismva/settings/kerberos
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Domain		object	Domain Information
	DomainName	string	Specifies the name of a domain.
	Realm	string	Specifies a realm name.
	ControllerName	string	Specifies a domain control server.

[Response Parameter]

Parameter		Type	Description
Domain		object	Domain Information
	DomainName	string	Name of a Domain
	Realm	string	Realm Name
	ControllerName	string	Domain Control Server
Restart		string	Restart Outputs if a restart is required as the result of this API. ISM-VA: restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API executes the ismadm command below.
  - Addition of the domain setting information: ismadm kerberos add
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.35 Going Back to Previous Domain Setting

[Overview]

Goes back to the previous domain setting.

[Format]

```
POST /ismva/settings/kerberos/restore
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
Restart	string	Restart Outputs if a restart is required as the result of this API. ISM-VA: restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Reverting to the previous domain setting information: ismadm kerberos restore
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.36 Displaying Domain Settings

[Overview]

Displays the settings of a domain.

[Format]

```
GET /ismva/settings/kerberos
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Domain		object	Domain Information
	Logging	object	Logging Information
	Default	string	Default
	Kdc	string	kdc
	AdminServer	string	admins_server
	Comment	string	Comment Information
	Libdefaults	object	Default Value Information

Parameter			Type	Description
		Dns_lookup_realm	string	dns_lookup_realm
		Ticket_lifetime	string	ticket_lifetime
		Renew_lifetime	string	renew_lifetime
		Forwardable	string	forwardable
		Rdns	string	rdns
		Default_ccache_name	string	default_ccache_name
		Default_realm	string	default_realm
		Comment	string	Comment Information
	Realms		object	Realms Information
		Realm	string	realm
		Kdc	string	kdc
		AdminServer	string	admin_server
		Comment	string	Comment Information
	DomainRealm		array(string)	
Output			string	Output Result of Command

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - Display of the domain setting information: ismadm kerberos show

4.17.37 Restarting ISM-VA

[Overview]

Restarts ISM-VA.

[Format]

```
POST /ismva/power/restart
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- The following are the precautions for restarting ISM-VA.
  - After logging out internally from a session that has been logged in, it restarts ISM-VA.
  - In order to return this API, it will restart ISM-VA a few seconds after the response.

    - Login cannot be executed automatically after a restart.
- This API executes the ismadm command below.
    - Restart of ISM-VA: ismadm power restart
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.38 Stopping ISM-VA

[Overview]

Stops ISM-VA.

[Format]

```
POST /ismva/power/stop
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- After internal logging out a session that has been logged in, it stops ISM-VA.
- In order to return this API, it will stop ISM-VA a few seconds after the response.
- This API executes the ismadm command below.
    - Stop of ISM-VA: ismadm power stop
- To execute this API, it is required to retrieve VA operation privilege in advance.

4.17.39 Displaying Service Status

[Overview]

Displays the status of an ISM service in ISM-VA.

[Format]

```
GET /ismva/settings/service
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
ServiceList	string	Service List
UnitFile	string	Service Name

Parameter		Type	Description
			Outputs the following. ism.service
	Active	string	Execution status During running of the service, outputs the following. active (running) since Time and Date of start Time and Date of start is output in the following form. Day of the week YYYY-MM-DD hh:mm:ss Timezone; elapsed time Example: Thu 2017-10-26 19:06:14 JST; 24h ago

4.17.40 Retrieving ISM Version Number

[Overview]

Retrieves information on the ISM version number.

[Format]

```
GET /system/ismva/version
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
IsmVersion	string	ISM Version Number Information

4.17.41 Retrieving CAS Settings

[Overview]

Retrieves CAS settings in ISM.

[Format]

```
GET /ismva/settings/cas
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
CasSettings		object	CAS Settings
	CasEnabled	string	Outputs whether CAS is enabled or disabled. - Enabled: enabled - Disabled: disabled
	Port	integer	Port Number

Parameter		Type	Description
	Status	string	CAS Status is output. - Normal: started normally - Updating: CAS is being set - Error: error at start - "": invalid CAS
	UserRole	string	User Role of the user who access the server User role of users who belong to Administrator groups and have user roles specified with this parameter, who only become automatic login users, are output. - Administrator: default - Operator - Monitor
Modified		string	Last updated Outputs time and date of modification in UTC hours.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.17.42 Updating CAS Settings

[Overview]

Updates CAS settings in ISM.

[Format]

```
PATCH /ismva/settings/cas
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
CasSettings		object	CAS Settings
	CasEnabled	string	Specify whether CAS is enabled or disabled. - Enabled: enabled - Disabled: disabled
	Port	integer	Specify the port number.
	UserRole	string	Specify User Role of the user who access CAS. Only users who belong to Administrator groups and have user roles specified with this parameter will be automatic login users. - Administrator: default - Operator:

Parameter		Type	Description
			- Monitor

[Response Parameter]

Parameter		Type	Description
CasSettings		object	CAS Settings
	CasEnabled	string	Outputs whether CAS is enabled or disabled. - Enabled: enabled - Disabled: disabled
	Port	integer	Port Number
	TaskId	string	Task ID If CAS is running, the started Task ID is output.
	UserRole	string	User Role of the user who access the server User role of users who belong to Administrator groups and have user roles specified with this parameter, who only become automatic login users, are output. - Administrator: default - Operator - Monitor
Modified		string	Last updated Outputs time and date of modification in UTC hours.

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.17.43 Execution of ISM Backup

[Overview]

Executes ISM backup.

[Format]

```
POST /ismva/settings/backup
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Backup		object	Information of Backup
	Mode	string	Execution Mode - GUICheck: check mode. Checks whether Backup can be executed. - GUIExecute: execution mode. Execute Backup.

Parameter	Type	Description
		If the key is omitted, GUIExecute is set.

[Response Parameter]

Parameter	Type	Description
Backup	object	Information of Backup
Result	string	Process Results - When the execution mode is GUICheck Outputs whether Backup is enabled or disabled. OK: backup can be executed NG: backup cannot be executed - When the execution mode is GUIExecute OK: execute Backup
BackupDetail	object	Backup Information Details When the execution mode is GUICheck, outputs the backup information details.
JudgementInfo	object	Backup Execution Judgement Information
DiskSpace	string	Disk Space Judgment Result - OK: backup can be executed - Insufficient: insufficient disk space
Task	string	Task Judgment Result - OK: backup can be executed - Active: unable to run because there is a running task
SystemInfo	object	System Information
Version	string	ISM-VA Version
DiskSpaceAvailableList	array	Available Disk Space
Name	string	Name - System - /Administrator: Outputs only when the virtual directory is mounted.
DiskSize	string	Size
DiskSizeUnit	string	Unit: MB
DiskSpaceRequiredList	array	Required Disk Space
Name	string	Name - System - /Administrator: Outputs only when the virtual directory is mounted.
DiskSize	string	Size
DiskSizeUnit	string	Unit: MB
ActiveTask	integer	Number of Running Tasks

Parameter			Type	Description
		Path	string	Backup File Output Directory Administrator/transfer/webbackup

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - ISM Backup: ismadm system backup
- To execute this API, it is required to retrieve VA operation privilege in advance. Note that if you specify GUICheck for Mode of the request parameter, you do not need to retrieve VA operation privilege.

4.17.44 Execution of ISM Restore

[Overview]

Executes ISM restore.

[Format]

```
POST /ismva/settings/restore
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
Restore		object	Information of Restore
	Mode	string	Execution Mode - GUICheck: check mode. Checks whether Restore can be executed. - GUIExecute: execution mode. Execute Restore. If the key is omitted, GUIExecute is set.
	File	string	Backup File Name Specify a file path from the "ftp" directory of "Administrator" directory.

[Response Parameter]

Parameter		Type	Description
Restore		object	Information of Restore
	Result	string	Process Results - When the execution mode is GUICheck Outputs whether Restore is enabled or disabled. OK: Restore can be executed NG: restore cannot be executed - When the execution mode is GUIExecute

Parameter	Type	Description
		OK: execute restore
RestoreDetail	object	Restore Information Details When the execution mode is GUICheck, outputs the restore information details.
JudgementInfo	object	Restore Execution Judgement Information
DiskSpace	string	Disk Space Judgment Result - OK: restore can be executed - Insufficient: insufficient disk space
Version	string	Version Judgment Result - OK: restore can be executed - Mismatch: version mismatch
SystemInfo	object	System Information
Version	string	ISM-VA Version
BackupFileInfo	object	Backup File Information
Version	string	Backup File Version
DiskSpaceAvailableList	array	Available Disk Space
Name	string	Name: System
DiskSize	string	Size
DiskSizeUnit	string	Unit: MB
DiskSpaceRequiredList	array	Required Disk Space
Name	string	Name: System
DiskSize	string	Size
DiskSizeUnit	string	Unit: MB

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
  - ISM Restore: ismadm system restore
- To execute this API, it is required to retrieve VA operation privilege in advance. Note that if you specify GUICheck for Mode of the request parameter, you do not need to retrieve VA operation privilege.

4.18 Common Information

4.18.1 List Retrieval for FTP Files

[Overview]

Retrieves all files that stored in the FTP site of the ISM managed by the user group that the users belong to.

[Format]

```
GET /system/settings/ftp/filelist
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
Directory		array	File Information
	Path	string	Path it belongs to
	Name	string	File Name or Directory Name
	Type	string	Type - File: File - Folder: Directory
	Size	integer	Size
	Timestamp	string	Update Time and Date
	UserId	integer	Owner User ID User ID of ISM-VA.
	GroupId	integer	Owner Group ID Group ID of ISM-VA.
	Permission	string	Access Privilege Example: "rwxr--r--"

4.18.2 Registration of Cloud Management Software

[Overview]

Registers a cloud management software.

[Format]

```
POST /system/settings/cms
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
CmsInfo		object	Information of a cloud management software
	UserGroupId	string	User group ID for managing of the cloud management software
	CmsName	string	Name of the cloud management software for managing Designate a Unique Name in the ISM.
	CmsType	string	Type of the cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - MicrosoftFailoverCluster(MAS HCI): Microsoft Failover Cluster (MAS HCI)

Parameter	Type	Description
		- SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS - OpenStack: OpenStack
CmsVersion	string	Version Number of the cloud management software - vCenter: 5.5/ 6.0/ 6.5/ 6.7/ 7.0/ 8.0 - MicrosoftFailoverCluster: 2012/ 2012R2/ 2016/ 2019/ 2022/ 2025 - MicrosoftFailoverCluster(MAS HCI): 20H2/ 21H2/ 22H2/ 23H2 - SystemCenter: 2012/ 2012R2/ 2016/ 2019/ 2022/ 2025 - KVM RedHat: 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 6.10/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4/ 7.5/ 7.6/ 7.7/ 7.8/ 7.9/ 8.0/ 8.1/ 8.2/ 8.3/ 8.4/ 8.5/ 8.6/ 8.7/ 8.8/ 8.9/ 8.10/ 9.0/ 9.1/ 9.2/ 9.3/ 9.4 - KVM RedHat: 9.5 (ISM 3.0.0.010 or later) - KVM SUSELinuxEnterprise: 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3/ 12SP4/ 12SP5/ 15/ 15SP1/ 15SP2/ 15SP3/ 15SP4/ 15SP5/ 15SP6 - IPCOM OS: 1.x - OpenStack: Ocata/ Pike/ Queens
IpAddress	string	IP Address of the cloud management software
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
PortNum	integer	Port Number used Specify the port number or null. When null specified, sets the standard port number for the protocol. Connecting protocols for respective cloud management software are as follows: - vCenter: CIM (No. 443) - MicrosoftFailoverCluster, MicrosoftFailoverCluster(MAS HCI), SystemCenter: WinRM (No. 5986) - KVM RedHat, KVM SUSELinuxEnteprise, IPCOM OS: SSH (No. 22) - OpenStack: HTTPS (Port number for OpenStack connection port, number 5001)
DomainName	string	Domain Name

Parameter	Type	Description
		The following are the domain names set for the cloud management software type. - vCenter, MicrosoftFailoverCluster, SystemCenter, KVM RedHat, KVM SUSELinuxEnterprise, IPCOM OS: Windows domain name - OpenStack: OpenStack domain name For Windows domain name, specify a name of FQDN for a realm. Example: ISMDOMAIN.LOCAL For MicrosoftFailoverCluster and SystemCenter, this must be set. For OpenStack, if null is specified "Default" (character string) is set.
AccountName	string	Account Name Specify an account name excluding a realm. Example: ismadmin
Password	string	Password Encrypt the password with a method described in "2.4 Encryption."
Url	string	WebURL Can register access URL to WebUI and others.
VCenter	object	Additional Information for vCenter Presently, it is not supported.
Scvmm	object	Additional Information for SCVMM Presently, it is not supported.
OpenStack	object	Additional Information for OpenStack Presently, it is not supported.

[Response Parameter]

Parameter	Type	Description
CmsInfo	object	Information of a cloud management software
CmsId	integer	ID of the cloud management software
UserGroupId	string	User Group ID for managing of the cloud management software
CmsName	string	Name of the cloud management software for managing
CmsType	string	Type of the cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - MicrosoftFailoverCluster(MAS HCI): Microsoft Failover Cluster (MAS HCI) - SystemCenter: Microsoft System Center Virtual Machine Manager

Parameter	Type	Description
		- KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS - OpenStack: OpenStack
CmsVersion	string	Version Number of the cloud management software
IpAddress	string	IP Address of the cloud management software
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6
PortNum	integer	Port Number used
DomainName	string	Domain Name
AccountName	string	Account Name
Url	string	WebURL
VCenter	object	Additional Information for vCenter Presently, it is not supported.
Scvmm	object	Additional Information for SCVMM Presently, it is not supported.
MicrosoftFailoverCluster	object	Additional Information for Microsoft Failover Cluster
SystemCenterId	integer	ID of the cloud management software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, cloud management software ID of the SystemCenter is set up. Cannot retrieve information from Microsoft Failover Cluster that is managed by SystemCenter. Retrieve information from SystemCenter.
OpenStack	object	Additional Information for OpenStack Presently, it is not supported.
Timestamp	string	Last Updated Time
RefreshDate	string	The Last Retrieval Time of the information on the cloud management software
MaintenanceMode	boolean	Event Output Restricted Mode - True: Enable Event Output Restricted Mode - False: Disable Event Output Restricted Mode (default)

[Precautions]

- The name of a cloud management software starting with under bar "_" cannot be used as it is used with ISM. After registration of the cloud management software, execute an instruction of retrieving virtual information.

4.18.3 List Retrieval for Cloud Management Softwares

[Overview]

Retrieves information of all cloud management software under managed by the user group that the users belong to.

[Format]

```
GET /system/settings/cms
```

[Query Parameter]

Parameter	Type	Description
usergroupid	string	Narrowing down by User Group ID

[Response Parameter]

Parameter		Type	Description
CmsInfoList		array	Information of a cloud management software
	CmsId	integer	ID of the cloud management software
	UserGroupId	string	User group ID for managing of the cloud management software
	CmsName	string	Name of the cloud management software for managing
	CmsType	string	Type of the cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - MicrosoftFailoverCluster(MAS HCI): Microsoft Failover Cluster (MAS HCI) - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS - OpenStack: OpenStack
	CmsVersion	string	Version Number of the cloud management software
	IpAddress	string	IP Address of the cloud management software
	IpVersion	string	IP Version of IP address - V4: IPv4 - V6: IPv6
	PortNum	integer	Port Number used
	DomainName	string	Domain Name
	AccountName	string	Account Name
	Url	string	WebURL
	VCenter	object	Additional Information for vCenter Presently, it is not supported.
	Scvmm	object	Additional Information for SCVMM Presently, it is not supported.

Parameter	Type	Description
MicrosoftFailoverCluster	object	Additional Information for Microsoft Failover Cluster
SystemCenterId	integer	ID of the cloud management software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, the cloud management software ID of the SystemCenter is set up. Cannot retrieve information from Microsoft Failover Cluster that is managed by SystemCenter. Retrieve information from SystemCenter.
OpenStack	object	Additional Information for OpenStack Presently, it is not supported.
Timestamp	string	Last Updated Time
RefreshDate	string	The Last Acquisition Time of the information on the cloud management software
MaintenanceMode	boolean	Event Output Restricted Mode - True: Enable Event Output Restricted Mode - False: Disable Event Output Restricted Mode (default)

4.18.4 Individual Retrieval of Cloud Management Software

[Overview]

Retrieves the specified cloud management software.

[Format]

```
GET /system/settings/cms/{cmsid}
```

[Query Parameter]

None

[Response Parameter]

Parameter	Type	Description
CmsInfo	object	Information of a cloud management software
CmsId	integer	ID of the cloud management software
UserGroupId	string	User group ID for managing of the cloud management software
CmsName	string	Name of the cloud management software for managing
CmsType	string	Type of the cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - MicrosoftFailoverCluster(MAS HCI): Microsoft Failover Cluster (MAS HCI) - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux

Parameter	Type	Description
		- KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS - OpenStack: OpenStack
CmsVersion	string	Version Number of the cloud management software
IpAddress	string	IP Address of the cloud management software
IpVersion	string	IP Version of IP address - V4: IPv4 - V6: IPv6
PortNum	integer	Port Number used
DomainName	string	Domain Name
AccountName	string	Account Name
Url	string	WebURL
VCenter	object	Additional Information for vCenter Presently, it is not supported.
Scvmm	object	Additional Information for SCVMM Presently, it is not supported.
MicrosoftFailoverCluster	object	Additional Information for Microsoft Failover Cluster
SystemCenterId	integer	ID of the cloud management software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, the cloud management software ID of the SystemCenter is set up. Cannot retrieve information from Microsoft Failover Cluster that is managed by SystemCenter. Retrieve information from SystemCenter.
OpenStack	object	Additional Information for OpenStack Presently, it is not supported.
Timestamp	string	Last Updated Time
RefreshDate	string	The Last Acquisition Time of the information on the cloud management software
MaintenanceMode	boolean	Event Output Restricted Mode - True: Enable Event Output Restricted Mode - False: Disable Event Output Restricted Mode (default)

4.18.5 Updating of Cloud Management Software

[Overview]

Updates the information of the specified cloud management software.

[Format]

```
PATCH /system/settings/cms/{cmsid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
CmsInfo	object	Information of a cloud management software
UserGroupId	string	User Group ID for managing of the cloud management software
CmsName	string	Name of the cloud management software for managing Designate a unique name in the ISM.
CmsVersion	string	Version number of the cloud management software For details on the cloud management software, refer to "4.18.2 Registration of Cloud Management Software."
IpAddress	string	IP Address of the cloud management software
IpVersion	string	IP Version of IP address - V4: IPv4 - V6: IPv6
PortNum	integer	Port Number used Specify the port number or null. When null specified, sets the standard port number for the protocol. Connecting protocols for respective cloud management software are as follows: - vCenter: CIM (No. 443) - MicrosoftFailoverCluster, MicrosoftFailoverCluster(MAS HCI), SystemCenter: WinRM (No. 5986) - KVM RedHat, KVM SUSELinuxEnteprise, IPCOM OS: SSH (No. 22) - OpenStack: HTTPS (Port number for OpenStack connection port, number 5001)
DomainName	string	Domain Name The following are the domain names set for the cloud management software type. - vCenter, MicrosoftFailoverCluster, SystemCenter, KVM RedHat, KVM SUSELinuxEnterprise, IPCOM OS: Windows domain name - OpenStack: OpenStack domain name For Windows domain name, specify a name of FQDN for a realm. Example: ISMDOMAIN.LOCAL For MicrosoftFailoverCluster and SystemCenter, this must be set.

Parameter		Type	Description
			For OpenStack, if null is specified "Default" (character string) is set.
	AccountName	string	Account Name Specify an account name excluding a realm. Example: ismadmin
	Password	string	Password Encrypt the password with a method described in "2.4 Encryption."
	Url	string	WebURL Can register access URL to WebUI and others.
	VCenter	object	Additional Information for vCenter Presently, it is not supported.
	Scvmm	object	Additional Information for SCVMM Presently, it is not supported.
	OpenStack	object	Additional Information for OpenStack Presently, it is not supported.

[Response Parameter]

Parameter		Type	Description
CmsInfo		object	Information of a cloud management software
	CmsId	integer	ID of the cloud management software
	UserGroupId	string	User Group ID for managing of the cloud management software
	CmsName	string	Name of the cloud management software for managing
	CmsType	string	Type of the cloud management software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - MicrosoftFailoverCluster(MAS HCI): Microsoft Failover Cluster (MAS HCI) - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS - OpenStack: OpenStack
	CmsVersion	string	Version Number of the cloud management software
	IpAddress	string	IP Address of the cloud management software
	IpVersion	string	IP Version of IP address - V4: IPv4

Parameter	Type	Description
		- V6: IPv6
PortNum	integer	Port Number used
DomainName	string	Domain Name
AccountName	string	Account Name
Url	string	WebURL
VCenter	object	Additional Information for vCenter Presently, it is not supported.
Scvmm	object	Additional Information for SCVMM Presently, it is not supported.
MicrosoftFailoverCluster	object	Additional Information for Microsoft Failover Cluster
SystemCenterId	integer	ID of the cloud management software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, the cloud management software ID of the SystemCenter is set up. Cannot retrieve information from Microsoft Failover Cluster that is managed by SystemCenter. Retrieve information from SystemCenter.
OpenStack	object	Additional Information for OpenStack Presently, it is not supported.
Timestamp	string	Last Updated Time
RefreshDate	string	The last acquisition time of the information on the cloud management software
MaintenanceMode	boolean	Event Output Restricted Mode - True: Enable Event Output Restricted Mode - False: Disable Event Output Restricted Mode (default)

[Precautions]

- The name of a cloud management software starting with under bar "_" cannot be used as it is used with ISM. After updating of cloud management software, execute an instruction of acquiring virtual information.

4.18.6 Deletion of Cloud Management Software

[Overview]

Deletes the information of the specified cloud management software.

[Format]

```
DELETE /system/settings/cms/{cmsid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.18.7 Pool Settings

[Overview]

Sets the pool information managed in the ISM.

[Format]

```
PATCH /pools
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Pool	object	Pool Information
PoolType	string	Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN
ValueRangeList	array	Range of Values to pool Specify all information of the range of the specified pool type. Overwrites information of the pool type with the specified values. Cannot specify to duplicate ranges. When there are values already dispensed and the dispensed values are beyond a range of pool, it will be an error.
BeginValue	string	Start Value of Range Specify in correct format for the respective types of pools - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, delimited by "-" or ":") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, delimited by "-" or ":")
EndValue	string	End Value of Range Specify in correct format for the respective types of pools - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, delimited by "-" or ":") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, delimited by "-" or ":")
UserGroupId	string	User Group ID available for the pool range It turns to a range usable for all users unless specified.

[Response Parameter]

Parameter	Type	Description
Pool	object	Pool Information
PoolType	string	Pool Type - MacAddress: Virtual MAC Address - Wwn: Virtual WWN
ValueRangeList	array	Range of Values to pool
BeginValue	string	Start Value of Range - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, delimited by "-") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, delimited by ":")
EndValue	string	End Value of Range - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, delimited by "-") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, delimited by ":")
UserGroupId	string	User Group ID available for the pool range It turns to a range usable for all users unless specified.

[Precautions]

- Can only be executed by ISM administrators.
- It turns to error when the pool range is specified as follows:
  - When ranges of pools overlap
  - When there are values already dispensed and the dispensed values are beyond a range of pool

4.18.8 Retrieval of Pool Information

[Overview]

Retrieves information of all pools managed by the user group that the users belong to.

[Format]

```
GET /pools
```

[Query Parameter]

Parameter	Type	Description
pooltype	string	Narrowing down by Pool Type - MacAddress: Virtual MAC Address - Wwn: Virtual WWN
assigned	string	Enable/Disable List output of assigned values It is recommended to use it by combining with pooltype as the assigned pool may get larger content of information. - No specification: Do not display

Parameter	Type	Description
		- Output: Display

[Response Parameter]

Parameter	Type	Description
PoolList	array	Pool Information
PoolType	string	Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN
ValueRangeList	array	Range of Values to pool
BeginValue	string	Start Value of Range - MacAddress: xx-xx-xx-xx-xx-xx (x is 0-9a-f, lower case, delimited by "-") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, delimited by ":")
EndValue	string	End Value of Range - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, delimited by "-") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, delimited by ":")
UserGroupId	string	User Group ID available for the pool range It turns to a range usable for all users unless specified.
ValueLeftNumber	integer	The Number of Pool Values available Displays the number of pool values that are not discharged yet.
AssignedList	array(string)	Assigned Value Only displayed when "Output" is specified for "assigned" of the query parameter.

4.18.9 Allocating Values from Pools

[Overview]

Allocates values from the pool information managed by the user group that the users belong to.

[Format]

```
POST /pools/assign
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Pool	object	Pool Information
PoolType	string	Type of Pool

Parameter		Type	Description
			- MacAddress: Virtual MAC Address - Wwn: Virtual WWN
	UserGroupId	string	User Group that demands assignment Dispense values in the range available for user groups as specified. A range of values under management of a user group will be prioritized. When there is no available value to dispense from the value range managed by a user group, it is dispensed from a range that all users can use. Becomes an error when there is no value to assign.
	AssignMode	string	Mode to assign Unless specified, it operates by Automatic. - Automatic: A free value is allocated automatically. - Manual: Specifies a value to assign. It turns to error unless it is a value within a range that a user can use.
	Value	string	Value to assign Specify when AssignMode is Manual. Specify in correct format for the respective types of pools - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, delimited by "-" or ":") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, delimited by "-" or ":")

[Response Parameter]

Parameter		Type	Description
Pool		object	Pool Information
	PoolType	string	Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN
	Value	string	Assigned Value - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, delimited by "-") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, delimited by ":")

4.18.10 Release of Assigned Values

[Overview]

Releases assigned values managed by the user group that the users belong to.

[Format]

```
POST /pools/unassign
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
Pool	object	Pool Information
PoolType	string	Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN
Value	string	Value to release - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, delimited by "-") - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, delimited by ":")

[Response Parameter]

None

4.18.11 Adding Shared Directories

[Overview]

Adds shared directories.

[Format]

```
POST /system/settings/shareddirectory/{usergroupid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
SharedDirectoryList	array	Shared Directory Information List Specifies shared directory information. The maximum value is 5.
SharedDirectoryHostName	string	Host Name Specifies IP address (or Host Name).
SharedDirectoryDomainName	string	Domain Name
SharedDirectoryAccountSetting	object	Account Information
Account	string	Account Name Specifies the Account Name (User Name).
Password	string	Password Specifies a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method.

Parameter	Type	Description
		In addition, specify an encrypted character string whose decrypted result is 256 characters or less.
SharedDirectoryPath	string	Shared Directory Path Specifies a shared directory path.
SharedDirectoryType	string	Shared Directory Type Specifies a type of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS

[Response Parameter]

Parameter	Type	Description
UserGroupList	array	List of User Group Information
SharedDirectory	object	Shared Directory Information
MountId	string	Mount ID Notifies a mount ID. Notifies null when the result is NG.
SharedDirectoryHostName	string	Host Name Notifies IP address (or Host Name).
SharedDirectoryDomainName	string	Domain Name
SharedDirectoryAccountSetting	object	Account Information
Account	string	Account Name
SharedDirectoryPath	string	Shared Directory Path Notifies a shared directory path.
SharedDirectoryType	string	Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS
Modified	string	Update Time and Date Notifies a time stamp of the update time and date.
Result	string	Results Notifies results added. Notifies the following. - OK: succeeded - NG: failed - -: not yet processed
Message	object	Message Notifies error message when the result is NG.
MessageId	string	Message ID
Message	string	Text of Message

[Precautions]

- Can only be executed by a user holding an Administrator role.
- There are two kinds of errors of this API as shown below:
  - When API itself becomes an error

    The API Response is error.

    - is set in the Result parameter.
  - When one of the elements specified results in an error

    An API Response is normal.

    NG is set in the Result parameter.
- Mount ID are as shown below:
  - Each user group is created by the following rules:

    User group ID with number of +1-n (n: maximum number of mounting enabled for each user group)

    Due to above mentioned reason, by repeating addition and deletion, it may result in the same number.
- The number of registrations is as shown below:
  - Up to 5 IDs can be registered for each user group at a maximum.
  - If you try to register a 6th ID, it will result in an error.
- Details of domain assignment is as shown below:

  Specify when Samba server had jointed in Kerberos domain.

4.18.12 List Retrieval for Shared Directories

[Overview]

Retrieves a list of shared directories.

[Format]

```
GET /system/settings/shareddirectory
```

[Query Parameter]

Parameter	Type	Description
UserGroupId	string	User Group ID If no specified, displays everything within a range of the executing user's user group.

[Response Parameter]

Parameter			Type	Description
UserGroupList			array	List of User Group Information
	UserGroupId		string	User Group ID
	SharedDirectory		object	Shared Directory Information List Notifies shared directory information. The maximum value is 5.
		MountId	string	Mount ID Notifies a mount ID.

Parameter			Type	Description
				Notifies null when the result is NG.
		SharedDirectoryHostName	string	Host Name IP address (or Host Name) is notified.
		SharedDirectoryDomainName	string	Domain Name
		SharedDirectoryPath	string	Shared Directory Path Informs a shared directory path.
		SharedDirectoryType	string	Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS
		SharedDirectoryStatus	string	Mount Status Notifies Status of a node. - Mount: Being mounted - Unmount: Not mounted.
		SharedDirectoryMountOn	string	Mounting position. When being mounted, it notifies its mounting position as follows: /User Group/- When not being mounted, it notifies null.

[Precautions]

- Users holding Administrator or Operator privilege can execute this API.

4.18.13 Individual Retrieval of Shared Directory

[Overview]

Retrieves detailed information of a shared directory.

[Format]

```
GET /system/settings/shareddirectory/{mountid}
```

[Query Parameter]

None

[Response Parameter]

Parameter		Type	Description
UserGroup		object	List of User Group Information
	UserGroupId	string	User Group ID
	SharedDirectoryList	object	Shared Directory Information List Notifies shared directory information. The maximum value is 5.

Parameter	Type	Description
MountId	string	Mount ID Notifies a mount ID. Notifies null when the result is NG.
SharedDirectoryHostName	string	Host Name Notifies IP address (or Host Name).
SharedDirectoryDomainName	string	Domain Name
SharedDirectoryAccountSetting	object	Account Information
Account	string	Account Name Notifies the Account Name (User Name).
SharedDirectoryPath	string	Shared Directory Path Informs a shared directory path.
SharedDirectoryType	string	Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS
Modified	string	Update Time and Date Notifies a time stamp of the update time and date.
SharedDirectoryStatus	string	Mount Status Notifies Status of a node. - Mount: Being mounted - Unmount: Not mounted.
SharedDirectoryMountOn	string	Mounting Position. When being mounted, it notifies its mounting position as follows: /User Group/- When not being mounted, it notifies null.
SharedDirectoryMountCounter	integer	Mounting Frequency When being mounted, it notifies the number of mounting. When not being mounted, it notifies null.
Mounted	string	Time/Date of Mount Notifies a time stamp of the mounting. When not being mounted, it notifies null.

[Precautions]

- Users holding Administrator or Operator privilege can execute this API.

4.18.14 Updating Shared Directories

[Overview]

Updates shared directories.

[Format]

```
PATCH /system/settings/shareddirectory/{mountid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
SharedDirectory	object	Shared Directory Information Specifies shared directory information. The maximum value is 5.
SharedDirectoryHostName	string	Host Name Specifies IP address (or Host Name).
SharedDirectoryDomainName	string	Domain Name
SharedDirectoryAccountSetting	object	Account Information
Account	string	Account Name Specifies the Account Name (User Name).
Password	string	Password Specifies a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 256 characters or less.
SharedDirectoryPath	string	Shared Directory Path Specifies a shared directory path.
SharedDirectoryType	string	Shared Directory Type Specifies a type of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS

[Response Parameter]

Parameter	Type	Description
UserGroup	object	User Group Information
UserGroupId	string	User Group ID
SharedDirectory	object	Shared Directory Information Notifies shared directory information. The maximum value is 5.
MountId	string	Mount ID Notifies a mount ID. Notifies null when the result is NG.
SharedDirectoryHostName	string	Host Name Notifies IP address (or Host Name).

Parameter			Type	Description
		SharedDirectoryDomainName	string	Domain Name
		SharedDirectoryAccountSetting	object	Account Information
		Account	string	Account Name Notifies the Account Name (User Name).
		SharedDirectoryPath	string	Shared Directory Path Informs a shared directory path.
		SharedDirectoryType	string	Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS
		Modified	string	Update Time and Date Notifies a time stamp of the update time and date.

[Precautions]

- Can only be executed by a user holding an Administrator role.
- Updates only keys as specified. Values of the omitted keys are not changed.
- It becomes an error when specifying null to the key. (As any key element has no default value and cannot be deleted)
- The information of the shared directories of which status is Mount cannot be changed.

4.18.15 Deleting Shared Directories

[Overview]

Deletes shared directories.

[Format]

```
DELETE /system/settings/shareddirectory/{mountid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by a user holding an Administrator role.
- The information of the shared directories of which status is Mount cannot be changed.

4.18.16 Mounting Shared Directories

[Overview]

Mounts shared directories.

[Format]

```
POST /system/settings/shareddirectory/mount/{mountid}
```

[Query Parameter]

None

[Request Parameter]

Parameter		Type	Description
SharedDirectory		object	Shared Directory Information Specifies shared directory information. The maximum value is 5.
	MountOn	string	Mounting Position. Specifies a mounting position. It will be notified appropriately at mounting unless specified. When specifying, specify as follows. /User Group/-

[Response Parameter]

Parameter		Type	Description
SharedDirectory		object	Shared Directory Information Notifies shared directory information. The maximum value is 5.
	MountId	string	Mount ID Notifies a mount ID. Notifies null when the result is NG.
	SharedDirectoryMountOn	string	Mounting Position Will be notified of mounting positions as follows - When a mounting position is not specified /User Group/mount/n (n: 1-5) - When a mounting position is specified Will be notified of the specified mounting position.
	Mounted	string	Time/Date of Mount Notifies a time stamp of the mounting.

[Precautions]

- Can be executed with a user holding an Administrator or an Operator privilege.
- Privilege of mounted directory are as shown below:
  - They will be mounted as read-only.
  - Case of SMB: The same as the directory at the mounting destination

  - Case of NFS: root

- The same and shared directory information cannot be mounted to the different mounting destinations.
- The same and shared directory information can be mounted several times on the same mounting destinations.

4.18.17 Unmounting Shared Directories

[Overview]

Unmounts shared directories.

[Format]

```
POST /system/settings/shareddirectory/umount/{mountid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UmountMode	string	Unmount Mode Specifies a mode of unmount. - Normal: Executes unmount according to the number of mounts. - Forced: Unmount forcibly. When the key is omitted, it assumes Normal is specified.

[Response Parameter]

None

[Precautions]

- Users holding Administrator or Operator privilege can execute this API.
- When the same and shared directory information is mounted on the same mounting destinations for several times, it will be unmounted when the frequency of mounting is 0.

4.18.18 Adding Proxy Settings

[Overview]

Adds settings of a proxy.

[Format]

```
POST /system/settings/proxy
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
UserGroupId	string	User Group ID If this key is omitted, the proxy settings are added for the user group to which the executed user belongs.
ProxySetting	object	Proxy Settings Information
DetailSettings	array	Specify detailed proxy settings.
ProxyHostName	string	Proxy Host Name Specifies the IP address or host name of the proxy server.
ProxyPortNum	integer	Proxy Port Number Specifies the port number of the proxy server.
ProxyAccountSetting	object	Authentication Information for Proxy Server Specifies if proxy server authentication is required. This key can be omitted.
Account	string	Account Name Specifies the Account Name (User Name).
Password	string	Password Specifies a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 256 characters or less.

[Response Parameter]

Parameter	Type	Description
ProxySetting	object	Proxy Settings Information
ProxyId	string	Proxy ID
UserGroupId	string	User Group ID
DetailSettings	array	Detailed Settings for Proxy
ProxyHostName	string	Proxy Host Name
ProxyPortNum	integer	Proxy Port Number
ProxyAccountSetting	object	Authentication Information for Proxy Server Outputs if the authentication information for proxy server has been set.
Account	string	Account Name

[Precautions]

- Users holding Administrator, or Operator privilege can execute this API.
- The number of registrations is as shown below:
  - Only one can be set each user group.
  - Proxy settings are the same for all node-managed user groups.
  - If you try to register a second, it will result in an error.
- If you specify an account name, the password is required.

- If a password is specified, the account name is required.
- This API adds proxy settings information even if it is incorrect. To check that the proxy settings are correct, execute "4.18.22 Connection Test of Proxy Settings."

4.18.19 Displaying Proxy Settings

[Overview]

Displays the settings of a proxy.

[Format]

```
GET /system/settings/proxy
```

[Query Parameter]

Parameter	Type	Description
usergroupid	string	User Group ID
proxyid	string	Proxy ID

[Response Parameter]

Parameter	Type	Description
ProxySettingList	array	List of Proxy Settings Information
ProxyId	string	Proxy ID
UserGroupId	string	User Group ID
DetailSettings	array	Detailed Settings for Proxy
ProxyHostName	string	Proxy Host Name
ProxyPortNum	integer	Proxy Port Number
ProxyAccountSetting	object	Authentication Information for Proxy Server Outputs if the authentication information for proxy server has been set.
Account	string	Account Name

[Precautions]

- Users holding Administrator, Operator, or Monitor privilege can execute this API.
- If the query parameter is not specified, the proxy settings for the user group to which the executing user belongs are output.
- If the usergroupid of the query parameter is specified as the user group ID for all node management, the proxy settings common to the Administrator group are output.

4.18.20 Update of Proxy Settings

[Overview]

Updates the settings of a proxy.

[Format]

```
PATCH /system/settings/proxy/{proxyid}
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProxySetting	object	Proxy Settings Information
DetailSettings	array	Specify detailed proxy settings.
ProxyHostName	string	Proxy Host Name Specifies the IP address or host name of the proxy server.
ProxyPortNum	integer	Proxy Port Number Specifies the port number of the proxy server.
ProxyAccountSetting	object	Authentication Information for Proxy Server Specifies if proxy server authentication is required.
Account	string	Account Name Specifies the Account Name (User Name). When specifying null, clears the account name setting.
Password	string	Password Specifies a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 256 characters or less. When specifying null, clears the password setting.

[Response Parameter]

Parameter	Type	Description
ProxySetting	object	Proxy Settings Information
ProxyId	string	Proxy ID
UserGroupId	string	User Group ID
DetailSettings	array	Detailed Settings for Proxy
ProxyHostName	string	Proxy Host Name
ProxyPortNum	integer	Proxy Port Number
ProxyAccountSetting	object	Authentication Information for Proxy Server Outputs if the authentication information for proxy server has been set.
Account	string	Account Name

[Precautions]

- Users holding Administrator, or Operator privilege can execute this API.
- Updates only keys as specified. Values of the omitted keys are not changed.
- This API adds proxy settings information even if it is incorrect. To check that the proxy settings are correct, execute "4.18.22 Connection Test of Proxy Settings."

4.18.21 Deleting Proxy Settings

[Overview]

Deletes the settings of a proxy.

[Format]

```
DELETE /system/settings/proxy/{proxyid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
ProxyId	string	Proxy ID

[Precautions]

- Users holding Administrator, or Operator privilege can execute this API.

4.18.22 Connection Test of Proxy Settings

[Overview]

Execute a connection test for proxy settings.

[Format]

```
POST /system/settings/proxy/test
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
ProxyId	string	Proxy ID If you omit this key, be sure to specify the Password key.
ProxyHostName	string	Proxy Host Name Specifies the IP address or host name of the proxy server.
ProxyPortNum	integer	Proxy Port Number Specifies the port number of the proxy server.
ProxyAccountSetting	object	Authentication Information for Proxy Server Specifies if proxy server authentication is required. This key can be omitted.
Account	string	Account Name

Parameter		Type	Description
			Specifies the Account Name (User Name).
	Password	string	Password Specifies a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 256 characters or less.
ValidationURL		string	Connection Test URL Specifies a connection test URL to check the connection with the specified proxy settings.

[Response Parameter]

Parameter		Type	Description
TestInfo		object	Test Information
	TestResult	string	Test Status - Success: succeeded - IPaddressFailed: invalid IP address - PortClosed: port closed - IpaddressOrPortFailed: Invalid IP address or port closed - AuthenticationFailed: authentication failed - UnexpectedFailed: unexpected failure - Timeout: timeout - ValidationURLFailed: bad connection test URL - DNSFailed: name resolution failed
	TestDetails	string	Transmission Result For failed: detailed message

[Precautions]

- Users holding Administrator, or Operator privilege can execute this API.
- If a proxy ID is specified in the request parameters, a test run is performed using the password managed by the specified proxy ID.
- If you specify both a proxy ID and a password in the request parameters, the test runs using the value specified in the password.

4.18.23 Modifying Event Output Restricted Mode for Cloud Management Software

[Overview]

Modifies Event Output Restricted Mode of the specified cloud management software.

[Format]

```
POST /system/settings/cms/{cmsid}/maintenancemode
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
CmsInfo	object	Information of a cloud management software
MaintenanceMode	boolean	Event Output Restricted Mode - True: Enable Event Output Restricted Mode - False: Disable Event Output Restricted Mode (default)

[Response Parameter]

Parameter	Type	Description
CmsInfo	object	Information of a cloud management software
MaintenanceMode	boolean	Event Output Restricted Mode - True: Enable Event Output Restricted Mode - False: Disable Event Output Restricted Mode (default)

4.18.24 Retrieval of Relay Route Settings

[Overview]

Retrieves relay route settings.

[Format]

```
GET /system/settings/relayroute
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
RelayRouteSetting	object	Relay Route Settings
RelayRouteSettingList	array	List of Relay Route Settings
RelayRouteId	integer	Relay Route Number
Client	object	Client Information
IpAddress	string	IP Address If the IP address is not set, null is output.
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6

Parameter	Type	Description
		- null: IP address is not set

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.18.25 Updating Relay Route Settings

[Overview]

Updates relay route settings.

A relay route relays communication so that when iRMC login ("4.5.5 Retrieving iRMC Login Sessions") is used, the Web screens of iRMC in a network not directly accessible by clients can be displayed.

Set the relay route number to the IP address used for communication from the client that displays the iRMC Web screen via the relay route to ISM.

[Format]

```
PATCH /system/settings/relayroute
```

[Query Parameter]

None

[Request Parameter]

Parameter	Type	Description
RelayRouteSetting	object	Relay Route Settings
RelayRouteSettingList	array	List of Relay Route Settings
RelayRouteId	integer	Relay Route Number Specify the relay route number that is output to the "RelayRouteId" response parameter of "4.18.24 Retrieval of Relay Route Settings."
Client	object	Client Information
IpAddress	string	IP Address Specifies the IP address used for communication from clients using relay route to ISM. Execute "4.18.26 Retrieval of Relay Route Information" on the client that uses the relay route, and specify the IP address that is output to the response parameter "IpAddress." Specify null to remove (unset) the setting.

[Response Parameter]

Parameter	Type	Description
RelayRouteSetting	object	Relay Route Settings
RelayRouteSettingList	array	List of Relay Route Settings
RelayRouteId	integer	Relay Route Number
Client	object	Client Information

Parameter	Type	Description
IpAddress	string	IP Address If the IP address is not set, null is outputed.
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6 - null: IP address is not set

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.

4.18.26 Retrieval of Relay Route Information

[Overview]

Retrieves relay route information (IP address, relay route number) that the self-client can use.

[Format]

```
GET /system/relayroute
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

Parameter	Type	Description
RelayRoute	object	Relay Route Settings
Client	object	Self-client Information
IpAddress	string	IP Address Retrieves an IP address from the request header "X-Forwarded-For." If the request header does not contain "X-Forwarded-For", null is output.
IpVersion	string	IP Version of IP Address - V4: IPv4 - V6: IPv6 - null: If the IP address could not be retrieved
RelayRouteList	array	List of Relay Route
RelayRouteId	integer	Relay Route Number The relay route number with the self-client IP address is output.
RelayedDestination	object	Relay destination information
NodeId	integer	Node ID

Parameter	Type	Description
		The ID of the relay destination node being relayed is output. If it is not relaying, null is output.

Appendix A List of Privileges for Each API

The following table summarizes for each user type (privilege) which API they can execute.

The following is a breakdown of the list items.

Authorized users

This section describes the authorized users in the "Execution privileges of each authorized user" column in the table below.

- ISM administrator

  A user who belongs to an Administrator group and holds an Administrator role.

  Can manage resources before they are assigned to tenants and make operations for portions (racks and chassis) that are shared by multiple tenants.

- Administrator

  A user who holds an Administrator role but does not belong to an Administrator group.

  Can control the partitioning of resources (such as user creation) within the user group to which they belong.

- Operator

  A user who belongs to any group (including Administrator) and holds an Operator role.

  Can control the resources within the user group to which they belong.

- Monitor

  A user who belongs to any group (including Administrator) and holds a Monitor role.

  Can look up the resources within the user group to which they belong.

Meanings of symbols in table

Y: Can execute

-: Cannot execute

I: Only ISM administrators can execute

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/datacenters	GET	Y	Y	Y	Y	Y	Y	
/datacenters	POST	I	-	-	-	-	-	
/datacenters/{datacenterid}	DELETE	I	-	-	-	-	-	
/datacenters/{datacenterid}	GET	Y	Y	Y	Y	Y	Y	
/datacenters/{datacenterid}	PATCH	I	-	-	-	-	-	
/event/actions	GET	Y	Y	Y	Y	Y	Y	
/event/actions	POST	Y	Y	-	Y	Y	-	
/event/actions/{actionid}	DELETE	Y	Y	-	Y	Y	-	
/event/actions/{actionid}	PATCH	Y	Y	-	Y	Y	-	
/event/actions/{actionid}/test	POST	Y	Y	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/event/alarms	GET	Y	Y	Y	Y	Y	Y	
/event/alarms	POST	Y	Y	-	Y	Y	-	
/event/alarms/{alarmid}	DELETE	Y	Y	-	Y	Y	-	
/event/alarms/{alarmid}	PATCH	Y	Y	-	Y	Y	-	
/event/alarms/eventlist	GET	Y	Y	Y	Y	Y	Y	
/event/alarms/settings	GET	Y	Y	Y	Y	Y	Y	
/event/alarms/settings	PATCH	Y	Y	-	Y	Y	-	
/event/alarms/traplist	GET	Y	Y	Y	Y	Y	Y	
/event/history	GET	Y	Y	Y	Y	Y	Y	
/event/history/anomaly/export	POST	Y	Y	Y	Y	Y	Y	
/event/history/anomaly/logs/{logid}	GET	Y	Y	Y	Y	Y	Y	
/event/history/anomaly/show	GET	Y	Y	Y	Y	Y	Y	
/event/history/audit/export	POST	I	-	-	-	-	-	If not an ISM administrator, you will be notified of lack of privileges.
/event/history/audit/logs/{logid}	GET	I	Y	Y	Y	Y	Y	For users other than ISM administrators, searches yield 0 results.
/event/history/audit/show	GET	I	Y	Y	Y	Y	Y	For users other than ISM administrators, searches yield 0 results.
/event/history/event/export	POST	Y	Y	Y	Y	Y	Y	
/event/history/event/logs/{logid}	GET	Y	Y	Y	Y	Y	Y	
/event/history/event/show	GET	Y	Y	Y	Y	Y	Y	
/event/history/retentionperiod/settings	GET	Y	Y	Y	Y	Y	Y	
/event/history/retentionperiod/settings	PATCH	I	-	-	-	-	-	
/event/history/trap	GET	Y	Y	Y	Y	Y	Y	
/event/history/trap/ignore	GET	Y	Y	Y	Y	Y	Y	
/event/history/trap/ignore	POST	Y	Y	-	Y	Y	-	
/event/history/trap/ignore/delete	POST	Y	Y	-	Y	Y	-	
/event/snmpmanagers	GET	Y	Y	Y	Y	Y	Y	
/event/snmpmanagers	POST	Y	Y	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/event/snmpmanagers/{snmpserverid}	DELETE	Y	Y	-	Y	Y	-	
/event/snmpmanagers/{snmpserverid}	PATCH	Y	Y	-	Y	Y	-	
/floors	GET	Y	Y	Y	Y	Y	Y	
/floors	POST	I	-	-	-	-	-	
/floors/{floorid}	DELETE	I	-	-	-	-	-	
/floors/{floorid}	GET	Y	Y	Y	Y	Y	Y	
/floors/{floorid}	PATCH	I	-	-	-	-	-	
/ismva/loginstatus	GET	I	-	-	-	-	-	
/ismva/power/restart	POST	I	-	-	-	-	-	
/ismva/power/stop	POST	I	-	-	-	-	-	
/ismva/privilege	POST	I	-	-	-	-	-	
/ismva/privilege/settings	GET	I	-	-	-	-	-	
/ismva/privilege/settings	POST	Y	Y	Y	-	-	-	
/ismva/settings	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings	PATCH	I	-	-	-	-	-	
/ismva/settings/backup	POST	I	-	-	-	-	-	
/ismva/settings/cas	GET	I	-	-	-	-	-	
/ismva/settings/cas	PATCH	I	-	-	-	-	-	
/ismva/settings/dhcp	GET	I	-	-	-	-	-	
/ismva/settings/dhcp	PATCH	I	-	-	-	-	-	
/ismva/settings/dhcp/export	POST	I	-	-	-	-	-	
/ismva/settings/kerberos	GET	I	-	-	-	-	-	
/ismva/settings/kerberos	POST	I	-	-	-	-	-	
/ismva/settings/kerberos/init	POST	I	-	-	-	-	-	
/ismva/settings/kerberos/restore	POST	I	-	-	-	-	-	
/ismva/settings/locale	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/locale	PATCH	I	-	-	-	-	-	
/ismva/settings/locale/keymap/list	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/locale/list	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/patch/add	POST	I	-	-	-	-	-	
/ismva/settings/plugin	GET	I	-	-	-	-	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/ismva/settings/plugin/add	POST	I	-	-	-	-	-	
/ismva/settings/plugin/delete	POST	I	-	-	-	-	-	
/ismva/settings/restore	POST	I	-	-	-	-	-	
/ismva/settings/result	GET	I	-	-	-	-	-	
/ismva/settings/service	GET	I	-	-	-	-	-	
/ismva/settings/sslcert	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/sslcert	PATCH	I	-	-	-	-	-	
/ismva/settings/sslcert/export	POST	I	-	-	-	-	-	
/ismva/settings/time	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/time	PATCH	I	-	-	-	-	-	
/ismva/settings/timezone	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/volume	GET	Y	Y	Y	Y	Y	Y	
/ismva/settings/volume	POST	I	-	-	-	-	-	
/ismva/settings/volume/delete	POST	I	-	-	-	-	-	
/ismva/settings/volume/extend	POST	I	-	-	-	-	-	
/ismva/settings/volume/mount	POST	I	-	-	-	-	-	
/ismva/settings/volume/umount	POST	I	-	-	-	-	-	
/ismva/webserverlog/export	POST	I	-	-	-	-	-	
/networks/connections	GET	Y	Y	Y	Y	Y	Y	
/networks/connections	PATCH	I	-	-	-	-	-	
/networks/differences	GET	Y	Y	Y	Y	Y	Y	
/networks/differences	POST	I	-	-	-	-	-	
/networks/nodes/{nodeid}/ifgroups	GET	Y	Y	Y	Y	Y	Y	
/networks/nodes/{nodeid}/lags	GET	Y	Y	Y	Y	Y	Y	
/networks/nodes/{nodeid}/lags	PATCH	Y	Y	-	Y	Y	-	
/networks/nodes/{nodeid}/vfabs	GET	Y	Y	Y	Y	Y	Y	
/networks/nodes/{nodeid}/vlans	GET	Y	Y	Y	Y	Y	Y	
/networks/ports	GET	Y	Y	Y	Y	Y	Y	
/networks/refresh	GET	Y	Y	Y	Y	Y	Y	
/networks/refresh	POST	Y	Y	Y	Y	Y	Y	
/networks/virtualmachines	GET	Y	Y	Y	Y	Y	Y	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/networks/virtualrouters	GET	Y	Y	Y	Y	Y	Y	
/networks/virtualswitches	GET	Y	Y	Y	Y	Y	Y	
/networks/vlans	POST	Y	Y	Y	Y	Y	Y	
/networks/vlans/cancel	POST	Y	Y	Y	Y	Y	Y	
/nodegroups	GET	Y	Y	Y	Y	Y	Y	
/nodegroups	POST	I	-	-	-	-	-	
/nodegroups/{nodegroupid}	DELETE	I	-	-	-	-	-	
/nodegroups/{nodegroupid}	GET	Y	Y	Y	Y	Y	Y	
/nodegroups/{nodegroupid}	PATCH	I	-	-	-	-	-	
/nodes	GET	Y	Y	Y	Y	Y	Y	
/nodes	POST	I	-	-	-	-	-	
/nodes/account/authentication/check (ISM 3.0.0.010 or later)	POST	I	-	-	-	-	-	
/nodes/{nodeid}	DELETE	I	-	-	-	-	-	
/nodes/{nodeid}	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}	PATCH	Y	Y	-	Y	Y	-	Only the ISM administrator can change the built-in location information of the rack.
/nodes/{nodeid}/accounts	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}/accounts	POST	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/accounts/{accountid}	DELETE	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/accounts/{accountid}	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}/accounts/{accountid}	PATCH	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/alarmstatus/deactivate	POST	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/inventory	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}/inventory/refresh	POST	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/irmcloginsession	POST	Y	Y	Y	Y	Y	Y	Monitor cannot use AVR and remote storage.
/nodes/{nodeid}/led	GET	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/led	PATCH	Y	Y	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/nodes/{nodeid}/maintenancemode	PATCH	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/monitor/itemlist	GET	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/monitor/network	PATCH	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/monitor/network/history	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}/monitor/settings	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}/monitor/settings	PATCH	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/os	DELETE	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/os	GET	Y	Y	Y	Y	Y	Y	
/nodes/{nodeid}/os	PATCH	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/os	POST	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/power	GET	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/power	PATCH	Y	Y	-	Y	Y	-	
/nodes/{nodeid}/profiles/assign	POST	Y	-	-	Y	Y	-	
/nodes/{nodeid}/profiles/backup	POST	Y	-	-	Y	Y	-	
/nodes/{nodeid}/profiles/eim/update	POST	Y	-	-	Y	Y	-	
/nodes/{nodeid}/profiles/restore	POST	Y	-	-	Y	Y	-	
/nodes/{nodeid}/profiles/unassign	POST	Y	-	-	Y	Y	-	
/nodes/{nodeid}/profiles/verify	POST	Y	-	-	Y	Y	-	
/nodes/aisgateway/scripts/download	POST	Y	-	-	Y	-	-	
/nodes/discovery/auto	GET	I	-	-	-	-	-	
/nodes/discovery/auto/{discoverednodeid}	POST	I	-	-	-	-	-	
/nodes/discovery/auto/{discoverednodeid}/authentication/check (ISM 3.0.0.010 or later)	POST	I	-	-	-	-	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/nodes/discovery/manual	GET	I	-	-	-	-	-	
/nodes/discovery/manual	POST	I	-	-	-	-	-	
/nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid}	POST	I	-	-	-	-	-	
/nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid}/authentication/check (ISM 3.0.0.010 or later)	POST	I	-	-	-	-	-	
/nodes/discovery/manual/{manualdiscoveryid}/cancel	POST	I	-	-	-	-	-	
/nodes/discovery/manual/csv	POST	I	-	-	-	-	-	
/nodes/discovery/manual/csvitems	GET	I	-	-	-	-	-	
/nodes/firmware/update	POST	Y	Y	-	Y	Y	-	
/nodes/firmware/update/cancel	POST	Y	Y	-	Y	Y	-	Must be executed by same user (user ID).
/nodes/inventory	GET	Y	Y	Y	Y	Y	Y	
/nodes/logs	GET	Y	Y	Y	Y	Y	Y	
/nodes/logs/archivedlog/downloadfiles	GET	Y	Y	-	Y	Y	-	
/nodes/logs/archivedlog/downloadfiles/create	POST	Y	Y	-	Y	Y	-	
/nodes/logs/archivedlog/downloadfiles/create/cancel	POST	Y	Y	-	Y	Y	-	
/nodes/logs/collection/collect	POST	Y	Y	-	Y	Y	-	
/nodes/logs/collection/collect/cancel	POST	Y	Y	-	Y	Y	-	
/nodes/logs/collection/settings	GET	Y	Y	Y	Y	Y	Y	
/nodes/logs/collection/settings	PATCH	Y	Y	-	Y	Y	-	
/nodes/logs/files	GET	Y	Y	-	Y	Y	-	
/nodes/logs/files/delete	POST	Y	Y	-	Y	Y	-	
/nodes/logs/files/delete/cancel	POST	Y	Y	-	Y	Y	-	
/nodes/logs/nodelog/downloadfiles	GET	Y	Y	-	Y	Y	-	
/nodes/logs/nodelog/downloadfiles/create	POST	Y	Y	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/nodes/logs/nodelog/downloadfiles/create/cancel	POST	Y	Y	-	Y	Y	-	
/nodes/monitor/items	GET	Y	Y	Y	Y	Y	Y	
/nodes/monitor/items	POST	Y	Y	-	Y	Y	-	
/nodes/monitor/items/{itemid}	DELETE	Y	Y	-	Y	Y	-	
/nodes/monitor/items/{itemid}	PATCH	Y	Y	-	Y	Y	-	
/nodes/monitor/items/{itemid}/history	GET	Y	Y	Y	Y	Y	Y	
/nodes/monitor/network	GET	Y	Y	Y	Y	Y	Y	
/nodes/monitor/prediction/globalthreshold	GET	Y	Y	Y	Y	Y	Y	
/nodes/monitor/prediction/globalthreshold	PATCH	Y	Y	-	Y	Y	-	
/nodes/nodes	PATCH	Y	Y	-	Y	Y	-	
/nodes/nodes/os	PATCH	Y	Y	-	Y	Y	-	
/nodes/schedules	PATCH	Y	Y	-	Y	Y	-	
/nodes/nodegroups/assign	POST	I	-	-	-	-	-	
/nodes/nodetags	GET	Y	Y	Y	Y	Y	Y	
/nodes/os	GET	Y	Y	Y	Y	Y	Y	
/nodes/powercapping	GET	I	-	-	-	-	-	
/nodes/powercapping	POST	I	-	-	-	-	-	
/nodes/powercapping/{cappingid}	DELETE	I	-	-	-	-	-	
/nodes/powercapping/{cappingid}	GET	I	-	-	-	-	-	
/nodes/powercapping/{cappingid}	PATCH	I	-	-	-	-	-	
/nodes/powercapping/{cappingid}/policy	PATCH	I	-	-	-	-	-	
/nodes/powercapping/cancel	POST	I	-	-	-	-	-	
/nodes/profiles/assign/cancel	POST	Y	-	-	Y	Y	-	
/nodes/profiles/backup/cancel	POST	Y	-	-	Y	Y	-	
/nodes/profiles/eim/update/cancel	POST	Y	-	-	Y	Y	-	
/nodes/profiles/restore/cancel	POST	Y	-	-	Y	Y	-	
/nodes/profiles/unassign/cancel	POST	Y	-	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/nodes/profiles/verify/cancel	POST	Y	-	-	Y	Y	-	
/pools	GET	Y	Y	Y	Y	Y	Y	
/pools	PATCH	I	-	-	-	-	-	
/pools/assign	POST	Y	Y	-	Y	Y	-	
/pools/unassign	POST	Y	Y	-	Y	Y	-	
/profiles/backups	GET	Y	-	-	Y	Y	Y	
/profiles/backups/{backupid}	DELETE	Y	-	-	Y	Y	-	
/profiles/backups/export	POST	Y	-	-	Y	Y	-	
/profiles/backups/import	POST	Y	-	-	Y	Y	-	
/profiles/backups/policy	POST	Y	-	-	Y	Y	-	
/profiles/backups/profile	POST	Y	-	-	Y	Y	-	
/profiles/categories	GET	Y	-	-	Y	Y	Y	
/profiles/categories	POST	Y	-	-	Y	Y	Y	
/profiles/export	POST	Y	-	-	Y	Y	-	
/profiles/import	POST	Y	-	-	Y	Y	-	
/profiles/packages	GET	Y	-	-	Y	Y	Y	
/profiles/policies	GET	Y	-	-	Y	Y	Y	
/profiles/policies	POST	Y	-	-	Y	Y	-	
/profiles/policies/{policyid}	DELETE	Y	-	-	Y	Y	-	
/profiles/policies/{policyid}	GET	Y	-	-	Y	Y	Y	
/profiles/policies/{policyid}	PATCH	Y	-	-	Y	Y	-	
/profiles/policies/groups	GET	Y	-	-	Y	Y	Y	
/profiles/policies/groups	POST	Y	-	-	Y	Y	-	
/profiles/policies/groups/{groupid}	DELETE	Y	-	-	Y	Y	-	
/profiles/policies/groups/{groupid}	GET	Y	-	-	Y	Y	Y	
/profiles/policies/groups/{groupid}	PATCH	Y	-	-	Y	Y	-	
/profiles/profiles	GET	Y	-	-	Y	Y	Y	
/profiles/profiles	POST	Y	-	-	Y	Y	-	
/profiles/profiles/{profileid}	DELETE	Y	-	-	Y	Y	-	
/profiles/profiles/{profileid}	GET	Y	-	-	Y	Y	Y	
/profiles/profiles/{profileid}	PATCH	Y	-	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/profiles/profiles/groups	GET	Y	-	-	Y	Y	Y	
/profiles/profiles/groups	POST	Y	-	-	Y	Y	-	
/profiles/profiles/groups/{groupid}	DELETE	Y	-	-	Y	Y	-	
/profiles/profiles/groups/{groupid}	GET	Y	-	-	Y	Y	Y	
/profiles/profiles/groups/{groupid}	PATCH	Y	-	-	Y	Y	-	
/profiles/profiles/nodes	GET	Y	-	-	Y	Y	Y	
/racks	GET	Y	Y	Y	Y	Y	Y	
/racks	POST	I	-	-	-	-	-	
/racks/{rackid}	DELETE	I	-	-	-	-	-	
/racks/{rackid}	GET	Y	Y	Y	Y	Y	Y	
/racks/{rackid}	PATCH	I	-	-	-	-	-	
/resources/clusters	GET	Y	Y	Y	Y	Y	Y	
/resources/clusters/{clusterid}	GET	Y	Y	Y	Y	Y	Y	
/resources/inventory/refresh	POST	Y	Y	-	Y	Y	-	
/resources/inventory/virtualmachine/test	POST	Y	Y	-	Y	Y	-	
/resources/nodes/{nodeid}/cmsmaintenancemode/set	POST	Y	Y	-	Y	Y	-	
/resources/nodes/{nodeid}/cmsmaintenancemode/unset	POST	Y	Y	-	Y	Y	-	
/resources/nodes/{nodeid}/restart	POST	Y	Y	-	Y	Y	-	
/resources/storagepools	GET	Y	Y	Y	Y	Y	Y	
/resources/storagepools/{storagepoolid}	GET	Y	Y	Y	Y	Y	Y	
/resources/storagepools/{storagepoolid}/history	POST	Y	Y	Y	Y	Y	Y	
/resources/storagepools/refresh	POST	Y	Y	Y	Y	Y	Y	
/resources/virtualmachines	GET	Y	Y	Y	Y	Y	Y	
/resources/virtualmachines/{virtualmachineid}	GET	Y	Y	Y	Y	Y	Y	
/resources/virtualmachines/{virtualmachineid}/move	POST	Y	Y	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/resources/virtualmachines/{virtualmachineid}/power/off	POST	Y	Y	-	Y	Y	-	
/resources/virtualmachines/{virtualmachineid}/power/on	POST	Y	Y	-	Y	Y	-	
/resources/virtualrouters	GET	Y	Y	Y	Y	Y	Y	
/resources/virtualrouters/{virtualrouterid}	GET	Y	Y	Y	Y	Y	Y	
/resources/virtualswitches	GET	Y	Y	Y	Y	Y	Y	
/resources/virtualswitches/{virtualswitchid}	GET	Y	Y	Y	Y	Y	Y	
/system/ismva/version	GET	Y	Y	Y	Y	Y	Y	
/system/licenses	GET	I	-	-	-	-	-	
/system/licenses	PATCH	I	-	-	-	-	-	
/system/licenses	POST	I	-	-	-	-	-	
/system/licenses/delete	POST	I	-	-	-	-	-	
/system/relayroute	GET	Y	Y	Y	Y	Y	Y	
/system/settings/cms	GET	Y	Y	Y	Y	Y	Y	
/system/settings/cms	POST	Y	Y	-	Y	Y	-	
/system/settings/cms/{cmsid}	DELETE	Y	Y	-	Y	Y	-	
/system/settings/cms/{cmsid}	GET	Y	Y	Y	Y	Y	Y	
/system/settings/cms/{cmsid}	PATCH	Y	Y	-	Y	Y	-	
/system/settings/cms/{cmsid}/maintenancemode	POST	Y	Y	-	Y	Y	-	
/system/settings/firmware/{firmwareid}	DELETE	Y	Y	-	Y	Y	-	
/system/settings/firmware/documents	POST	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/dvd/{repositoryid}	DELETE	Y	Y	-	Y	Y	-	
/system/settings/firmware/dvd/import	POST	Y	Y	-	Y	Y	-	
/system/settings/firmware/dvd/import/cancel	POST	Y	Y	-	Y	Y	-	Must be executed by same user (user ID).
/system/settings/firmware/import	POST	Y	Y	-	Y	Y	-	
/system/settings/firmware/import/cancel	POST	Y	Y	-	Y	Y	-	Must be executed by same user (user ID).

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/system/settings/firmware/repositories	GET	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/template	GET	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/list	GET	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/baseline/createupdate	PATCH	Y	Y	-	Y	Y	-	
/system/settings/firmware/baseline/delete	PATCH	Y	Y	-	Y	Y	-	
/system/settings/firmware/baseline/list	GET	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/baseline/allocate	PATH	Y	Y	-	Y	Y	-	
/system/settings/firmware/baseline/allocate/release	PATCH	Y	Y	-	Y	Y	-	
/system/settings/firmware/baseline/template	GET	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/firmtool/import	POST	Y	Y	-	Y	Y	-	
/system/settings/firmware/firmtool/import/cancel	POST	Y	Y	-	Y	Y	-	Must be executed by same user (user ID).
/system/settings/firmware/firmtool/list	GET	Y	Y	Y	Y	Y	Y	
/system/settings/firmware/firmtool/{toolid}	DELETE	Y	Y	-	Y	Y	-	
/system/settings/ftp/filelist	GET	Y	Y	Y	Y	Y	Y	
/system/settings/job/firmwareupdate	GET	Y	Y	Y	Y	Y	Y	
/system/settings/job/firmwareupdate/{JobId}	DELETE	Y	Y	-	Y	Y	-	
/system/settings/ldaps	GET	I	-	-	-	-	-	
/system/settings/ldaps	PATCH	I	-	-	-	-	-	
/system/settings/ldaps/switch	POST	I	-	-	-	-	-	
/system/settings/proxy	GET	Y	Y	Y	Y	Y	Y	
/system/settings/proxy	POST	Y	Y	-	Y	Y	-	
/system/settings/proxy/{proxyid}	DELETE	Y	Y	-	Y	Y	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/system/settings/proxy/{proxyid}	PATCH	Y	Y	-	Y	Y	-	
/system/settings/proxy/test	POST	Y	Y	-	Y	Y	-	
/system/settings/relayroute	GET	I	-	-	-	-	-	
/system/settings/relayroute	PATCH	I	-	-	-	-	-	
/system/settings/repositories/profiles	GET	Y	-	-	Y	Y	Y	
/system/settings/repositories/profiles/{repositoryid}	DELETE	Y	-	-	Y	Y	-	
/system/settings/repositories/profiles/dvd/import	POST	Y	-	-	Y	Y	-	
/system/settings/repositories/profiles/dvd/import/cancel	POST	Y	-	-	Y	Y	-	
/system/settings/shareddirectory	GET	Y	Y	Y	Y	Y	Y	
/system/settings/shareddirectory/{mountid}	DELETE	I	-	-	-	-	-	
/system/settings/shareddirectory/{mountid}	GET	Y	Y	-	Y	Y	-	
/system/settings/shareddirectory/{mountid}	PATCH	I	-	-	-	-	-	
/system/settings/shareddirectory/{usergroupid}	POST	I	-	-	-	-	-	
/system/settings/shareddirectory/mount/{mountid}	POST	Y	Y	-	Y	Y	-	
/system/settings/shareddirectory/umount/{mountid}	POST	Y	Y	-	Y	Y	-	
/system/settings/smtpserver	GET	Y	Y	Y	Y	Y	Y	
/system/settings/smtpserver	PATCH	I	-	-	-	-	-	
/system/settings/snmptrapsettings	POST	I	-	-	-	-	-	
/system/settings/snmptrapsettings	GET	I	-	-	-	-	-	
/system/settings/snmptrapsettings/{snmptrapsettingsid}	PATCH	I	-	-	-	-	-	

API		Execution abilities of each authorized user						Remarks
		Resource operation for whole of ISM			Resource operation within own group			
URI	Method	ISM administrator	Operator	Monitor	Administrator	Operator	Monitor	
/system/settings/snmptrapsettings/{snmptrapsettingsid}	DELETE	I	-	-	-	-	-	
/system/snap	POST	I	-	-	-	-	-	
/tasks	GET	Y	Y	Y	Y	Y	Y	
/tasks/{taskid}	GET	Y	Y	Y	Y	Y	Y	
/usergroups	GET	Y	Y	Y	Y	Y	Y	
/usergroups	POST	I	-	-	-	-	-	
/usergroups/{usergroupid}	DELETE	I	-	-	-	-	-	
/usergroups/{usergroupid}	GET	Y	Y	Y	Y	Y	Y	
/usergroups/{usergroupid}	PATCH	I	-	-	-	-	-	
/usergroups/search	GET	I	-	-	-	-	-	
/users	GET	Y	Y	Y	Y	Y	Y	If executed by a user not holding an Administrator role, only the user's own information can be retrieved.
/users	POST	Y	-	-	Y	-	-	
/users/{userid}	DELETE	Y	-	-	Y	-	-	
/users/{userid}	GET	Y	Y	Y	Y	Y	Y	If executed by a user not holding an Administrator role, only the user's own information can be retrieved.
/users/{userid}	PATCH	Y	Y	Y	Y	Y	Y	If run with a user not holding Administrator role, only the user's own general information can be edited.
/users/{userid}/selectgroup	POST	Y	Y	Y	Y	Y	Y	This can be executed only by target users.
/users/login	POST	Y	Y	Y	Y	Y	Y	
/users/logout	POST	Y	Y	Y	Y	Y	Y	
/users/policy	GET	Y	Y	Y	Y	Y	Y	
/users/policy	POST	I	-	-	-	-	-	

Appendix B Examples of REST API Usage

This appendix provides examples for using the REST APIs in ISM, assuming the following cases of operation:

- Node Registration (from Discovery to Registration)

  This section provides sample procedures for registering nodes, using the REST APIs for Node Management.

- List Display of Node Statuses

  This section provides sample procedures for displaying a list of node statuses, using the REST APIs for Node Management.

- Assigning Profiles

  This section provides sample procedures for assigning profile to nodes, using the REST APIs for Profile Management.

- Updating Firmware

  This section provides sample procedures for updating firmware on nodes, using the REST APIs for Firmware Management.

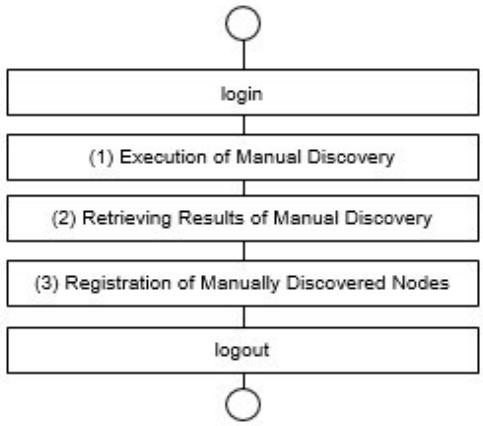
- Extracting Logs

  This section provides sample procedures for extracting logs from nodes, using the REST APIs for Log Management.

B.1 Node Registration (from Discovery to Registration)

This section provides examples of REST API usage for discovering servers and registering them as nodes.

The following is the overview of the process to node registration.



Point

For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."

Based on the overview of processing as described above, this section provides examples of REST API usage for Node Discovery.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates retrieved from ISM are assumed to be stored in "/tmp/certificate.crt."
- The session ID retrieved at login is assumed to be "123456789."

The information on the servers to be registered as nodes is assumed to be as follows. Passwords must be encrypted according to the procedures in "2.4 Encryption."

- Model name: PRIMERGY RX2540 M4

- Serial number: XXXXXXXX
- IP address: 192.168.1.10
- User name: admin
- Encrypted password: abcdefgh

(1) Execution of Manual Discovery

Discovers a node manually by specifying an IP address and the account information.

Table B.1 REST API for manual node discovery

REST API	Reference
POST /nodes/discovery/manual	4.4.1 Execution of Manual Node Discovery

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/discovery/manual" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"ManualDiscoverySetting":{
      "Ranges":[{"IpAddressRange":"192.168.1.10","IpVersion":"V4"}],
      "Accounts":[{"AccountType":"Ipmi","PortNum":623,"AccountName":"admin","Password":"abcdefgh",
       "Property":{"Ipmi":null,"Ssh":null,
        "SnmpV1":{"CommunityName":null},"SnmpV2":{"CommunityName":null},
        "SnmpV3":{"SecurityLevel":null, "AuthProtocol":null, "PrivProtocol":null,
          "PrivPassword":null, "ContextName":null,"EngineId":null}
       }
     }]
   }}}'
```

Example of response (JSON)

```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesDiscoveryManual-POST-Out.
0.0.1.json",
 "MessageInfo":[],
 "IsmBody":{
  "ManualDiscoveryId":1
 }
}
```

(2) Retrieving Results of Manual Discovery

Retrieves the progress and the results of manual discovery.

Table B.2 REST API for retrieving results of manual discovery

REST API	Reference
GET /nodes/discovery/manual	4.4.2 Retrieving Results of Manual Node Discovery

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/discovery/manual" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON) (Processing for discovery incomplete)

```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesDiscoveryManual-GET-Out.
```

```
0.0.1.json",
 "MessageInfo":[],
 "IsmBody":{
  "ManualDiscoveryId":1,
  "Status":"Running",
  "ManualDiscoveredNodes":[],
  "ManualDiscoverySetting":{
    "Ranges":[{"IpAddressRange":"192.168.1.10","IpVersion":"V4"}],
    "Accounts":[{"AccountType":"Ipmi","PortNum":623,"AccountName":"admin",
     "Property":{"Ipmi":null,"Ssh":null,
     "SnmpV1":{"CommunityName":null},"SnmpV2":{"CommunityName":null},
     "SnmpV3":{"SecurityLevel":null, "AuthProtocol":null, "PrivProtocol":null,
       "ContextName":null,"EngineId":null}
     }
   }]
  }
 }
}
```

Example of response (JSON) (Processing for discovery completed)

```
{
"SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesDiscoveryManual-GET-Out.
0.0.1.json",
  "MessageInfo":[],
  "IsmBody":{
    "ManualDiscoveryId":1,
    "Status":"Complete",
    "TotalIpAddressCount":1,
    "CompletedIpAddressCount":1,
    "ManualDiscoveredNodes":[{
     "ManualNodeId":1,
     "IpAddress":"192.168.1.10",
     "IpVersion":"V4",
     "NodeStatus":"Success",
     "NodeType":"server",
     "Model":"PRIMERGY RX2540 M4",
     "SerialNumber":"XXXXXXXX",
     "DomainName":"DomainName-1",
     "Chassis":null,
     "Accounts":[{"AccountType":"Ipmi"}]
  }],
  "ManualDiscoverySetting":{
   "Ranges":[{"IpAddressRange":"192.168.1.10","IpVersion":"V4"}],
   "Accounts":[{"AccountType":"Ipmi","PortNum":623,"AccountName":"admin",
    "Property":{"Ipmi":null,"Ssh":null,
     "SnmpV1":{"CommunityName":null},"SnmpV2":{"CommunityName":null},
     "SnmpV3":{"SecurityLevel":null, "AuthProtocol":null, "PrivProtocol":null,
      "ContextName":null,"EngineId":null}
    }
   }]
  }
 }
}
```

(3) Registration of Manually Discovered Nodes

Registers manually discovered nodes in ISM. Execute after confirming that the manual discovery process is complete in "(2) Retrieving Results of Manual Discovery" and that Status of the Manual Discovery Node is Success.

The subsequent syntax examples are based on the following assumptions. You can retrieve manually discovered IDs and manually discovered node IDs by the procedures described in "(2) Retrieving Results of Manual Discovery."

- Manually discovered ID: 1

- Manually discovered node ID: 1
- Node name: Server-1
- Information on mounting position in a rack
  - Rack ID: 1
  - Mounting position: 11 (11 - 12)
  - Number of units in a rack: 2

Note

If you are going to specify information on the mounting positions in racks, execute "4.3.6 Registration of Racks" before registering manually discovered nodes.

Table B.3 REST API for registration of manually discovered nodes

REST API	Reference
POST /nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid}	4.4.3 Registration of Manually Discovered Nodes

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/discovery/manual/1/1" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"Node":{"Name":"Server-1","Type":"server","Model":"PRIMERGY RX2540 M4",
      "WebUrl":"http://192.168.1.10","Description":null, "NodeTagList":[{"NodeTag":"Windows"}],
      "RackInfo":{"RackId":1,"Position":11,"OccupySize":2},"MountType":null,"PduPosition":null,
      "Outlet":[],"Chassis":null
    }}}'
```

Example of response (JSON)

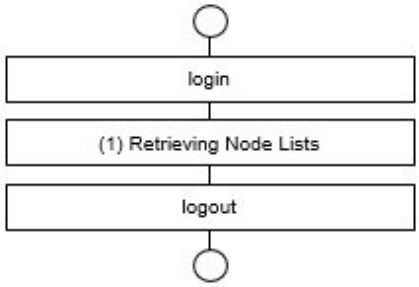
```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/
NodesDiscoveryManualManualDiscoveryIdManualNodeId-POST-Out.0.0.1.json",
 "MessageInfo":[],
 "IsmBody":{
  "Node":{
   "NodeId":10110,
   "Name":"Server-1",
   "Type":"server",
   "Model":"PRIMERGY RX2540 M4",
   "IpAddress":"192.168.1.10",
   "IpVersion":"V4",
   "WebUrl":"http://192.168.1.10",
    "Discription":null,
    "NodeTagList":[{"NodeTag":"Windows"}],
    "RackInfo":{"RackId":1, "Position":11, "OccupySize":2},
    "MountType":null,
    "PduPosition":null,
    "Outlet":[],
    "SlotNum":null,
    "ParentNodeId":null,
    "ParentFabricId":null,
    "ChildNodeList":[],
    "Fabric":[],
    "Status":"Updating",
    "AlarmStatus":"Normal",
```

```
    "MaintenanceMode":"Normal",
    "NodeGroupId":8,
    "UniqInfo":"XXXXXXXX",
    "UpdateDate":"2017-09-21T09:26:43.572Z"
   }
 }
}
```

B.2 List Display of Node Statuses

This section provides examples of REST API usage for retrieving the statuses of all devices that are registered as nodes.

The following is the overview of the process to display a list of node statuses.



Point

For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."

Based on the overview of processing as described above, this section provides examples of REST API usage for Node Management.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates retrieved from ISM are assumed to be stored in "/tmp/certificate.crt."
- The session ID retrieved at login is assumed to be "123456789."

(1) Retrieving Node Lists

Retrieves information on all nodes that are managed by a user group to which users belong as well as the statuses of respective nodes.

Table B.4 REST API for retrieving node lists

REST API	Reference
GET /nodes	4.3.2 List Retrieval for Nodes

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON)

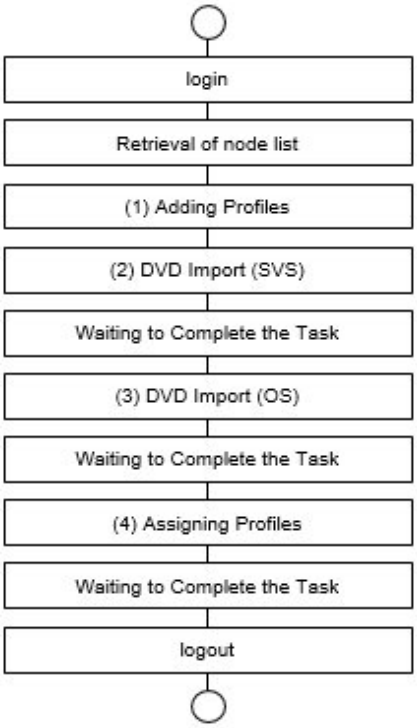
```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/Nodes-GET-Out.0.0.1.json",
 "MessageInfo":[],
```

```
  "IsmBody":{
   "Nodes":[{
   "NodeId":10110,
   "Name":"Server-1",
   "Type":"server",
    "Model":"PRIMERGY RX2540 M4",
   "IpAddress":"192.168.1.10",
   "IpVersion":"V4",
   "WebUrl":"http://192.168.1.10",
   "Urls":[],
   "Discription":null,
   "NodeTagList":[{"NodeTag":"Windows"}],
   "RackInfo":{"RackId":1, "Position":11, "OccupySize":2},
   "MountType":null,
   "PduPosition":null,
   "Outlet":[],
   "SlotNum":null,
   "ParentNodeId":null,
   "ParentFabricId":null,
   "ChildNodeList":[],
   "Fabric":[],
   "Status":"Normal",
   "AlarmStatus":"Normal",
   "MaintenanceMode":"Normal",
   "NodeGroupId":8,
   "UniqInfo":"XXXXXXXX",
   "UpdateDate":"2017-09-21T09:26:43.572Z"
  },{
   "NodeId":10111,
   "Name":"Server-2",
   "Type":"server",
   "Model":"PRIMERGY RX2540 M4",
   "IpAddress":"192.168.1.11",
   "IpVersion":"V4",
   "WebUrl":"http://192.168.1.11",
   "Urls":[],
   "Discription":null,
   "NodeTagList":[{"NodeTag":"Windows"}],
   "RackInfo":{"RackId":1, "Position":13, "OccupySize":2},
   "MountType":null,
   "PduPosition":null,
   "Outlet":[],
   "SlotNum":null,
   "ParentNodeId":null,
   "ParentFabricId":null,
   "ChildNodeList":[],
   "Fabric":[],
   "Status":"Normal",
   "AlarmStatus":"Normal",
   "MaintenanceMode":"Normal",
   "NodeGroupId":8,
   "UniqInfo":"YYYYYYYY",
   "UpdateDate":"2017-09-21T09:26:43.572Z"
  }]
 }
}
```

B.3 Assigning Profiles

This section provides examples of REST API usage for assigning profiles for installing the Red Hat Enterprise Linux 7.4 (x86_64) OS on devices that are registered as nodes.

The following is the overview of the process to assign profiles.



Point

- For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."
- For information on "Retrieving Node Lists" in the above flow, refer to "B.2 List Display of Node Statuses."
- For information on "Waiting to Complete the Task" in the above flow, refer to "3.8 Task."

Based on the overview of processing as described above, this section provides examples of REST API usage for Profile Management.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates retrieved from ISM are assumed to be stored in "/tmp/certificate.crt."
- The session ID retrieved at login is assumed to be "123456789."
- Any node ID that retrieved only a server during retrieval of node list is assumed to be "10110."

The information on the passwords is assumed to be as follows. Passwords must be encrypted according to the procedures in "2.4 Encryption."

- Password: password123
- Password key used for encryption: 192.168.1.2
- Encrypted password: U2FsdGVkX1+25IsK4ZPpgfJitxBE2XM1IqSyuLEMy0M=

(1) Adding Profiles

Adds profiles that specify how to install OSes.

Table B.5 REST API for adding profiles

REST API	Reference
POST /profiles/profiles	4.10.3 Adding Profiles

Example of request (when OS is Red Hat Enterprise Linux 7.4 (x86_64))

```
curl "https://192.168.1.2:25566/ism/api/v2/profiles/profiles" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":
{"ProfileName":"SampleProfile","CategoryId":"2","OneTimePasswordKey":"192.168.1.2",
     "ProfileData":{"Server-RX":{
     "OSInstallation":{"Linux":{
      "OsType":{"Type":"Red Hat Enterprise Linux 7.4 (x86_64)"},
      "RaidConfig":{"LogicalDiskType":"RAID","RAIDController":"Disabled"},
      "Volumes":{
       "boot":{"CreatePartition":"Enabled","FileSystem":"ext4",
               "FillToMaximumAllowableSize":"Disabled","PartitionSize":256},
       "swap":{"CreatePartition":"Enabled", "FileSystem":"swap",
               "FillToMaximumAllowableSize":"Disabled", "PartitionSize":1024},
       "root":{"CreatePartition":"Enabled", "FileSystem":"ext4",
               "FillToMaximumAllowableSize":"Enabled"}
      },"AdditionalVolumes":[],
      "BasicSettings":{"Language":"English", "Keyboard":"United States - English",
                       "TimeZone":"Tokyo Standard Time", "SystemClockUsesUTC":"Disabled"
      },"PackageSettings":{
      "SelectPackages":{"SelectPackageList":["core"]},
      "SinglePackages":{"SinglePackageList":[]}
      },"SystemSettings":{
      "InstallBootloader":"Enabled", "BootloaderLocation":"MBR", "KernelParameters":"",
      "SELinux":"Enforcing", "UseShadowPasswords":"Enabled", "UseMD5":"Enabled",
"EnableNSCD":"Enabled"
      },"AdditionalParameters":{"SelectApplicationList":[]
      },"OsIndividualConfig":{
      "BasicSettings":{"RootPassword":"U2FsdGVkX1+25IsK4ZPpgfJitxBE2XM1IqSyuLEMy0M="},
      "NetworkSettings":{"GetComputerNameViaDNS":"Enabled", "DhcpEnable":"Enabled",
      "NetworkInterface":{"IPv4":{}}}
      }}}
    }}
  }}'
```

Example of response (JSON)

```
{
  "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Profiles/ProfilesProfiles-POST-Out.
0.0.1.json",
  "MessageInfo":[],
  "IsmBody":{
    "ProfileId":"1",
    "ProfileName":"SampleProfile"
  }
}
```

(2) DVD Import (SVS)

Imports the ServerView Suite DVD to be used in OS installation.

Table B.6 REST API for importing DVDs

REST API	Reference
POST /system/settings/repositories/profiles/dvd/import	4.10.29 DVD Import

Example of request (when MediaType is ServerView Suite DVD)

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/repositories/profiles/dvd/import" -X
POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"MediaType" : "ServerView Suite DVD","FilePath" : "SVIM_12.17.09.04.iso"}}'
```

Example of response (JSON)

```
{
  "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/System/
SystemSettingsRepositoriesProfilesDvdImport-POST-Out.0.0.1.json",
  "MessageInfo":[],
  "IsmBody":{
  "TaskId": "10"
 }
}
```

(3) DVD Import (OS)

Imports the DVD with the OS to be used in OS installation.

Table B.7 REST API for importing DVDs

REST API	Reference
POST /system/settings/repositories/profiles/dvd/import	4.10.29 DVD Import

Example of request (when MediaType is Red Hat Enterprise Linux 7.4 (x86_64))

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/repositories/profiles/dvd/import" -X
POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"MediaType" : "Red Hat Enterprise Linux 7.4 (x86_64)",
                    "FilePath" : "rhel-server-7.4-x86_64-dvd.iso"}}'
```

Example of response (JSON)

```
{
  "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/System/
SystemSettingsRepositoriesProfilesDvdImport-POST-Out.0.0.1.json",
  "MessageInfo":[],
  "IsmBody":{
    "TaskId": "11"
 }
}
```

(4) Assigning Profiles

Assigns profiles to nodes.

Table B.8 REST API for assigning profiles

REST API	Reference
POST /ism/api/v2/nodes/{nodeid}/profiles/assign	4.10.8 Assigning Profiles to Nodes

Example of request (with Node ID: 10110 and Profile ID: 1)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10110/profiles/assign" -X POST
    --cacert /tmp/certificate.crt
```

```
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"ProfileId" : "1"}}'
```

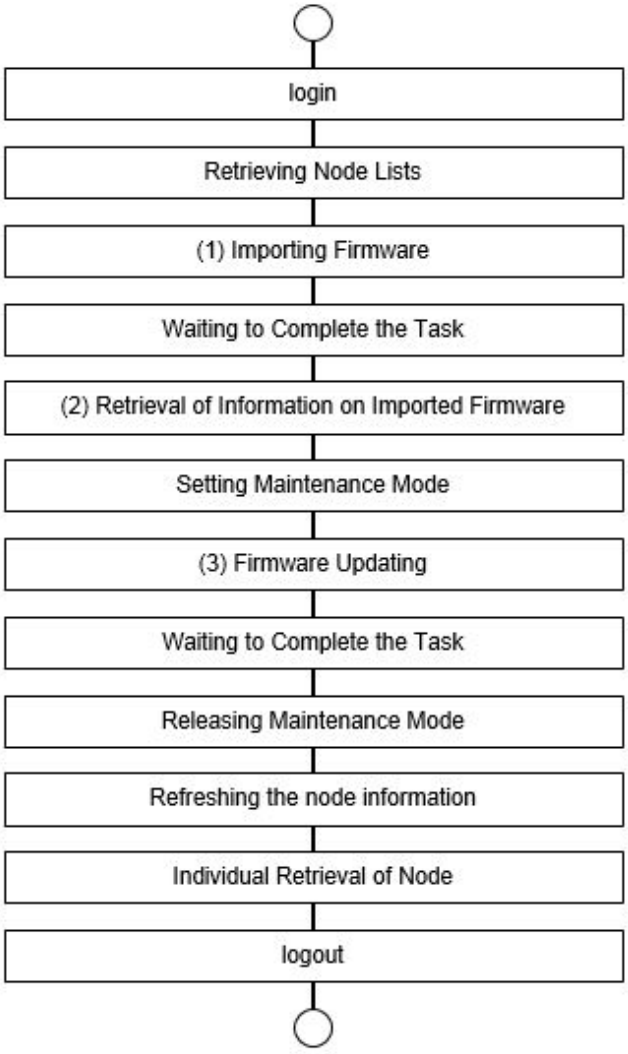
Example of response (JSON)

```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesNodeIdProfilesAssign-POST-Out.
0.0.1.json",
 "MessageInfo":[],
 "IsmBody":{
 "TaskId": "12"
 }
}
```

B.4 Updating Firmware

This section provides examples of REST API usage for Firmware Management, assuming updating of firmware on devices that are registered as nodes.

The following is the overview of the process for updating firmware.



Point

- For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."
- For information on "Retrieving Node Lists" in the above flow, refer to "B.2 List Display of Node Statuses."
- For information on "Waiting to Complete the Task" in the above flow, refer to "3.8 Task."

Based on the overview of processing as described above, this section provides examples of REST API usage for Firmware Management.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates retrieved from ISM are assumed to be stored in "/tmp/certificate.crt."
- The session ID retrieved at login is assumed to be "123456789."
- The node IDs of the servers on which to update the firmware are assumed to be "10110" and "10111."
- The firmware to be imported is assumed to be deployed in "<user name>/ftp/RX200_S8" on the ISM-VA.

(1) Importing Firmware

Refer to the node IDs you retrieved in the node list in advance, then check the firmware information. After checking, download the firmware to be applied. After downloading, forward the firmware to be applied to the target servers to the FTP server of the ISM-VA.

After forwarding the firmware, use this REST API to register the firmware in the repository of the ISM-VA.

Point

- For information on how to forward the firmware to the FTP server of the ISM-VA, refer to "2.1.2 FTP Access" in "User's Guide."
- For information on checking the firmware information, refer to "4.6.2 List Retrieval for Detailed Node Information" or "4.6.3 Individual Retrieval of Detailed Node Information."

Table B.9 REST API for starting Import Firmware

REST API	Reference
POST /system/settings/firmware/import	4.11.9 Individual Import Firmware

Example of request (when importing iRMC firmware (Version 8.12F&3.0) for PRIMERGY RX200 S8)

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/import" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"Path":"RX200_S8","FirmwareType":"iRMC","Model":"RX200 S8",
"Version":"8.12F&3.0"}}'
```

Example of response (JSON)

```
{
    "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/System/SystemSettingsFirmwareImport-
POST-Out.0.0.1.json",
    "MessageInfo": [],
    "IsmBody": {
        "TaskId": "1",
        "CancelUri": "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/import/cancel"
    }
}
```

Point

As for the respective values for FirmwareType, Model and Version to be specified in the request, execute the following REST API to look up the applicable FirmwareType, Model and VersionExample:

Table B.10 REST API for retrieving version number templates

REST API	Reference
GET /system/settings/firmware/template	4.11.6 Retrieval of Version Number Template Information

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/template" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Excerpt from response (JSON)

```
{
   "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/System/SystemSettingsFirmwareTemplate-
GET-Out.0.0.1.json",
   "MessageInfo": [],
    "IsmBody": {
        "VersionTemplateList": [
            {
                "FirmwareType": "iRMC",
                "ModelList": [
                    {
                        "Model": "RX100 S7",
                        "VersionTemplate": "*.*A&*.*",
                        "VersionExample": "6.62A&3.42"
                    },
(Omitted)
                   {
                        "Model": "RX200 S8",
                        "VersionTemplate": "*.*F&*.*",
                        "VersionExample": "7.82F&3.60"
                    },
(Omitted)
                    {
                        "Model": "PRIMEQUEST 3800L",
                        "VersionTemplate": "PA*",
                        "VersionExample": "PA17082"
                    }
                ]
            }
        ]
    }
}
```

(2) Retrieval of Information on Imported Firmware

After completing a firmware import task, retrieves the information on the imported firmware.

Table B.11 REST API for retrieving information on imported firmware

REST API	Reference
GET /system/settings/firmware/list?nodeid={value}	4.11.5 List Retrieval for Firmware

Example of request (Display list of firmware applicable to Node IDs 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/list?
nodeid=10110&nodeid=10111" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON)

```
{
    "SchemaType": "https://10.21.114.117:25566/ism/schema/v2/System/SystemSettingsFirmwareList-
GET-Out.0.0.1.json",
    "MessageInfo": [],
    "IsmBody": {
        "FirmwareList": [
            {
                "FirmwareId": 1,
                "NodeId": 10110,
                "ModelName": "RX200 S8",
                "FirmwareName": "RX200 S8_iRMC",
                "RepositoryName": "Individual Repository Administrator",
                "FirmwareVersion": "8.12F&3.0",
                "OperationMode": "Online",
                "FirmwareType": "iRMC",
                "DiskUsage": "31",
                "RegisterDate": "2017-09-22T04:00:50.497Z"
            },
            {
                "FirmwareId": 1,
                "NodeId": 10111,
                "ModelName": "RX200 S8",
                "FirmwareName": "RX200 S8_iRMC",
                "RepositoryName": "Individual Repository Administrator",
                "FirmwareVersion": "8.12F&3.0",
                "OperationMode": "Online",
                "FirmwareType": "iRMC",
                "DiskUsage": "31",
                "RegisterDate": "2017-09-22T04:00:50.497Z"
            }
        ]
    }
}
```

Use the FirmwareName, FirmwareVersion, NodeId, OperationMode, and RepositoryName from the retrieved information when executing Update Firmware of REST API.

Setting Maintenance Mode

Sets into Maintenance Mode the nodes on which to apply the firmware.

Point

When you set the value for the request parameter (AutoMaintenance) of Update Firmware to "true" on ISM, this procedure is not required because setting/releasing of the maintenance mode is executed automatically.

For detailed information, refer to "4.11.1 Starting Update Firmware/Driver."

Table B.12 REST API for changing Maintenance Mode

REST API	Reference
PATCH /nodes/{nodeid}/maintenancemode	4.3.33 Changing from/to Maintenance Mode

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10100/maintenancemode" -X PATCH
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"Node":{"MaintenanceMode":"Maintenance"}}}'
```

Excerpt from response (JSON)

```
{
    "MessageInfo": [],
    "SchemaType": "https://192.168.10.160:25566/ism/schema/v2/Nodes/NodesNodeIdMaintenanceMode-
PATCH-Out.0.0.1.json",
    "IsmBody": {
        "Node": {
            "MaintenanceMode": "Maintenance"
        }
    },
}
```

(3) Firmware Updating

Use the firmware stored in the repository when you start Update Firmware.

Point

If you also imported any documents when you imported firmware, you can check those documents.

For information on checking documents, refer to "4.11.3 List Retrieval for Firmware Documents."

Table B.13 REST API for starting Update Firmware

REST API	Reference
POST /nodes/firmware/update	4.11.1 Starting Update Firmware/Driver

Example of request (when applying iRMC firmware (Version 8.12F&30) of PRIMERGY RX200 S8 to Node IDs: 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/firmware/update" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody": {"UpdateRequest": [ {"NodeId":10110, "FirmwareName":"RX200 S8_iRMC",
"RepositoryName":"Individual Repository Administrator", "FirmwareVersion":"8.12F&3.0",
"OperationMode":"Online"},{"NodeId":10111, "FirmwareName":"RX200 S8_iRMC",
"RepositoryName":"Individual Repository Administrator", "FirmwareVersion":"8.12F&3.0",
"OperationMode":"Online"} ] } }'
```

Example of response (JSON)

```
{
   "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/nodes/NodesFirmwareUpdate-POST-Out.
0.0.1.json",
   "MessageInfo":[],
   "IsmBody":{
   "TaskId":"2",
```

```
    "CancelUri":"https://192.168.1.2:25566/ism/api/v2/nodes/firmware/update/cancel"
    }
}
```

Note

Even after a Update Firmware task has completed, on some devices Update Firmware becomes effective only by restarting the node. Restart such nodes any time as needed. For information on devices that need to be restarted, refer to "2.6.3.2 Behavior during firmware updates" in "User's Guide."

Releasing Maintenance Mode

Releases Maintenance Mode on the nodes on which application of firmware has completed.

Point

When you set the value for the request parameter (AutoMaintenance) of Update Firmware to "true," this procedure is not required because setting/releasing of the maintenance mode is executed automatically.

For detailed information, refer to "4.11.1 Starting Update Firmware/Driver."

Table B.14 REST API for changing Maintenance Mode

REST API	Reference
PATCH /nodes/{nodeid}/maintenancemode	4.3.33 Changing from/to Maintenance Mode

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10100/maintenancemode" -X PATCH
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody":{"Node":{"MaintenanceMode":"Normal"}}}'
```

Excerpt from response (JSON)

```
{
    "MessageInfo": [],
    "SchemaType": "https://192.168.10.160:25566/ism/schema/v2/Nodes/NodesNodeIdMaintenanceMode-
PATCH-Out.0.0.1.json",
    "IsmBody": {
        "Node": {
            "MaintenanceMode": "Normal"
        }
    }
}
```

Refreshing the node information

After clearing Maintenance Mode, the node information must be refreshed in order to check whether the firmware was correctly applied to the devices.

Point

It is not required to refresh the node information because the node information will be refreshed after the offline updates.

Table B.15 REST API for retrieving node information

REST API	Reference
POST /nodes/{nodeid}/inventory/refresh	4.6.1 Instruction to Execute Retrieval of Node Information

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10100/inventory/refresh" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Excerpt from response (JSON)

```
{
    "MessageInfo": [],
    "SchemaType": "https://192.168.10.160:25566/ism/schema/v2/Nodes/NodesNodeIdInventoryRefresh-
POST-Out.0.0.1.json",
    "IsmBody": {
        "RefreshDate": "2017-09-22T06:56:00.668Z"
    }
}
```

Individual retrieval of node

After the node information is refreshed again, retrieve detailed information for each node individually. Check the firmware information to confirm whether the firmware was applied to the devices correctly.

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10110/inventory?level=all&target=Firmware" -X GET
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
```

Excerpt from response (JSON)

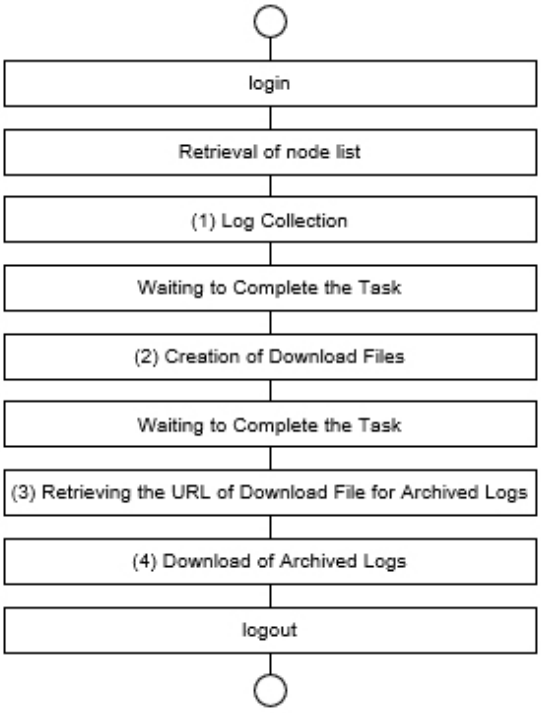
```
{
  "MessageInfo": [],
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesNodeIdInventory-GET-Out.
0.0.1.json",
  "IsmBody": {
    "Node": {
      "Manufacture": "FUJITSU",
      "MacAddress": "00-00-00-00-00-00",
      "Wwnn": null,
      "VariableData": {
        "Firmware": [
          {
            "Function": null,
            "Slot": null,
            "Name": "RX200S8_BIOS",
            "Bus": null,
            "ParentName": null,
            "Version": null,
            "Device": null,
            "Model": "RX200 S8",
            "Segment": null,
            "Type": "BIOS",
            "FirmwareVersion": "R1.17.0"
          },
          {
            "Function": null,
            "Slot": null,
```

```
            "Name": "RX200 S8_iRMC",
            "Bus": null,
            "ParentName": null,
            "Version": "iRMCS3",
            "Device": null,
            "Model": "RX200 S8",
            "Segment": null,
            "Type": "iRMC",
            "FirmwareVersion": "8.12F&3.0"
          }
        ]
      },
      "Name": "Server",
      "HardwareLogTarget": 1,
      "SerialNumber": "ABCDEFGHIJ",
      "ServerViewLogTarget": 0,
      "NodeId": 10110,
      "ProductName": "PRIMERGY RX200 S8",
      "UpdateDate": "2017-09-22T06:57:00.668Z",
      "Progress": "Complete",
      "RaidLogTarget": 0,
      "SoftwareLogTarget": 1
    }
  }
}
```


B.5 Extracting Logs

This section provides examples of REST API usage for Log Management, assuming that server Archived Logs (hardware logs and operating system logs) from all devices registered as nodes are collected and downloaded any time as needed.

The following is the overview of the process to extracting logs.



Point

- For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."
- For information on "Retrieving Node Lists" in the above flow, refer to "B.2 List Display of Node Statuses."
- For information on "Waiting to Complete the Task" in the above flow, refer to "3.8 Task."

Based on the overview of processing as described above, this section provides examples of REST API usage for Log Management.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates retrieved from ISM are assumed to be stored in "/tmp/certificate.crt."
- The session ID retrieved at login is assumed to be "123456789."
- The node IDs of the servers that were retrieved when retrieving a node list only of servers are assumed to be "10110"and "10111."

(1) Log Collection

After retrieving the node IDs of servers in advance, retrieve their node statuses and make the settings for collecting logs.

After making the settings for collecting logs, execute a log collection.

Retrieval of node statuses

Table B.16 REST API for retrieving node statuses

REST API	Reference
GET /nodes/logs?nodeid={value}	4.12.4 Retrieving Node Statuses

Example of request (with Node IDs: 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/logs?nodeid=10110&nodeid=10111" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesLogs-GET-Out.0.0.1.json",
  "IsmBody": {
    "StatusInfo": {
      "Nodes": [
        {
          "NodeId": 10110,
          "Status": "Idle"
        },
        {
          "NodeId": 10111,
          "Status": "Idle"
        }
      ]
    }
  },
  "MessageInfo": []
}
```

Retrieving and changing settings for log collection

Registers the settings for log collection for all nodes with any status other than "Exempt," such as "Idle."

After retrieving the settings for log collection, you can use these retrieved settings as parameters for changing the current log collection settings.

Disable any schedule settings, and then specify collection of both hardware log (HWLogEnable) and operating system log (OSLogEnable).

Note

If no OS information is set on a respective node, log collection will be treated as disabled even if operating system log collection is enabled in the log collection settings.

Table B.17 REST API for retrieving log collection settings

REST API	Reference
GET /nodes/logs/collection/settings?nodeid={value}	4.12.1 Retrieving Log Collection Settings

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/logs/collection/settings?nodeid=10110" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesLogsCollectionSettings-GET-
Out.0.0.1.json",
  "IsmBody": {
    "LogCollect": {
      "Nodes": [
        {
          "NodeId": 10110,
          "Schedule": {
            "ScheduleEnable": 0,
            "ScheduleMethod": "Days",
            "NextExecutionDate": ""
          },
          "ArchivedLogGeneration": 7,
          "SecurityLogGeneration": 30,
          "OperationLogGeneration": 30,
          "EventLogGeneration": 30,
          "HWLogEnable": 1,
          "OSLogEnable": 0,
          "SVSLogEnable": 0,
          "RAIDLogEnable": 0,
          "HWLogPossible": 1,
          "OSLogPossible": 1,
          "SVSLogPossible": 1,
          "RAIDLogPossible": 1
        }
      ]
    }
  },
  "MessageInfo": []
}
```

Table B.18 REST API for changing log collection settings

REST API	Reference
PATCH /nodes/logs/collection/settings	4.12.2 Changing Log Collection Settings

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/logs/collection/settings" -X PATCH
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody": {"LogCollect": {"Nodes": [{"NodeId": 10110, "Schedule": {"ScheduleEnable": 0,
"ScheduleMethod": "Days"}, "ArchivedLogGeneration": 7, "SecurityLogGeneration": 30,
"OperationLogGeneration": 30, "EventLogGeneration": 30, "HWLogEnable": 1, "OSLogEnable": 1,
"SVSLogEnable": 0, "RAIDLogEnable": 0}]}}}'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesLogsCollectionSettings-
PATCH-Out.0.0.1.json",
  "IsmBody": {
    "LogCollect": {
      "Nodes": [
        {
          "NodeId": 10110,
          "Schedule": {
            "ScheduleEnable": 0,
            "ScheduleMethod": "Days",
            "NextExecutionDate": ""
          },
          "ArchivedLogGeneration": 7,
          "SecurityLogGeneration": 30,
          "OperationLogGeneration": 30,
          "EventLogGeneration": 30,
          "HWLogEnable": 1,
          "OSLogEnable": 1,
          "SVSLogEnable": 0,
          "RAIDLogEnable": 0,
          "HWLogPossible": 1,
          "OSLogPossible": 1,
          "SVSLogPossible": 1,
          "RAIDLogPossible": 1
        }
      ]
    }
  },
  "MessageInfo": []
}
```

Log collection

After changing the settings for log collection, start collecting logs from the node ID of each server.

Table B.19 REST API for starting log collection

REST API	Reference
POST /nodes/logs/collection/collect	4.12.5 Collecting Logs

Example of request (with Node IDs: 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/logs/collection/collect" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody": {"Nodes": [{"NodeId": 10110}, {"NodeId": 10111}]}}'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesLogsCollectionCollect-POST-
Out.0.0.1.json",
  "IsmBody": {
    "TaskId": "1"
  },
  "MessageInfo": []
}
```

(2) Creation of Download Files

After completing a log collection task, creates a download file of the Archived Log.

The following is an example of creating a download file of the latest Archived Log.

Table B.20 REST API for creating download files for Archived Logs

REST API	Reference
POST /nodes/logs/archivedlog/downloadfiles/create	4.12.9 Creating Archived Log Download Files

Example of request (with Node IDs: 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/logs/archivedlog/downloadfiles/create" -X POST
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
    -d '{"IsmBody": {"Generation": {"Nodes": [{"NodeId": 10110}, {"NodeId": 10111}], "Generation":
1}, "PasswordEnable": 0}}'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/
NodesLogsArchivedLogDownloadFilesCreate-POST-Out.0.0.1.json",
  "IsmBody": {
    "TaskId": "2"
  },
  "MessageInfo": []
}
```

(3) Retrieving the URL of Download File for Archived Logs

Retrieves the URL of download files for the Archived Logs.

Table B.21 REST API for retrieving the URL of download files for Archived Logs

REST API	Reference
GET /nodes/logs/archivedlog/downloadfiles	4.12.12 Retrieving Information on Archived Log Download Files

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/logs/archivedlog/downloadfiles" -X GET
    --cacert /tmp/certificate.crt
    -H "X-Ism-Authorization:123456789"
    -H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesLogsArchivedLogDownloadFiles-
GET-Out.0.0.1.json",
  "IsmBody": {
```

```
    "DownloadFiles": {
      "FileCreateStatus": "Created",
      "TaskId": "2",
      "FileUrl": "https://192.168.1.2:25566/ism/data/export/Administrator/transfer/Archive/
123456789/download/archivedlog/2/ArchivedLog_20170930120000.zip",
      "FileCreated": "2017-09-30T03:00:00.000Z",
      "FileSize": "5",
      "FileSizeUnit": "MiB"
    }
  },
  "MessageInfo": []
}
```

(4) Download of Archived Logs

When creation of download files of Archived Logs is completed, the status of download file creation (FileCreateStatus) changes to "Created."

In this case, as the download file URL (FileUrl) is specified, download them from here.

```
curl -O "https://192.168.1.2:25566/ism/data/export/Administrator/transfer/Archive/123456789/download/
archivedlog/2/ArchivedLog_20170930120000.zip"
    --cacert /tmp/certificate.crt
    -b "X-Ism-Authorization=123456789"
```

Appendix C List of Profile Parameters (ProfileData)

This section describes detailed information about the following parameters:

- 4.10.3 Adding Profiles
- 4.10.5 Individual Retrieval of Profiles
- 4.10.6 Updating Profiles
- 4.10.17 Adding Policies
- 4.10.19 Individual Retrieval of Policies
- 4.10.20 Updating Policies

C.1 Server-BX

Parameter	Type	Description
BIOS	object	BIOS Settings If you delete all of the BIOS settings in "4.10.6 Updating Profiles," omit this item. When a policy is being referenced, you cannot delete the settings.
SasController	string	Specifies the operation of the onboard SAS/SATA storage controller unit (SCU). If none are set, specifies null. - Enabled: Enables SCU. - Disabled: Disables SCU.
SasSataOpRom	string	Specifies the operation of Option ROM for SAS/SATA controller. Specify when SasController is Enabled. If none are set, specifies null. - Enabled: Enables Option ROM. - Disabled: Disables Option ROM.
SasSataDriver	string	Specifies the type of Option ROM for SAS/SATA controller. Specify when SasSataOpRom is Enabled. If none are set, specifies null. - LSI MegaRAID: Uses Option ROM which uses Embedded MegaRAID. - Intel RSTe: Uses Intel RSTe-use Option ROM.
AspmSupport	string	Specify the operations of Active State Power Management (ASPM). Even if ASPM is generally enabled, certain links will only be enabled when ASPM is supported. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables function.

Parameter	Type	Description
		- Auto: Set to maximize power saving. - L1 Only: Set the power saving mode of the PCI Express link to L1 (Unidirectional). - Force L0s/Limit to L0s: Set the power saving mode of the PCI Express link to L0 (Unidirectional).
Above4GDecoding	string	Specifies whether memory resources beyond the 4 GB address boundary can be allocated to PCI devices. The option depends on the operating system and the adapter card installed. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Allocate only memory resources below the 4 GB address boundary to PCI devices. - Enabled: Allocate memory resources beyond 4 GB address boundaries to PCI devices.
DmiControl	string	Specifies the bus connection speed between the CPU and the chip set. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - GEN 1: Set the bus connection speed between the CPU and the chip set and execute at 2.5 GT/s. - GEN 2: Set the bus connection speed between the CPU and the chip set and execute at 5.0 GT/s.
SR_IOV	string	Specifies whether to enable Single Root IO Virtualization if the system has an SR-IOV capable PCIe device. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
HyperThreading	string	Specifies the CPU's Hyper Threading Technology operation. If the installed CPU does not support this function, this setting has no meaning. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
CoreProcessingMode	string	For processors that include multiple processor cores, specify the number of enabled processor cores. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - All: Enables all available processor cores. - 1-16: Enables only the selected number of processor cores and disable the remaining processor cores.

Parameter	Type	Description
HardwarePrefetcher	string	Specifies to pre-load the memory contents that may be required when the memory bus becomes inactive to the cache automatically. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
AdjacentCacheLinePrefetch	string	Specifies whether to load the adjacent 64 byte cache line when the processor is sending cache requests. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Loads the requested cache line and the adjacent cache line. - Disabled: Loads the requested cache line.
DcuStreamerPrefecher	string	Specifies to pre-load the memory contents that may be required when the memory bus becomes inactive to the L1 data cache automatically. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
DcuIpPrefecher	string	Specifies the DCU IP Prefetch operations of the CPU. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
XDBitfunctionalityAndNXMemoryProtection	string	Specifies the CPU's Execute Disable Bit operation. This function is also called XD (eXecute Disable) bit or NX (No eXecute) bit. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
VirtualizationTechnology	string	Specifies operation of the CPU's virtualization support function. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
IntelVTd	string	Specifies the CPU's Virtualization Technology for Directed I/O function operation. If none are set, specifies null. - Enabled: Enables function.

Parameter	Type	Description
		- Disabled: Disables function.
PowerTechnologyCpu	string	Specifies the CPU's power management operation. If none are set, specifies null. - Energy Efficient: Behavior optimized for power-saving. - Custom: Detailed behavior setup by using additional setting items. - Disabled: Disables power management function.
CPUHardwarePowerManagement	string	Specifies the settings of HWPM (Hardware Power Management), which manages performance and power saving. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables function. - Native Mode: HWPM operates in cooperation with the operating system via the software interface. - OOB Mode: The CPU automatically controls the frequency based on the settings of the energy performance policy of the operating system.
EnhancedSpeedStep	string	Specifies operation of power saving functions. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
TurboMode	string	Specifies Turbo Boost Technology behavior of a CPU. If the installed CPU does not support this function, this function is set to regardless of this setting. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
OverrideOsEnergyPerformance	string	Specify whether to prevent override of the energy performance policy set up for the OS. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
EnergyPerformance	string	Specify the energy performance policy of non-legacy operating systems. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Performance: Optimize to get maximum performance, even if this sacrifices energy performance. - Balanced Performance: Specify to get performance while also saving energy.

Parameter	Type	Description
		- Balanced Energy: Save energy while getting good performance. - Energy Efficient: Optimize to save energy, even if this sacrifices performance.
UtilizationProfile	string	Specify the share of optimized energy performance used for other systems. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Even: Optimize to get a system with a balanced energy performance. - Unbalanced: Optimize to use an unbalanced system prioritizing performance.
CpuC1eSupport	string	Specify whether to stop the processor when it is possible to save energy. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
AutonomousCStateSupport	string	Specify whether to enable the Autonomous C state clock control of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
CpuC3Report	string	Transfer the C3 status of the processor as a ACPI C-2 status to OSPM (OS Power Management). If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: CPU C3 is provided to OSPM in ACPI-2 status. - Disabled: CPU C3 is not provided to OSPM in ACPI-2 status.
CpuC6Report	string	Specify whether to transfer the C6 status of the process to OSPM in ACPI C-3 status and whether to enable the Deep Power Down Technology of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: CPU C6 is provided to OSPM in ACPI-3 status. - Disabled: CPU C6 is not provided to OSPM in ACPI-3 status.
PackageCStateLimit	string	Specify the upper limit of the C State of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified.

Parameter	Type	Description
		- C0: Set the upper limit of C State to C0. - C2: Set the upper limit of C State to C2. - C6: Set the upper limit of C State to C6. - C6(Retention): Set the C6 Retention to C status limit. - C7: Set the upper limit of C State to C7. - No Limit: Set the upper limit of C State to C7. - Auto: It is set automatically in the system.
QpiLinkFrequencySelect	string	Specify the frequency of a shared and supported CPU for the link frequency. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Auto: Set the maximum speed from the BIOS, based on the current CPU and chip set in the system. The speed settings that can be used depend on the CPU. - 6.4 GT/s - 7.2 GT/s - 8.0 GT/s - 9.6 GT/S - 10.4 GT/s
UncoreFrequencyOverride	string	Specify the uncore frequency of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: To save power, the processor automatically controls the frequency within the range defined in advance. - Maximum: The frequency is set to the maximum value defined in advance. - Nominal: To save power, the processor automatically controls the frequency within the range defined in advance. It will not exceed the rating frequency. - Power balanced: To optimize the balance between power and performance, the processor automatically controls the frequency within the range defined in advance.
LlcDeadLineAlloc	string	Specify the processing of the LLC (Last Level Cache) deadline. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Meets the LLC deadline temporary. - Disabled: Does not meet the LLC deadline.
StaleAtoS	string	Specifies whether to optimize the directory of data whose use value in Caching Agent has decreased. If none are set, specifies null. If it is omitted, it will be handled as if null was specified.

Parameter	Type	Description
		- Enabled: Enable optimization. - Disabled: Disable optimization.
CODEnable	string	Specify whether the BIOS should configure the added NUMA nodes for each socket and to optimize for high NUMA directionality load performance in COD (Cluster-on-Die). CPU with two home agents is required. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
EarlySnoop	string	Specify whether to enable early snoop. This is not supported when COD is enabled. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function. - Auto: If COD is disabled in the system configurations, early snoop will be enabled.
HomeSnoopDirOsb	string	Specifies whether to use Home Snoop Directory with plain OSB (Opportunistic Snoop Broadcast) caching to optimize the snoop processing. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
NUMA	string	Specifies operation of NUMA (Non-Uniform Memory Access) function. If none are set, specifies null. - Enabled: Enables NUMA function. - Disabled: Disables NUMA function.
DDR_Performance	string	Specifies operation of memory module. Memory modules operate with different speeds (Frequencies). The faster the speed, the higher the performance. The slower the speed the more the power saved. The available memory speeds differ depending on the installed memory module configurations. If none are set, specifies null. - Low-Voltage optimized: The fastest setting available with low voltage - Energy optimized: The slowest setting available with power-saving

Parameter	Type	Description
		- Performance optimized: The fastest setting available for achieving the highest performance - Power balanced: The setting available with reduced speed for achieving balance between power and performance
PatrolScrub	string	Specify whether to perform regular background screenings. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enable screening. - Disabled: Disable screening.
ImcInterleaving	string	Specifies the interleaving of Integrated Memory Controllers (IMC). If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Auto: Automatically select the interleaving in the BIOS according to the available memory configuration. - 1-Way: Select 1-Way interleaving. - 2-Way: Select 2-Way interleaving.
SubNumaClustering	string	Split the LLC (Last Level Cache) into different clusters based on the address scope. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Support 1-Way interleaving for two clusters. - Disabled: Disables function. - Auto: Depending on the selected IMC interleaving, one or two clusters are supported.
SATAControllerModeSelection	string	Specifies the operation mode of the SATA interface. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables the operating mode - IDE: Operate in IDE mode - AHCI: Operate in AHCI mode - RAID: Operate in RAID mode
SATAController	string	Enables or disables the SATA controller. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables the SATA controller - Enabled: Enables the SATA controller
sSATAController	string	Enables or disables the SSATA controller. If none are set, specifies null. If it is omitted, it will be handled as if null was specified.

Parameter	Type	Description
		- Disabled: Disables the SSATA controller - Enabled: Enables the SSATA controller
Csm	string	Specifies the CSM (Compatibility Support Module) execution operation. Legacy operating system can be booted only when the CSM is loaded. If none are set, specifies null. - Enabled: CSM is executed to ensure Legacy or UEFI operating system can startup. - Disabled: CSM is not executed to ensure only UEFI operating system can startup.
BootOptionFilter	string	Specifies boot operation of a drive. If none are set, specifies null. - UEFI and Legacy: Bootable from UEFI OS drive and Legacy OS drive. - Legacy only: Bootable only from Legacy OS drive. - UEFI only: Bootable only from UEFI OS drive.
LaunchPxeOpRomPolicy	string	Specifies the PXE Option ROM to be booted. For PXE boot, there are available normal (Legacy) PXE boot and UEFI PXE boot. If none are set, specifies null. - Do not launch: Option ROM not booted. - UEFI only: Only UEFI Option ROM booted. - Legacy only: Only Legacy Option ROM booted.
LaunchStorageOpRomPolicy	string	Specifies the Storage Option ROM to be booted. If none are set, specifies null. - Do not launch: Storage Option ROM not booted. - UEFI only: Only UEFI Storage Option ROM booted. - Legacy only: Only Legacy Storage Option ROM booted.
OtherPciDeviceRomPriority	string	Specifies the Option Rom booted with the devices other than a network, mass storage device and video. If none are set, specifies null. - UEFI OpROM: Only UEFI Option ROM booted. - Legacy OpROM: Only Legacy Option ROM booted.
USBHostController	string	Specifies whether to enable the USB controller of the system board. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disable the USB controller. - Enabled: Enable the USB controller.

Parameter	Type	Description
NetworkStack	string	Specifies whether UEFI Network Stack can be used for network access on UEFI. For example, when unable to use UEFI network stack, UEFI install cannot be executed via PXE. If none are set, specifies null. - Disabled: Cannot use UEFI network stack. - Enabled: Can use UEFI network stack.
IPv4PxeSupport	string	Specifies whether PXE UEFI Boot with IPv4 can be used with UEFI mode for installation of an operating system. If none are set, specifies null. - Disabled: Cannot use PXE UEFI Boot with IPv4. - Enabled: Can use PXE UEFI Boot with IPv4.
IPv6PxeSupport	string	Specifies whether PXE UEFI Boot with IPv6 can be used with UEFI mode for installation of an operating system. If none are set, specifies null. - Disabled: Cannot use PXE UEFI Boot with IPv6. - Enabled: Can use PXE UEFI Boot with IPv6.
LaunchSlot1Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 1. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot2Oprom	string	Specifies the execution of the extended ROM of the option card mounted in PCI slot 2. You can specify this for multiple slots in the profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot3Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 3. You can specify this for multiple slots in profile. Do not specify this for a slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot4Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 4. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.

Parameter	Type	Description
		If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot5Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 5. You can specify this for multiple slots in profile. Do not specify this for a slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot6Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 6. You can specify this for multiple slots in profile. Do not specify this for a slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
SecureBoot	string	Specify whether to permit non-certified boot loaders/ UEFI OpROM boot. This setting may not be "Disabled" due to the hardware specifications. In this case, specify the value from the BIOS interface of the server. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Only permit certified boot loaders/ UEFI OpROM boot. - Disabled: All boot loaders/OpROM (Legacy/UEFI) can be executed.
SyncRTCwithMMB	string	Specifies whether to synchronize Real Time Clock with the management blade. If none are set, specifies null. - Enabled: Synchronizes. - Disabled: Does not synchronize.
AdjustDateTime	string	Specifies whether to modify the time of the server based on the time of management server when the profile is assigned. This item can be set up only when SyncRTCwithMMB is Disabled. If none are set, specifies null. - Local Time: Specifies time according to the time zone of the management server. - UTC: Specifies time converted to UTC from the time zone of the management server.
iRMC	object	Settings of iRMC (Integrated Remote Management Controller)

Parameter	Type	Description
		If you delete all of the iRMC settings in "4.10.6 Updating Profiles," omit this item. When a policy is being referenced, you cannot delete the settings.
ConfAisConnectEnabled	string	AIS Connect If none are set, specifies null. - Enabled: Enabled - Disabled: Disabled
ConfAisConnectServiceMode	string	Service Mode If none are set, specifies null. - Enabled: Enabled - Disabled: Disabled
ConfAisConnectUseProxyAuth	string	Proxy Server If none are set, specifies null. - Enabled: Use Proxy server - Disabled: Do not use Proxy server
ConfAisConnectCountryId	string	AIS Connect RP (Reverse Proxy) Country If none are set, specifies null.
ConfAisConnectAllowRemoteSession	string	Remote Session If none are set, specifies null. - Enabled: allowed - Disabled: denied
ConfPostErrorHalt	string	Specifies performance at startup error of a server If none are set, specifies null. - Continue: Boot continued even after the occurrence of an error. - Halt on errors: Boot interrupted until the key entry when an error occurs.
ConfPowerControlMode	string	Specifies the power-saving and noise canceling operations for a server. If none are set, specifies null. - O/S Controlled: Control by OS followed. - Minimum Power: Operation where priority is placed on reduction in power consumption.
ConfPowerFailBehavior	string	Specifies the power source operation upon power restore operation after interruption of AC power source input. If none are set, specifies null. - As Before: State upon power source interruption maintained (Powered on if a server is powered on upon interruption/ Not powered on if the server is powered off.) - Remain Off: Always powered off.

Parameter	Type	Description
		- Always On: Always powered on.
ConfSoftWatchdogEnable	string	Specifies whether to use Software Watchdog to execute periodic communication confirmations while an OS is running. If none are set, specifies null. - Enabled: Communication monitored. - Disabled: Communication not monitored. The setting is enabled after restarting the server.
ConfSoftWatchdogBehavior	string	Specifies an operation when the OS does not communicate due to Software Watchdog. Specifies when ConfSoftWatchdogEnable is Enabled. If none are set, specifies null. - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. The setting is enabled after restarting the server.
ConfSoftWatchdogTime	integer	Specifies a value from 1-100 minutes for monitoring time by the Software Watchdog. Specifies when ConfSoftWatchdogEnable is Enabled. It is judged as unable to communicate when there is no communication after a specified time here. If none are set, specifies null. The setting is enabled after restarting the server.
ConfBootWatchdogEnable	string	Specifies the monitoring the period between POST completion and OS start, with use of Boot Watchdog. If none are set, specifies null. - Enabled: Period monitored. - Disabled: Period not monitored. The setting is enabled after restarting the server.
ConfBootWatchdogBehavior	string	Specifies behavior for the case when an OS does not start within the specified time in Boot Watchdog. Specifies when ConfBootWatchdogEnable is Enabled. If none are set, specifies null. - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. The setting is enabled after restarting the server.
ConfBootWatchdogTime	integer	Specifies a value from 1-100 minutes for the Boot Watchdog monitoring time. Specifies when ConfBootWatchdogEnable is Enabled.

Parameter	Type	Description
		It is judged as abnormality when OS cannot start after a specified time here. If none are set, specifies null. The setting is enabled after restarting the server.
ConfPermanentBiosConfigStorageEnabled	string	Specifies whether to enable Automatic BIOS Parameter Backup. If none are set, specifies null. - Enabled: Enables Automatic BIOS Parameter Backup - Disabled: Disables Automatic BIOS Parameter Backup The setting is enabled after restarting the server.
ConfBmcProxyAddress	string	DNS name or IP address of the Proxy server. If none are set, specifies null. The number of characters specifiable is 127 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), colon (:), and dot (.).
ConfBmcProxyPort	integer	Port number of Proxy Service Default: 81 If none are set, specifies null.
ConfBmcProxyUserName	string	User Name for Proxy Server Authentication If none are set, specifies null. The number of characters specifiable is 127 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), dot (.), underscore (_), at sign (@), and yen sign (\). Also, the character string must start with a single-byte alphanumeric character.
ConfBmcProxyPassword	string	Password for Proxy Server Authentication If none are set, specifies null. Set the password encrypted with AES256+Base64. For the password before encryption, specify a character string of 1 -127 characters composed of ASCII characters (0x20 - 0x7e).
ConfBMCUseDNS	string	Specifies whether to enable DNS of iRMC. If none are set, specifies null. - Enabled: Enabled - Disabled: Disabled
ConfBMCObtainDNSfromDHCP	string	Specifies whether to retrieve DNS configuration from DHCP server. If none are set, specifies null. - Enabled: Retrieve DNS configuration from the DHCP server

Parameter	Type	Description
		- Disabled: Do not retrieve DNS configuration from the DHCP server
ConfBMCDNSDomain	string	Specifies a default domain name for the DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 48 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), and dot (.).
ConfBMCDNSDomainSearchPath	string	Specifies a list of DNS search paths. Domain names in the list should be delimited by one or more space characters. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 127 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), dot (.), and space ( ).
ConfBMCDNSServer1	string	Specifies IP address of a DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), colon (:), and dot (.).
ConfBMCDNSServer2	string	Specifies IP address of a DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), colon (:), and dot (.).
ConfBMCDNSServer3	string	Specifies IP address of a DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), colon (:), and dot (.).
ConfBMCDNSRetries	integer	Specifies the number of times of DNS retry in the range of 1 - 5 times. Default setting is twice. If none are set, specifies null.

Parameter	Type	Description
ConfBMCDNSTimeout	integer	Specifies the timeout value for the DNS response in the range of 1 - 30 seconds. Default setting is five seconds. If none are set, specifies null.
ConfBMCRegisterDNS	string	Specifies a setting method for the DNS name of iRMC. If none are set, specifies null. - Disabled: Do not select - Register DHCP in DNS: Register the DHCP address in DNS - Register FQDN with DHCP in DNS: Use DHCP to register the fully qualified domain name in DNS - DNS Update Enabled: Dynamic DNS Enabled
ConfBMCUseNetworkName	string	Specifies whether to use the iRMC name specified in "ConfBMCNetworkName" as a part of the DNS name. If none are set, specifies null. - Enabled: Use - Disabled: Do not use
ConfBMCNetworkName	string	Specifies the iRMC name which is used as a part of the DNS name. If none are set, specifies null. Do not use a dot (.) except in the following cases because it may cause unexpected behavior. PRIMERGY RX/TX/CX M4 or later, PRIMEQUEST 3000B The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), and dot (.).
ConfBMCAddSerialNumber	string	Specifies whether to add the last three bytes of the MAC address to the DHCP name of iRMC. If none are set, specifies null. - Enabled: Add - Disabled: Do not add
ConfBMCAddExtension	string	Specifies whether to add an extension name which is specified for "ConfBMCNameExtension" to the DHCP name of iRMC. If none are set, specifies null. - Enabled: Add - Disabled: Do not add
ConfBMCNameExtension	string	Extension Name of iRMC If none are set, specifies null. The number of characters specifiable is 16 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), and dot (.).

Parameter	Type	Description
ConfBmcSsdpEnable	string	Specifies whether to enable automatic discovery via SSDP. If none are set, specifies null. - Enabled: Enable automatic discovery - Disabled: Disable automatic discovery
ConfBmcSnmpServiceEnable	string	Specifies SNMP service performance at iRMC. If none are set, specifies null. - Enabled: Enables the operation. - Disabled: Disables the operation.
ConfBMCSnmpServicePort	integer	Specifies a port number where an SNMP service is in an idle state. Typically it becomes the UDP 161 port. If none are set, specifies null.
ConfBMCSnmpServiceEnableV3Only	string	Specifies the SNMP protocol. If none are set, specifies null. - All (SNMPv1/v2c/v3): All protocol support (SNMPv1/v2c/v3) - SNMPv3 only:SNMPv3
ConfBMCSnmpServiceCommunityName	string	Specifies a community name for when it is SNMP v1/v2c. If none are set, specifies null. The number of characters specifiable is 18 at maximum. Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:,_?;-@&)%!. Blank symbols and \ may not be used.
ConfBMCSnmpV3UserServiceEnabled	string	Specifies SNMPv3 support operations for a user. If none are set, specifies null. - Enabled: Enables it. - Disabled: Disables it.
ConfBMCSnmpV3UserAuthType	string	Specifies authentication protocols that SNMPv3 uses for authentication. If none are set, specifies null. - SHA: Uses SHA (Secure Hash Algorithm) for authentication. - MD5: Uses MD5 (Message-Digest Algorithm 5) authentication. - none: Does not use authentication. - SHA256: Uses SHA256 (Secure Hash Algorithm 256-bit) for authentication. - SHA384: Uses SHA384 (Secure Hash Algorithm 384-bit) for authentication. - SHA512: Uses SHA512 (Secure Hash Algorithm 512-bit) for authentication.

Parameter	Type	Description
ConfBMCSnmpV3UserPrivType	string	Specifies privacy protocol that SNMPv3 uses to encrypt SNMPv3 traffic. If none are set, specifies null. - DES: Uses DES (Digital Encryption Standard) for SNMPv3 traffic encryption. - AES: Uses AES (Advanced Encryption Standard) 128 bits encryption for SNMPv3 traffic encryption. - none: Does not use encryption.
ConfBMCSnmpV3UserAccessType	string	Specifies access privilege of a user. "Read only" has been set as fixed. If none are set, specifies null. - Read Only: Read-only
ConfBMCSnmpTrapCommunityName	string	Specifies the SNMP Community Name. If none are set, specifies null. The number of characters specifiable is 18 at maximum. Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:,_?;-@&)%!. Blank symbols and \ may not be used.
ConfBMCSnmpV3UserSelected	string	Specifies a SNMPv3 user already defined as SNMPv3 trap destination. Specifies a user name that has been created on iRMC. If none are set, specifies null. A user name can be specified with 16 characters at maximum. A valid user name should start with an alphabet. For the remaining part of the name, it can accept only alphabets, digits, under bar, dash, period and at mark (@). Blank symbols may not be used.
ConfBMCSnmpTrapDestName1	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName2	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName3	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."

Parameter	Type	Description
		If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName4	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName5	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName6	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName7	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpProtocol1	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol2	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c

Parameter	Type	Description
		- SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol3	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol4	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol5	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol6	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol7	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBmcCasEnable	string	Specifies the CAS service behavior in iRMC. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasServer	string	Specifies the IP address or the DNS name of the CAS server. If none are set, specifies null. The number of characters specifiable is 64 at maximum.

Parameter	Type	Description
		Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), colon (:), and dot (.).
ConfBmcCasPort	string	Specifies the port number which CAS service is standing by. Usually, it is 3170. If none are set, specifies null.
ConfBmcCasVerifyServerCert	string	Specifies the SSL certificate confirmation behavior. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasAlwaysDisplayLogin	string	Specifies whether to always display the Login page. If none are set, specifies null. - Enabled: Always display the login page - Disabled: Do not always display the login page
ConfBmcCasLoginUri	string	Specifies a Login URL. Usually, it is "/cas/login." If none are set, specifies null. The number of characters specifiable is 32 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of "?/.:~-_%."
ConfBmcCasLogoutUri	string	Specifies a Logout URL. Usually, it is "/cas/logout." If none are set, specifies null. The number of characters specifiable is 32 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of "?/.:~-_%."
ConfBmcCasValidateUri	string	Specifies an authentication URL. Usually, it is "/cas/validate." If none are set, specifies null. The number of characters specifiable is 32 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of "?/.:~-_%."
ConfBmcCasAssignConfiguredPermissions	string	Specifies an access permission. It will always be set to Local. If none are set, specifies null. LocalAssignedPermissions: Local
ConfBmcCasNetworkPrivilege	string	Specifies the privilege level of the user. If none are set, specifies null. - User: User - Operator: Operator

Parameter	Type	Description
		- Administrator: Administrator - OEM: OEM
ConfBmcCasPermissionRedfish	string	Specifies a Redfish role. If none are set, specifies null. - Administrator: Administrator - Operator: Operator - ReadOnly: Read-only - NoAccess: Do not use Redfish
ConfBmcCasPermissionConfigureUsers	string	Specifies user change privileges. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasPermissionConfigureBmc	string	Specifies iRMC setting change privileges. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasPermissionAvrEnabled	string	Specifies Video Redirection use privileges. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasPermissionRemoteStorageEnabled	string	Specifies Remote Storage use privileges. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
IOVirtualization	object	Settings of Virtual IO For details, refer to "D.3 IOVirtualization."
OSInstallation	object	Settings of OS Installation For details, refer to "D.4 OSInstallation."

C.2 Storage-DX

Parameter	Type	Description
StandRaid	object	RAID Settings
RaidGroup	array	List of RAID Groups
RaidGroupName	string	Name of RAID Group
RaidLevel	string	RAID Level of Disk Array to be built - RAID1: RAID level 1 - RAID5: RAID level 5 - RAID6: RAID level 6

Parameter	Type	Description
		- RAID1+0: RAID level 1+0
DiskCount	integer	The Number of Disks used in Raid Group
DiskKind	object	Disk Information List to be registered as Raid Group
Inch	string	Disk Inch - 2.5Inch - 3.5Inch
Type	string	Disk Interface - SAS: SAS - NL-SAS: Near line SAS - SED: Disk for self-encrypting - SSD: SSD
Size	string	Disk Capacity - 100GB - 200GB - 300GB - 400GB - 450GB - 600GB - 800GB - 900GB - 1TB - 1.2TB - 1.6TB - 1.8TB - 2TB - 3TB - 4TB - 6TB
Volumes	array	List of Volume Information
VolumeName	string	Volume Name
VolumeSize	string	Volume Size
GHotSpare	object	Setting of Hot Spares
GHotDisks	array	List of Hot Spares
Disks	array	Disk Information List to be registered as Hot Spare
Inch	string	Disk Inch - 2.5Inch - 3.5Inch
Type	string	Disk Interface

Parameter	Type	Description
		- SAS: SAS - NL-SAS: Near line SAS - SED: Disk for self-encrypting - SSD: SSD
Size	string	Disk Capacity - 100GB - 200GB - 300GB - 400GB - 450GB - 600GB - 800GB - 900GB - 1TB - 1.2TB - 1.6TB - 1.8TB - 2TB - 3TB - 4TB - 6TB
HostAffinity	object	Settings of Host Affinity
HostAffinities	array	List of Host Affinity
LunGroup	object	LUN Group Information
LunGroupName	string	LUN Group Name
Volumes	array	Information of Volume
VolumeName	string	Volume Name
PortGroup	object	Port Group Information
PortGroupName	string	Port Group Name
Ports	array	Information of Ports that belong to a port group
PortNumber	string	Port Number
HostGroup	object	Information of Host Group
HostGroupName	string	Host Group Name
HostType	string	Host Type - iscsi:iSCSI - fc:FC
FcParameter	array	Host Information for FC Designate when HostType is "FC."

Parameter	Type	Description
HostName	string	Host Name
HostWwn	string	Host WWN
IscsiParameter	array	Host Information for iSCSI Designate when HostType is "iSCSI."
HostName	string	Host Name
IscsiName	string	iSCSI Name Specifies "iqn." or "eui." at the head.
DetailSettings	object	Detail Settings of Profile
PostRunCommand	string	Control Command to be executed in ETERNUS before running profile assigning operation (structuring of RAID/Hot spare)
PreRunCommand	string	Control Command to be executed in ETERNUS after running profile assigning operation (structuring of RAID/Hot spare)

C.3 Storage-NetAppCluster

Parameter	Type	Description
Snmp	object	SNMP Function Information
Service	object	SNMP Function Settings Information
Mode	string	Availability/Non-availability of SNMP Function - on: Enables SNMP function. - off: Disables SNMP function.
Communities	array	SNMP Community Information Setting available for up to 256 at maximum.
Name	string	SNMP Community Name Specify 3-32 characters in the character string.
Users	array	SNMP User Information Setting available for up to 100 at maximum.
Username	string	SNMP User Name Specify 3-32 characters in character string.
Auth	object	SNMP Authentication Protocol Information
Auth	string	SNMP Authentication Protocol - md5: Uses MD5. - sha: Uses SHA. - sha2-256: Uses SHA2. (Enabled only when the version of ONTAP is 9.2 or later) - noauth: Does not use a protocol for authentication.
Password	string	SNMP Authentication Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 30 characters.

Parameter	Type	Description
Priv	object	SNMP Privacy Protocol Information Enabled when SNMP authentication protocol is md5, sha or sha2-256.
Priv	string	SNMP Privacy Protocol - des: Uses DES. - aes128: Uses AES 128 bit. (Enabled only when the version of ONTAP is 9.2 or later) - nopriv: Does not use a protocol for encryption.
Password	string	SNMP Privacy Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 30 characters.
Traphosts	array	SNMP Transmission Reception Information A maximum of three can be set.
Address	string	Specify the IP address or host name receiving SNMP transmissions. When specifying the IP address, enter it as a character string following the IPv4 or IPv6 format.
Username	string	Specify the SNMPv3 USM user. Default is "public."
Notify	object	SNMP Trap Notification Permission Information
Access	string	SNMP Trap Notification Permission - 1: Allows SNMP trap notification. - 0: Does not allow SNMP trap notification. Default is "1: Enable."
Ntp	object	Information of Auto Time Adjustment
Servers	array	Information of a Time-provider Server Setting available for up to 10 at maximum.
Address	string	IP Address or Host Name of the Time-provider Server When specifying the IP address, enter it as a character string following the IPv4 or IPv6 format.
Version	string	Specifies the version of the NTP protocol used by the time-provider server. - 3: NTP protocol version 3 based on the Internet standard RFC#1305 - 4: NTP protocol version 4 based on the Internet standard RFC#5905 - auto (Default): Select the NTP protocol version in Data ONTAP

C.4 Switch-SRX

Parameter	Type	Description
Snmp	object	SNMP Function Information
Service	object	Setting Enabling/Disabling of SNMP Agent Function and SNMP Trap Function
Mode	string	Availability/Non-availability of SNMP Function - on: Enables SNMP Function. - off: Disables SNMP Function.
Agent	object	SNMP Agent Function
Address	object	Address Information of SNMP Agent
Address	string	Address of SNMP Agent Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254,192.0.0.1- 223.255.255.254" When 0.0.0.0 is specified, deletes all settings.
Engineid	object	SNMP Engine ID Information
Engineid	string	SNMP Engine ID Specifies 1-27 characters as a string. Specifies when using SNMPv3.
Manager	array	SNMP Manager Function Setting available for up to 8 at maximum. Specifies when using SNMPv1, SNMPv2c.
Number	string	SNMP Host Definition Number Specifies "0"-"7" in the character string.
Address	string	IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" When 0.0.0.0 is specified, allow access from all hosts.
Community	string	SNMP Community Name Specifies either "public" (communication with any host enabled) or any string consists of 1-32 characters.
Trap	string	Availability or Unavailability of Transmission of SNMP Trap - v1: Transmits a SNMPv1 trap. - v2c: Transmits a SNMPv2 trap. - off: Does not transmit SNMP trap.
Write	string	Writing Permission from the SNMP Manager - enable: Writing from SNMP manager is permitted. - disable: Writing from SNMP manager is not permitted.
User	array	SNMP User Function Setting available for up to 8 at maximum. Specifies when using SNMPv3.
Number	string	SNMP User Definition Number Specifies "0"-"7" in the character string.

Parameter	Type	Description
Name	object	SNMP User Name Information
Name	string	SNMP User Name Specifies either "public" (communication with any host enabled) or any string consists of 1-32 characters.
Address	object	SNMP Host Address Information
Number	string	SNMP Host Definition Number Specifies "0"-"7" in the character string.
Address	string	IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, allow access from all IPv4 hosts. Specifies "::2- fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, allow access from all IPv6 hosts.
Notification	object	SNMP Trap Notification Host Address Information
Number	string	SNMP Host Definition Number Specifies "0"-"7" in the character string.
Address	string	IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2- fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.
Auth	object	SNMP Authentication Protocol Information
Protocol	string	SNMP Authentication Protocol - md5: Uses MD5. - sha: Uses SHA. - none: Does not use a protocol for authentication.
Password	string	SNMP Authentication Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters.
Priv	object	SNMP Privacy Protocol Information
Protocol	string	SNMP Privacy Protocol - des: Uses DES. - none: Does not use a protocol for encryption.
Password	string	SNMP Privacy Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters.
Write	object	SNMP MIB Writing Permission Information
Access	string	SNMP MIB Writing Permission - all: Allows writing to MIB.

Parameter	Type	Description
		- none: Does not allow writing to MIB.
Read	object	SNMP MIB Reading Permission Information
Access	string	SNMP MIB Reading Permission - all: Allows reading of MIB. - none: Does not allow reading from MIB.
Notify	object	SNMP Trap Notification Permission Information
Access	string	SNMP Trap Notification Permission - all: Allows SNMP trap notification. - none: Does not allow SNMP trap notification.
AutoTime	object	Information of Auto Time Adjustment
Server	object	Information of a Time-provider Server
Address	string	IP Address of a Time-provider Server Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:: - feff:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.
Protocol	string	Protocol Used - time: Uses TCP. - sntp: Uses UDP.
Interval	object	An Interval for Auto Time Adjustment
Time	string	An Interval for Auto Time Adjustment Specifies "start" (for setting of time at power activation) or a string expressing 0 second to 10 days in the units of d (day), h (hours), m (minute) and s (second).
Zone	object	Time Zone that the Device uses
Offset	string	Time Zone that the Device uses Specifies sexagesimal digits [-2359]-[2359] in the character string.
Account	object	Password Information of Device Administrator
Password	string	Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 32 characters.
Stp	object	STP
Mode	string	Operation Mode for STP - disable: Does not use STP. - stp: STP operating mode - rstp: RSTP operating mode - mstp: MSTP operating mode

C.5 Switch-CFX

Parameter	Type	Description
Interface	array	Interface Information Setting available for up to 256 at maximum.
Targets	string	Setting target ether Port Specify by either "chassis ID/ether port number" or "domain ID/switch ID/chassis ID/ether port number." When chassis ID is 0 and ether port number is 1, it specifies "0/1. " It is also possible to specify a range using a character of "-" as a case of "0/1-0/3" as well as to specify partially by using a character of "," as a case of "0/1,0/3." - domain ID: Sets in decimal digits within a range of 1-32. - switch ID: Sets in decimal digits within a range of 1-8. - chassis ID: Sets in decimal digits within a range of 0-2. - ether port number: Sets in decimal digits.
Type	object	Information by Type of ether Port
Mode	string	Type of ether Port - endpoint: C-Fabric End Point
Lldp	object	LLDP Operation Information of ether Port
Mode	string	LLDP Operation of ether Port - disable: LLDP function does not work. - enable: Transmits/receives LLDP information. - send: Executes only transmission of LLDP information. - receive: Executes only reception of LLDP information.
Cfab	object	Usage Mode Information by Type of ether Port
Mode	string	Usage Mode by Type of ether Port - auto: Operates by port type as detected automatically. - external: Runs as external port by force.
Snmp	object	SNMP Function Information
Service	object	Setting Enabling/Disabling of SNMP Agent Function and SNMP Trap Function
Mode	string	Enabling/disabling of SNMP Function - on: Enables SNMP function. - off: Disables SNMP function.
Agent	array	SNMP Agent Function Setting available for up to 32 at maximum.
Domainid	string	Domain ID Specifies "1"-"32" in the character string.
Address	object	Address Information of SNMP Agent

Parameter	Type	Description
Address	string	Address of SNMP Agent Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, deletes all settings. Specifies "::2- fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, deletes all settings.
Engineid	object	SNMP Engine ID Information
Engineid	string	SNMP Engine ID Specifies 1-27 characters as a string. Specifies when using SNMPv3.
Manager	array	SNMP Manager Function Setting available for up to 8 at maximum. Specifies when using SNMPv1, SNMPv2c.
Number	string	SNMP Host Definition Number Specifies "0"-"7" in the character string.
Address	string	IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, allow access from all IPv4 hosts. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, allow access from all IPv6 hosts.
Community	string	SNMP Community Name Specifies either "public" (communication with any host enabled) or any string consists of 1-32 characters.
Trap	string	Availability or Unavailability of Transmission of SNMP Trap - v1: Transmits a SNMPv1 trap. - v2c: Transmits a SNMPv2 trap. - off: Does not transmit SNMP trap.
Write	string	Writing Permission from the SNMP Manager - enable: Writing from SNMP manager is permitted. - disable: Writing from SNMP manager is not permitted.
User	array	SNMP User Function Setting available for up to 8 at maximum. Specifies when using SNMPv3.
Number	string	SNMP User Definition Number Specifies "0"-"7" in the character string.
Name	object	SNMP User Name Information
Name	string	SNMP User Name

Parameter	Type	Description
		Specifies any string consists of 1-32 characters.
Address	object	SNMP Host Address Information
Number	string	SNMP Host Definition Number Specifies "0"-"7" in the character string.
Address	string	IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.
Notification	object	SNMP Trap Notification Host Address Information
Number	string	SNMP Host Definition Number Specifies "0"-"7" in the character string.
Address	string	IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.
Auth	object	SNMP Authentication Protocol Information
Protocol	string	SNMP Authentication Protocol - md5: Uses MD5. - sha: Uses SHA. - none: Does not use a protocol for authentication.
Password	string	SNMP Authentication Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters.
Priv	object	SNMP Privacy Protocol Information
Protocol	string	SNMP Privacy Protocol - des: Uses DES. - none: Does not use a protocol for encryption.
Password	string	SNMP Privacy Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters.
Write	object	SNMP MIB Writing Permission Information
Access	string	SNMP MIB Writing Permission - all: Allows writing to MIB. - none: Does not allow writing to MIB.
Read	object	SNMP MIB Reading Permission Information
Access	string	SNMP MIB Reading Permission - all: Allows reading of MIB. - none: Does not allow reading from MIB.

Parameter	Type	Description
Notify	object	SNMP Trap Notification Permission Information
Access	string	SNMP Trap Notification Permission - all: Allows SNMP trap notification. - none: Does not allow SNMP trap notification.
AutoTime	object	Information of Auto Time Adjustment
Server	object	Information of a Time-provider Server
Address	string	IP Address of a Time-provider Server Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, use the address informed from the DHCP server. When 255.255.255.255 is specified, use the broadcast address. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:: - feff:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, use the address informed from the DHCP server.
Protocol	string	Protocol Used - time: Uses TCP. - sntp: Uses UDP.
Interval	object	An interval for Auto Time Adjustment
Time	string	An interval for Auto Time Adjustment Specifies "start" (for setting of time at power activation) or a string expressing 0 second to 10 days in the units of d (day), h (hours), m (minute) and s (second).
Zone	object	Time Zone that the Device uses
Offset	string	Time Zone that the Device uses Specifies sexagesimal digits [-1200]-[1300] in the character string.
Account	object	Password Information of Device Administrator
Password	string	Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 32 characters.
Aaa	array	AAA information
Groupid	string	Group ID Specifies "0"-"9" in the character string.
Ldap	object	LDAP Information
Service	object	Availability/Non-availability Settings for LDAP Function
Mode	string	Availability/Non-availability of LDAP Function - on: Enables LDAP function. - off: Disables LDAP function.
Client	array	Client Information

Parameter	Type	Description
Number	string	Server Definition Number Specifies "0"-"3" in the character string.
Serverinfo	object	Server Information
Address	string	IP Address of LDAP Authentication Server Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2-fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.
Source	object	Information of LDAP Authentication Client
Domainid	string	Domain ID Specifies "1"-"32" in the character string.
Address	string	IP Address Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.
Rdn	object	Information of Relative Authentication Name for LDAP Authentication
Name	string	Relative attribute for identification of bind identification names Example: CN
Bindnordn	object	Information of LDAP Authentication Server
Name	string	Bind Identification Name Except for Opposing Identification Name Example: CN: user, DC: local
Admin	object	Information of Administrator's Class for LDAP Authentication Server
Classid	string	Number of Class Definition Specifies "0"-"3" in the character string.
Adminclass	string	Value of Administrator Classes Example: user

C.6 Switch-VDX

Parameter	Type	Description
Snmp	object	SNMP Function Information
Service	object	SNMP Function Settings Information
Mode	string	Availability/Non-availability of SNMP Function NOS6 is reflected on the device (enabling and disabling of functions available) NOS4 is not reflected on the device (Cannot be disabled as always being enabled). - on: Enables SNMP function.

Parameter	Type	Description
		- off: Disables SNMP function.
Host	array	SNMP v1/2c Trap and Destination Settings Setting available for up to 6 at maximum. Specifies when using SNMPv1/2c.
Address	string	IP Address of SNMP Host Specifies character strings in accordance with address description of IPv4 and IPv6.
Community	string	SNMP Community Name Specify any of character strings set with keys "Snmp"-->"Community"-->"Name"
Severitylevel	string	SNMP Trap Level - none: None - debug: Debug - info: Informational - warning: Warning - error: Error - critical: Critical
Trapversion	string	SNMP Trap Version - 1: SNMP Version 1 - 2c: SNMP Version 2c
Udpport	string	SNMP Trap Transmission Port Number Specifies "0"-"65535" in the character string.
V3host	array	Settings of SNMPv3 Trap and Destination of Transmission Setting available for up to 6 at maximum. Specifies when using SNMPv3.
Address	string	IP Address of SNMP Host Specifies character strings in accordance with address description of IPv4 and IPv6.
Username	string	SNMP User Name Specifies 1-16 characters in the character string. Specifies any of strings set by "Snmp" --> "User" --> "Username"
Notifytype	string	SNMP Trap Type - traps: Trap - informs: Inform
Engineid	string	SNMP Engine ID Specifies "0:0:0:0:0:0:0:0:0:0" - "FF:FF:FF:FF:FF:FF:FF:FF:FF:FF" by a character string. (Its character pattern is identical with MAC address. Its byte count is equivalent of 9 bytes.)
Udpport	string	SNMP Trap Transmission Port Number

Parameter	Type	Description
		Specifies "0" - "65535" in the character string.
Severitylevel	string	SNMP Trap Level - none: None - debug: Debug - info: Informational - warning: Warning - error: Error - critical: Critical
Community	array	SNMP Community Information Setting available for up to 256 at maximum. When assigning the profile, in order to delete a community that exists by default, there is a need to recreate it if required.
Name	string	SNMP Community Name Specifies 1-64 characters in the character string.
Write	object	SNMP Community Writing Permission Information
Access	string	SNMP Community Writing Permission NOS6 is not reflected on the device (direct associating function for the community not available). NOS4 is reflected on the device (function available). - enable: Writing to SNMP community is permitted. - disable: Writing to SNMP community is not permitted.
Group	object	SNMP Group Information
Name	string	SNMP Group Name Specify 1-16 characters in character string. Specify any of strings set by keys of "Snmp" --> "Group" --> "Name."
User	array	SNMP User Information Setting available for up to 10 at maximum.
Username	string	SNMP User Name Specify 1-16 characters in character string.
Groupname	string	SNMP Group Name Specify 1-16 characters in character string. Specify any of strings set by keys of "Snmp"-->"Group"-->"Name."
Auth	object	SNMP Authentication Protocol Information
Auth	string	SNMP Authentication Protocol - md5: Uses md5. - sha: Uses SHA. - noauth: Does not use a protocol for authentication.
Password	string	SNMP Authentication Password

Parameter	Type	Description
		Sets the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters.
Priv	object	SNMP Privacy Protocol Information
Priv	string	SNMP Privacy Protocol - DES: Uses DES. - AES128: Uses the AES128. - nopriv: Does not use a protocol for encryption.
Password	string	SNMP Privacy Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters.
Group	array	SNMP Group Information Setting available for up to 10 at maximum. NOS6 is reflected on the device (MIB access possibility grouping function available). NOS4 is not reflected on the device (function not available).
Name	string	Group Name Specify 1-16 characters in character string.
Snmpversion	string	SNMP Version - v1: SNMP Version 1 - v2c: SNMP Version 2c - v3: SNMP Version 3
V3	object	SNMPv3 Information
Securitylevel	string	Security Level for SNMPv3 Specify when using SNMPv3. - priv: Enables authentication and encryption. - auth: Enables authentication. - noauth: Disables authentication and encryption.
Read	object	SNMP MIB Reading Permission Information
Access	string	SNMP MIB Reading Permission - all: Allows reading of MIB. - none: Does not allow reading from MIB.
Write	object	SNMP MIB Writing Permission Information
Access	string	SNMP MIB Writing Permission - all: Allows writing to MIB. - none: Does not allow writing to MIB.
Notify	object	SNMP Trap Notification Permission Information
Access	string	SNMP Trap Notification Permission - all: Allows SNMP trap notification.

Parameter	Type	Description
		- none: Does not allow SNMP trap notification.
AutoTime	object	Information of Auto Time Adjustment
Server	array	Information of a Time-provider Server Setting available for up to 5 at maximum.
Address	string	IP Address of a Time-provider Server Information Specifies character strings in accordance with address description of IPv4 and IPv6.
Zone	object	Time Zone Information
Regioncity	string	Region/City - Africa/Luanda - Africa/Ouagadougou - Africa/Bujumbura - Africa/Porto-Novo - Africa/Gaborone - Africa/Kinshasa - Africa/Lubumbashi - Africa/Bangui - Africa/Brazzaville - Africa/Abidjan - Africa/Douala - Africa/Djibouti - Africa/Algiers - Africa/Cairo - Africa/El_Aaiun - Africa/Asmara - Africa/Ceuta - Africa/Addis_Ababa - Africa/Libreville - Africa/Accra - Africa/Banjul - Africa/Conakry - Africa/Malabo - Africa/Bissau - Africa/Nairobi - Africa/Monrovia - Africa/Maseru - Africa/Tripoli - Africa/Casablanca

Parameter	Type	Description
		- Africa/Bamako - Africa/Nouakchott - Africa/Blantyre - Africa/Maputo - Africa/Windhoek - Africa/Niamey - Africa/Lagos - Africa/Kigali - Africa/Khartoum - Africa/Freetown - Africa/Dakar - Africa/Mogadishu - Africa/Sao_Tome - Africa/Mbabane - Africa/Ndjamena - Africa/Lome - Africa/Tunis - Africa/Dar_es_Salaam - Africa/Kampala - Africa/Johannesburg - Africa/Lusaka - Africa/Harare - America/Antigua - America/Anguilla - America/Curacao - America/Argentina/Buenos_Aires - America/Argentina/Cordoba - America/Argentina/San_Luis - America/Argentina/Jujuy - America/Argentina/Tucuman - America/Argentina/Catamarca - America/Argentina/La_Rioja - America/Argentina/San_Juan - America/Argentina/Mendoza - America/Argentina/Rio_Gallegos - America/Argentina/Ushuaia - America/Aruba

Parameter	Type	Description
		- America/Guatemala - America/Guyana - America/Tegucigalpa - America/Port-au-Prince - America/Guadeloupe - America/Jamaica - America/St_Kitts - America/Cayman - America/St_Lucia - America/Marigot - America/Adak - America/Martinique - America/Montserrat - America/Mexico_City - America/Cancun - America/Edmonton - America/Cambridge_Bay - America/Yellowknife - America/Inuvik - America/Dawson_Creek - America/Vancouver - America/Whitehorse - America/Thunder_Bay - America/Iqaluit - America/Pangnirtung - America/Resolute - America/Rankin_Inlet - America/Winnipeg - America/Rainy_River - America/Regina - America/Barbados - America/St_Barthelemy - America/La_Paz - America/Noronha - America/Belem - America/Fortaleza - America/Recife

Parameter	Type	Description
		- America/Araguaina - America/Maceio - America/Bahia - America/Sao_Paulo - America/Campo_Grande - America/Cuiaba - America/Santarem - America/Porto_Velho - America/Merida - America/Monterrey - America/Mazatlan - America/Chihuahua - America/Hermosillo - America/Tijuana - America/Managua - America/Panama - America/Lima - America/Miquelon - America/Puerto_Rico - America/Asuncion - America/Paramaribo - America/El_Salvador - America/Grand_Turk - America/Montevideo - America/St_Vincent - America/Caracas - America/Tortola - America/St_Thomas - America/New_York - America/Detroit - America/Kentucky/Monticello - America/Indiana/Indianapolis - America/Indiana/Vincennes - America/Indiana/Knox - America/Indiana/Winamac - America/Indiana/Marengo - America/Indiana/Vevay

Parameter	Type	Description
		- America/Chicago - America/Boa_Vista - America/Manaus - America/Eirunepe - America/Rio_Branco - America/Nassau - America/Belize - America/St_Johns - America/Halifax - America/Glace_Bay - America/Moncton - America/Goose_Bay - America/Blanc-Sablon - America/Montreal - America/Toronto - America/Nipigon - America/Swift_Current - America/Dawson - America/Santiago - America/Bogota - America/Costa_Rica - America/Havana - America/Dominica - America/Santo_Domingo - America/Guayaquil - America/Grenada - America/Cayenne - America/Godthab - America/Danmarkshavn - America/Scoresbysund - America/Thule - America/Indiana/Tell_City - America/Indiana/Petersburg - America/Menominee - America/North_Dakota/Center - America/North_Dakota/New_Salem - America/Denver

Parameter	Type	Description
		- America/Boise - America/Shiprock - America/Phoenix - America/Los_Angeles - America/Anchorage - America/Juneau - America/Yakutat - America/Nome - America/Port_of_Spain - Antarctica/McMurdo - Antarctica/South_Pole - Antarctica/Rothera - Antarctica/Mawson - Antarctica/Davis - Antarctica/Casey - Antarctica/Vostok - Antarctica/DumontDUrville - Antarctica/Syowa - Arctic/Longyearbyen - Asia/Dubai - Asia/Kabul - Asia/Yerevan - Asia/Baku - Asia/Dhaka - Asia/Bahrain - Asia/Brunei - Asia/Thimphu - Asia/Shanghai - Asia/Harbin - Asia/Chongqing - Asia/Urumqi - Asia/Kashgar - Asia/Nicosia - Asia/Tbilisi - Asia/Hong_Kong - Asia/Jakarta - Asia/Pontianak

Parameter	Type	Description
		- Asia/Makassar - Asia/Jayapura - Asia/Jerusalem - Asia/Kolkata - Asia/Baghdad - Asia/Tehran - Asia/Amman - Asia/Tokyo - Asia/Bishkek - Asia/Phnom_Penh - Asia/Pyongyang - Asia/Seoul - Asia/Kuwait - Asia/Almaty - Asia/Qyzylorda - Asia/Aqtobe - Asia/Aqtau - Asia/Oral - Asia/Vientiane - Asia/Beirut - Asia/Colombo - Asia/Rangoon - Asia/Ulaanbaatar - Asia/Hovd - Asia/Choibalsan - Asia/Macau - Asia/Kuala_Lumpur - Asia/Kuching - Asia/Katmandu - Asia/Muscat - Asia/Manila - Asia/Karachi - Asia/Gaza - Asia/Qatar - Asia/Yekaterinburg - Asia/Omsk - Asia/Novosibirsk

Parameter	Type	Description
		- Asia/Krasnoyarsk - Asia/Irkutsk - Asia/Yakutsk - Asia/Vladivostok - Asia/Sakhalin - Asia/Magadan - Asia/Kamchatka - Asia/Anadyr - Asia/Riyadh - Asia/Singapore - Asia/Damascus - Asia/Bangkok - Asia/Dushanbe - Asia/Dili - Asia/Ashgabat - Asia/Taipei - Asia/Samarkand - Asia/Tashkent - Asia/Ho_Chi_Minh - Asia/Aden - Atlantic/Bermuda - Atlantic/Cape_Verde - Atlantic/Canary - Atlantic/Stanley - Atlantic/Faroe - Atlantic/South_Georgia - Atlantic/Reykjavik - Atlantic/Madeira - Atlantic/Azores - Atlantic/St_Helena - Australia/Lord_Howe - Australia/Hobart - Australia/Currie - Australia/Melbourne - Australia/Sydney - Australia/Brisbane - Australia/Lindeman

Parameter	Type	Description
		- Australia/Adelaide - Australia/Darwin - Australia/Perth - Australia/Eucla - Europe/Andorra - Europe/Tirane - Europe/Vienna - Europe/Mariehamn - Europe/Sarajevo - Europe/Brussels - Europe/Sofia - Europe/Minsk - Europe/Zurich - Europe/Prague - Europe/Berlin - Europe/Copenhagen - Europe/Tallinn - Europe/Madrid - Europe/Helsinki - Europe/Paris - Europe/London - Europe/Guernsey - Europe/Oslo - Europe/Gibraltar - Europe/Athens - Europe/Zagreb - Europe/Budapest - Europe/Dublin - Europe/Isle_of_Man - Europe/Rome - Europe/Jersey - Europe/Vaduz - Europe/Vilnius - Europe/Luxembourg - Europe/Riga - Europe/Monaco - Europe/Chisinau

Parameter	Type	Description
		- Europe/Podgorica - Europe/Skopje - Europe/Malta - Europe/Amsterdam - Europe/Warsaw - Europe/Lisbon - Europe/Bucharest - Europe/Belgrade - Europe/Kaliningrad - Europe/Moscow - Europe/Volgograd - Europe/Samara - Europe/Stockholm - Europe/Ljubljana - Europe/Bratislava - Europe/San_Marino - Europe/Istanbul - Europe/Kiev - Europe/Uzhgorod - Europe/Zaporozhye - Europe/Simferopol - Europe/Vatican - Indian/Cocos - Indian/Christmas - Indian/Chagos - Indian/Comoro - Indian/Antananarivo - Indian/Mauritius - Indian/Maldives - Indian/Reunion - Indian/Mahe - Indian/Kerguelen - Indian/Mayotte - Pacific/Pago_Pago - Pacific/Rarotonga - Pacific/Easter - Pacific/Galapagos

Parameter	Type	Description
		- Pacific/Fiji - Pacific/Truk - Pacific/Ponape - Pacific/Kosrae - Pacific/Guam - Pacific/Tarawa - Pacific/Enderbury - Pacific/Kiritimati - Pacific/Majuro - Pacific/Kwajalein - Pacific/Saipan - Pacific/Noumea - Pacific/Norfolk - Pacific/Nauru - Pacific/Niue - Pacific/Auckland - Pacific/Chatham - Pacific/Tahiti - Pacific/Marquesas - Pacific/Gambier - Pacific/Port_Moresby - Pacific/Pitcairn - Pacific/Palau - Pacific/Guadalcanal - Pacific/Fakaofo - Pacific/Tongatapu - Pacific/Funafuti - Pacific/Johnston - Pacific/Midway - Pacific/Wake - Pacific/Honolulu - Pacific/Efate - Pacific/Wallis - Pacific/Apia
Account	object	Account Information
Password	string	Password Set the password encrypted with AES256+Base64.

Parameter	Type	Description
		A password before encryption has a length of 8 to 32 characters.

C.7 Switch-PSWITCH

Parameter	Type	Description
Snmp	object	SNMP Function Information
Service	object	SNMP Function Settings Information
Mode	string	Availability/Non-availability of SNMP Function - on: Enables SNMP function. - off: Disables SNMP function.
Host	array	SNMP v1/2c Trap and Destination Settings Setting available for up to 8 at maximum. Specify when using SNMPv1/2c.
Address	string	IP Address of SNMP Host Specifies character strings in accordance with address description of IPv4 and IPv6.
Community	string	SNMP Community Name Specify 1-20 characters in character string. Specify any of character strings set with keys "Snmp"-->"Community"-->"Name."
Trapversion	string	SNMP Trap Version - 1: SNMP Version 1 - 2c: SNMP Version 2c
Udpport	string	SNMP Trap Transmission Port Number Specify "1"-"65535" in the character string.
V3host	array	SNMPv3 Trap and Destination Settings Setting available for up to 8 at maximum. Specify when using SNMPv3.
Address	string	IP Address of SNMP Host Specify character strings in accordance with address description of IPv4 and IPv6.
Username	string	SNMP User Name Specify 1-30 characters in the character string. Specify any of strings set by "Snmp"-->"User"-->"Username."
Notifytype	string	SNMP Trap Type - traps: Trap - informs: Inform
Udpport	string	SNMP Trap Transmission Port Number Specify "1"-"65535" in the character string.
Community	array	SNMP Community Information

Parameter	Type	Description
		Setting available for up to 8 at maximum.
Name	string	SNMP Community Name Specify 1-20 characters in the character string.
Write	object	SNMP Community Writing Permission Information
Access	string	SNMP Community Writing Permission - enable: Writing to SNMP community is permitted. - disable: Writing to SNMP community is not permitted.
Group	object	SNMP Group Information
Name	string	SNMP Group Name Specify 1-30 characters in the character string. Specify any of strings set by keys of "Snmp"-->"Group"-->"Name."
User	array	SNMP User Information Setting available for up to 8 at maximum.
Username	string	SNMP User Name Specify 1-30 characters in character string.
Groupname	string	SNMP Group Name Specify 1-30 characters in character string. Specify any of strings set by keys of "Snmp"-->"Group"-->"Name."
Auth	object	SNMP Authentication Protocol Information
Auth	string	SNMP Authentication Protocol - md5: Uses MD5. - sha: Uses SHA. - noauth: Does not use a protocol for authentication.
Password	string	SNMP Authentication Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters.
Priv	object	SNMP Privacy Protocol Information
Priv	string	SNMP Privacy Protocol - des: Uses DES. - nopriv: Does not use a protocol for encryption.
Password	string	SNMP Privacy Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters.
Group	array	SNMP Group Information Setting available for up to 8 at maximum.
Name	string	Group Name Specify 1-30 characters in character string.

Parameter	Type	Description
Snmpversion	string	SNMP Version - v1: SNMP Version 1 - v2c: SNMP Version 2c - v3: SNMP Version 3
V3	object	SNMPv3 Information
Securitylevel	string	Security Level for SNMPv3 Specify when using SNMPv3. - priv: Enables authentication and encryption. - auth: Enables authentication. - noauth: Disables authentication and encryption.
Read	object	SNMP MIB Reading Permission Information
Access	string	SNMP MIB Reading Permission - Default: Allows reading of MIB. - none: Does not allow reading from MIB.
Write	object	SNMP MIB Writing Permission Information
Access	string	SNMP MIB Writing Permission - Default: Allows writing to MIB. - none: Does not allow writing to MIB.
Notify	object	SNMP Trap Notification Permission Information
Access	string	SNMP Trap Notification Permission - Default: Allows SNMP trap notification. - none: Does not allow SNMP trap notification.
AutoTime	object	Information of Auto Time Adjustment
Server	array	Information of a Time-provider Server Setting available for up to 3 at maximum.
Address	string	IP Address of a Time-provider Server Information Specifies character strings in accordance with address description of IPv4 and IPv6.
Mode	string	Mode Used - broadcast: Synchronizes the time by inquiring the broadcast information to the SNTP server. - unicast: SNTP client works with a SNTP server in a relation of point-to-point.
Interval	object	An Interval for Auto Time Adjustment
Time	integer	An Interval for Auto Time Adjustment Specifies a second value between 6-10 seconds. Default value is 6 seconds.
Zone	object	Time Zone Information
Offset	string	Time Zone that the Device uses

Parameter	Type	Description
		Specifies sexagesimal digits [-1200]-[1300] in character string.
Account	object	Account Information
Password	string	Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 64 characters.

Appendix D Details of Profile Parameters (ProfileData)

This section describes detailed information about the following parameters:

- 4.10.3 Adding Profiles
- 4.10.5 Individual Retrieval of Profiles
- 4.10.6 Updating Profiles
- 4.10.17 Adding Policies
- 4.10.19 Individual Retrieval of Policies
- 4.10.20 Updating Policies
- C.1 Server-BX

D.1 BIOS

Parameter	Type	Description
BIOS	object	BIOS Settings If you delete all of the BIOS settings in "4.10.6 Updating Profiles," omit this item. When a policy is being referenced, you cannot delete the settings.
SasController	string	Specifies the operation of the onboard SAS/SATA storage controller unit (SCU). If none are set, specifies null. - Enabled: Enables SCU. - Disabled: Disables SCU.
SasSataOpRom	string	Specifies the operation of Option ROM for SAS/SATA controller. Specifies when SasController is Enabled. If none are set, specifies null. - Enabled: Enables Option ROM. - Disabled: Disables Option ROM.
SasSataDriver	string	Specifies the type of Option ROM for SAS/SATA controller. Specifies when SasSataOpRom is Enabled. If none are set, specifies null. - LSI MegaRAID: Use Option ROM which uses Embedded MegaRAID. - Intel RSTe: Use Intel RSTe-use Option ROM.
AspmSupport	string	Specify the operations of Active State Power Management (ASPM). Even if ASPM is generally enabled, certain links will only be enabled when ASPM is supported. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables function. - Auto: Set to maximize power saving.

Parameter	Type	Description
		- L1 Only: Set the power save mode of the PCI Express link to L1 (Unidirectional). - Force L0s/Limit to L0s: Set the power saving mode of the PCI Express link to L0 (Unidirectional).
Above4GDecoding	string	Specifies whether memory resources beyond the 4 GB address boundary can be allocated to PCI devices. The option depends on the operating system and the adapter card installed. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Allocate only memory resources below the 4 GB address boundary to PCI devices. - Enabled: Allocate memory resources beyond 4 GB address boundaries to PCI devices.
DmiControl	string	Specifies the bus connection speed between the CPU and the chip set. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - GEN 1: Set the bus connection speed between the CPU and the chip set and execute at 2.5 GT/s. - GEN 2: Set the bus connection speed between the CPU and the chip set and execute at 5.0 GT/s.
SR_IOV	string	Specifies whether to enable Single Root IO Virtualization if the system has an SR-IOV capable PCIe device. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
HyperThreading	string	Specifies the CPU's Hyper Threading Technology operation. If the installed CPU does not support this function, this setting has no meaning. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
CoreProcessingMode	string	For processors that include multiple processor cores, specify the number of enabled processor cores. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - All: Enable all available processor cores. - 1-64: Enable only the selected number of processor cores and disable the remaining processor cores.
HardwarePrefetcher	string	Specifies to pre-load the memory contents that may be required when the memory bus becomes inactive to the cache automatically.

Parameter	Type	Description
		If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
AdjacentCacheLinePrefetch	string	Specifies whether to load the adjacent 64 byte cache line when the processor is sending cache requests. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Load the requested cache line and the adjacent cache line. - Disabled: Load the requested cache line.
DcuStreamerPrefecher	string	Specifies to pre-load the memory contents that may be required when the memory bus becomes inactive to the L1 data cache automatically. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
DcuIpPrefecher	string	Specifies the DCU IP Prefetch operations of the CPU. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
XDBitfunctionalityAndNXMemoryProtection	string	Specifies the CPU's Execute Disable Bit operation. This function is also called XD (eXecute Disable) bit or NX (No eXecute) bit. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
VirtualizationTechnology	string	Specifies operation of the CPU's virtualization support function. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
IntelVTd	string	Specifies the CPU's Virtualization Technology for Directed I/O function operation. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
PowerTechnologyCpu	string	Specifies the CPU's power management operation. If none are set, specifies null. - Energy Efficient: Behavior optimized for power-saving.

Parameter	Type	Description
		- Custom: Sets detailed behavior setup by using additional setting items - Disabled: Disables power management function.
CPUHardwarePowerManagement	string	Specifies the settings of HWPM (Hardware Power Management), which manages performance and power saving. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables function. - Native Mode: HWPM operates in cooperation with the operating system via the software interface. - OOB Mode: The CPU automatically controls the frequency based on the settings of the energy performance policy of the operating system.
EnhancedSpeedStep	string	Specifies operation of power saving functions. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
TurboMode	string	Specifies Turbo Boost Technology behavior of a CPU. If the installed CPU does not support this function, this function is set to regardless of this setting. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function.
OverrideOsEnergyPerformance	string	Specify whether to prevent override of the energy performance policy set up for the OS. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
EnergyPerformance	string	Specify the energy performance policy of non-legacy operating systems. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Performance: Optimize to get maximum performance, even if this sacrifices energy performance. - Balanced Performance: Specify to get performance while also saving energy. - Balanced Energy: Save energy while getting good performance. - Energy Efficient: Optimize to save energy, even if this sacrifices performance.
UtilizationProfile	string	Specify the share of optimized energy performance used for other systems.

Parameter	Type	Description
		If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Even: Optimize to get a system with a balanced energy performance. - Unbalanced: Optimize to use an unbalanced system prioritizing performance.
CpuC1eSupport	string	Specify whether to stop the processor when it is possible to save energy. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
AutonomousCStateSupport	string	Specify whether to enable the Autonomous C state clock control of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
CpuC3Report	string	Transfer the C3 status of the processor as a ACPI C-2 status to OSPM (OS Power Management). If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: CPU C3 is provided to OSPM in ACPI-2 status. - Disabled: CPU C3 is not provided to OSPM in ACPI-2 status.
CpuC6Report	string	Specify whether to transfer the C6 status of the process to OSPM in ACPI C-3 status and whether to enable the Deep Power Down Technology of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: CPU C6 is provided to OSPM in ACPI-3 status. - Disabled: CPU C6 is not provided to OSPM in ACPI-3 status.
PackageCStateLimit	string	Specify the upper limit of the C State of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - C0: Set the upper limit of C State to C0. - C2: Set the upper limit of C State to C2. - C6: Set the upper limit of C State to C6. - C6(Retention): Set the C6 Retention to C status limit. - C7: Set the upper limit of C State to C7. - No Limit: Set the upper limit of C State to C7.

Parameter	Type	Description
		- Auto: It is set automatically in the system.
QpiLinkFrequencySelect	string	Specify the frequency of a shared and supported CPU for the link frequency. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Auto: Set the maximum speed from the BIOS, based on the current CPU and chip set in the system. The speed settings that can be used depend on the CPU. - 6.4 GT/s - 7.2 GT/s - 8.0 GT/s - 9.6 GT/S - 10.4 GT/s
UncoreFrequencyOverride	string	Specify the uncore frequency of the processor. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: To save power, the processor automatically controls the frequency within the range defined in advance. - Maximum: The frequency is set to the maximum value defined in advance. - Nominal: To save power, the processor automatically controls the frequency within the range defined in advance. It will not exceed the rating frequency. - Power balanced: To optimize the balance between power and performance, the processor automatically controls the frequency within the range defined in advance.
LlcDeadLineAlloc	string	Specify the processing of the LLC (Last Level Cache) deadline. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Meets the LLC deadline temporary. - Disabled: Does not meet the LLC deadline.
StaleAtoS	string	Specifies whether to optimize the directory of data whose use value in Caching Agent has decreased. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enable optimization. - Disabled: Disable optimization.
CODEnable	string	Specify whether the BIOS should configure the added NUMA nodes for each socket and to optimize for high NUMA directionality load performance in COD (Cluster-on-Die). CPU with two home agents is required. If none are set, specifies null.

Parameter	Type	Description
		If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
EarlySnoop	string	Specify whether to enable early snoop. This is not supported when COD is enabled. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function. - Auto: If COD is disabled in the system configurations, early snoop will be enabled.
HomeSnoopDirOsb	string	Specifies whether to use Home Snoop Directory with plain OSB (Opportunistic Snoop Broadcast) caching to optimize the snoop processing. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Enables function. - Disabled: Disables function.
NUMA	string	Specifies operation of NUMA (Non-Uniform Memory Access) function. If none are set, specifies null. - Enabled: Enables NUMA function. - Disabled: Disables NUMA function.
DDR_Performance	string	Specifies operation of memory module. Memory modules operates with different speed (frequencies). The faster the speed, the higher the performance. The slower the speed the more the power saved. The available memory speeds differ depending on the installed memory module configurations. If none are set, specifies null. - Low-Voltage optimized: The fastest setting available with low voltage - Energy optimized: The slowest setting available with power-saving - Performance optimized: The fastest setting available for achieving the highest performance - Power balanced: The setting available with reduced speed for achieving balance between power and performance
PatrolScrub	string	Specify whether to execute regular background screenings. If none are set, specifies null. If it is omitted, it will be handled as if null was specified.

Parameter	Type	Description
		- Enabled: Enable screening. - Disabled: Disable screening.
ImcInterleaving	string	Specifies the interleaving of Integrated Memory Controllers (IMC). If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Auto: Automatically select the interleaving in the BIOS according to the available memory configuration. - 1-Way: Select 1-Way interleaving. - 2-Way: Select 2-Way interleaving.
SubNumaClustering	string	Split the LLC (Last Level Cache) into different clusters based on the address scope. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Support 1-Way interleaving for two clusters. - Disabled: Disables function. - Auto: Depending on the selected IMC interleaving, one or two clusters are supported.
FlexibleLOMSupport	string	Specifies whether to enable Flexible LOM (OCP) port. If none are set, specifies null. - Enabled: Enables all Flexible LOM ports - Disabled: Disables Flexible LOM ports
FlexibleLOMOpromSupport	string	Specifies whether to boot Legacy Option ROM of the Flexible LOM adaptor. If none are set, specifies null. - Enabled: Boot Legacy Option ROM - Disabled: Do not boot Legacy Option ROM
LAN	string	Specifies LAN controllers to use. Depending on the server type, the BIOS settings value may be "Disabled/Enabled." If you want to make the BIOS setting value "Enabled," specify "LAN 1" for this item. If none are set, specifies null. - Disabled: Disable both of the LAN controllers - LAN 1: Enable LAN1 controller and disable LAN2 controller - LAN 1 & 2: Enable both of the LAN controllers
Lan1Oprom	string	Specifies whether to boot Option ROM of LAN 1. If booting, specify the type of Option ROM. Specifies it when LAN is "LAN 1" or " LAN 1 & 2." Depending on the server type, the BIOS settings value may be "Disabled/Enabled." If you want to make the BIOS setting value "Enabled," specify "PXE" for this item. If none are set, specifies null.

Parameter	Type	Description
		- Disabled: Do not boot Option ROM - PXE: Boot PXE Option ROM - iSCSI: Boot iSCSI Option ROM
Lan2Oprom	string	Specifies whether to boot Option ROM of LAN 2. If booting, specify the type of Option ROM. Specifies it when LAN is " LAN 1 & 2." Depending on the model of the server, there may not be a LAN 2 controller. In this case, disable this item. Depending on the server type, the BIOS settings value may be "Disabled/Enabled." If you want to make the BIOS setting value "Enabled," specify "PXE" for this item. If none are set, specifies null. - Disabled: Do not boot Option ROM - PXE: Boot PXE Option ROM - iSCSI: Boot iSCSI Option ROM
SATAControllerModeSelection	string	Specifies the operation mode of the SATA interface. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables the operating mode - IDE: Operate in IDE mode - AHCI: Operate in AHCI mode - RAID: Operate in RAID mode
SATAController	string	Enables or disables the SATA controller. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables the SATA controller - Enabled: Enables the SATA controller
sSATAController	string	Enables or disables the SSATA controller. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disables the SSATA controller - Enabled: Enables the SSATA controller
Csm	string	Specifies the CSM (Compatibility Support Module) execution operation. Legacy operating system can be booted only when the CSM is loaded. If none are set, specifies null. - Enabled: CSM is executed to ensure UEFI operating system can startup. - Disabled: CSM is not executed to ensure only UEFI operating system can startup.
BootOptionFilter	string	Specifies boot operation of a drive.

Parameter	Type	Description
		If none are set, specifies null. - UEFI and Legacy: Bootable from UEFI OS drive and Legacy OS drive. - Legacy only: Bootable only from Legacy OS drive. - UEFI only: Bootable only from UEFI OS drive.
LaunchPxeOpRomPolicy	string	Specifies the PXE Option ROM to be booted. For PXE boot, there are available, normal (Legacy) PXE boot and UEFI PXE boot. If none are set, specifies null. - Do not launch: Option ROM not booted. - UEFI only: Only UEFI Option ROM booted. - Legacy only: Only Legacy Option ROM booted.
LaunchStorageOpRomPolicy	string	Specifies the Storage Option ROM to be booted. If none are set, specifies null. - Do not launch: Storage Option ROM not booted. - UEFI only: Only UEFI Storage Option ROM booted. - Legacy only: Only Legacy Storage Option ROM booted.
OtherPciDeviceRomPriority	string	Specifies the Option ROM booted with the devices other than a network, mass storage device and video. If none are set, specifies null. - UEFI OpROM: Only UEFI Option ROM booted. - Legacy OpROM: Only Legacy Option ROM booted.
USBHostController	string	Specifies whether to enable the USB controller of the system board. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Disabled: Disable the USB controller. - Enabled: Enable the USB controller.
NetworkStack	string	Specifies whether UEFI Network Stack can be used for network access on UEFI. For example, when unable to use UEFI network stack, UEFI install cannot be executed via PXE. If none are set, specifies null. - Disabled: Cannot use UEFI network stack. - Enabled: Can use UEFI network stack.
IPv4PxeSupport	string	Specifies whether PXE UEFI Boot with IPv4 can be used with UEFI mode for installation of an operating system. If none are set, specifies null. - Disabled: Cannot use PXE UEFI Boot with IPv4. - Enabled: Can use PXE UEFI Boot with IPv4.

Parameter	Type	Description
IPv6PxeSupport	string	Specifies whether PXE UEFI Boot with IPv6 can be used with UEFI mode for installation of an operating system. If none are set, specifies null. - Disabled: Cannot use PXE UEFI Boot with IPv6. - Enabled: Can use PXE UEFI Boot with IPv6.
LaunchSlot1Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 1. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot2Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 2. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot3Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 3. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot4Oprom	string	Specifies the execution of e extended ROM of the option card mounted on PCI slot 4. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot5Oprom	string	Specifies the execution of e extended ROM of the option card mounted on PCI slot 5. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot6Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 6.

Parameter	Type	Description
		You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot7Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 7. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot8Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 8. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot9Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 9. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot10Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 10. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot11Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 11. You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
LaunchSlot12Oprom	string	Specifies the execution of extended ROM of the option card mounted on PCI slot 12.

Parameter	Type	Description
		You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device. If none are set, specifies null. - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed.
SecureBoot	string	Specify whether to permit non-certified boot loaders/UEFI OpROM boot. This setting may not be "Disabled" due to the hardware specifications. In this case, specify the value from the BIOS interface of the server. If none are set, specifies null. If it is omitted, it will be handled as if null was specified. - Enabled: Only permit certified boot loaders/ UEFI OpROM boot. - Disabled: All boot loaders/OpROM (Legacy/UEFI) can be executed.

D.2 iRMC

Parameter	Type	Description
iRMC	object	Settings of iRMC (Integrated Remote Management Controller) If you delete all of the iRMC settings in "4.10.6 Updating Profiles," omit this item. When a policy is being referenced, you cannot delete the settings.
ConfAisConnectEnabled	string	AIS Connect If none are set, specifies null. - Enabled: Enabled - Disabled: Disabled
ConfAisConnectServiceMode	string	Service Mode If none are set, specifies null. - Enabled: Enabled - Disabled: Disabled
ConfAisConnectUseProxyAuth	string	Proxy Server If none are set, specifies null. - Enabled: Use Proxy server - Disabled: Do not use Proxy server
ConfAisConnectCountryId	string	AIS Connect RP (Reverse Proxy) Country If none are set, specifies null.
ConfAisConnectAllowRemoteSession	string	Remote Session If none are set, specifies null. - Enabled: allowed - Disabled: denied

Parameter	Type	Description
ConfDefaultGuiLanguage	string	Specifies the initial settings of language. This is enabled from the next time iRMC Web interface is called. If none are set, specifies null. - English - German - Japanese
ConfBmcTimeSyncSource	string	Specifies time setting performance of iRMC. If none are set, specifies null. - System RTC: Time of iRMC retrieved from the system clock of a managed server. - NTP Server: Time of iRMC synchronized with that of an NTP server which operates based on specific time as its reference time source by using Network Time Protocol (NTP).
ConfBmcRtcTimeMode	string	Specifies time display performance of iRMC. If none are set, specifies null. - UTC: iRMC time displayed in UTC (Coordinated Universal Time) format. - Localtime: iRMC time displayed in local time format.
ConfBmcTimeZoneLocation	string	Specifies time zone to correspond to a location of a server. If none are set, specifies null. - Asia/Tokyo - US/Pacific - US/Mountain - US/Central - US/Eastern - Europe/Berlin - Europe/London - UTC
ConfBmcNtpServer0	string	Specifies the IP address or the DNS name of the primary NTP server. If none are set, specifies null.
ConfBmcNtpServer1	string	Specifies the IP address or the DNS name of the secondary NTP server. If none are set, specifies null.
ConfPostErrorHalt	string	Specifies the operation in response to the occurrence of an error upon server boot. If none are set, specifies null. - Continue: Boot continued even after the occurrence of an error. - Halt on errors: Boot interrupted until the key entry when an error occurs.

Parameter	Type	Description
ConfPowerControlMode	string	Specifies the power-saving and noise canceling operations for a server. If none are set, specifies null. - O/S Controlled: Control by OS followed. - Minimum Power: Operation where priority is placed on reduction in power consumption.
ConfDisableFanTest	string	Specifies the settings of fan test. If none are set, specifies null. - Enabled: Tests conducted every day at the specified time. - Disabled: Fan tests not conducted.
ConfFanDailyTestTime	string	Specifies starting time of the fan test. Becomes valid when executing the fan test. If none are set, specifies null.
ConfPowerFailBehavior	string	Specifies the power source operation upon power restore operation after interruption of AC power source input. If none are set, specifies null. - As Before: State upon power source interruption maintained (Powered on if a server is powered on upon interruption/ Not powered on if the server is powered off.) - Remain Off: Always powered off. - Always On: Always powered on.
ConfSoftWatchdogEnable	string	Specifies whether to use Software Watchdog to execute periodic communication confirmations while an OS is running. If none are set, specifies null. - Enabled: Communication monitored. - Disabled: Communication not monitored. The setting is enabled after restarting the server.
ConfSoftWatchdogBehavior	string	Specifies an operation when the OS does not communicate due to Software Watchdog. Specifies when ConfSoftWatchdogEnable is Enabled. If none are set, specifies null. - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. The setting is enabled after restarting the server.
ConfSoftWatchdogTime	integer	Specifies a value from 1-100 minutes for monitoring time by the Software Watchdog. Specifies when ConfSoftWatchdogEnable is Enabled. It is judged as unable to communicate when there is no communication after a specified time here. If none are set, specifies null.

Parameter	Type	Description
		The setting is enabled after restarting the server.
ConfBootWatchdogEnable	string	Specifies the monitoring the period between POST completion and OS start, with use of Boot Watchdog. If none are set, specifies null. - Enabled: Period monitored. - Disabled: Period not monitored. The setting is enabled after restarting the server.
ConfBootWatchdogBehavior	string	Specifies behavior for the case when an OS does not start within the specified time in Boot Watchdog. Specifies when ConfBootWatchdogEnable is Enabled. If none are set, specifies null. - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. The setting is enabled after restarting the server.
ConfBootWatchdogTime	integer	Specifies a value from 1-100 minutes for the Boot Watchdog monitoring time. Specifies when ConfBootWatchdogEnable is Enabled. It is judged as abnormality when OS cannot start after a specified time here. If none are set, specifies null. The setting is enabled after restarting the server.
ConfPermanentBiosConfigStorageEnabled	string	Specifies whether to enable Automatic BIOS Parameter Backup. If none are set, specifies null. - Enabled: Enables Automatic BIOS Parameter Backup - Disabled: Disables Automatic BIOS Parameter Backup The setting is enabled after restarting the server.
ConfBMCTelnetPort	integer	Specifies Telnet port number for iRMC. If none are set, specifies null.
ConfBMCSshPort	integer	Specifies SSH (Secure Shell) port number for iRMC. If none are set, specifies null.
ConfBMCTelnetEnable	string	Specifies connection with Telnet. If none are set, specifies null. - Enabled: Enables Telnet connection. - Disabled: Disables Telnet connection.
ConfBMCSshEnable	string	Specifies connection via SSH. If none are set, specifies null. - Enabled: Enables SSH connection. - Disabled: Disables SSH connection.

Parameter	Type	Description
ConfBmcProxyAddress	string	DNS name or IP address of the Proxy server. If none are set, specifies null. The number of characters specifiable is 127 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), colon (:), and dot (.).
ConfBmcProxyPort	integer	Port number of Proxy Service Default: 81 If none are set, specifies null.
ConfBmcProxyUserName	string	User Name for Proxy Server Authentication If none are set, specifies null. The number of characters specifiable is 127 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), dot (.), underscore (_), at sign (@), and yen sign (\). Also, the character string must start with a single-byte alphanumeric character.
ConfBmcProxyPassword	string	Password for Proxy Server Authentication If none are set, specifies null. Set the password encrypted with AES256+Base64. For the password before encryption, specify a character string of 1 -127 characters composed of ASCII characters (0x20 - 0x7e).
ConfBMCUseDNS	string	Specifies whether to enable DNS of iRMC. If none are set, specifies null. - Enabled: Enabled - Disabled: Disabled
ConfBMCObtainDNSfromDHCP	string	Specifies whether to retrieve DNS configuration from DHCP server. If you enable this item, enable DHCP in advance. If none are set, specifies null. - Enabled: Retrieve DNS configuration from the DHCP server - Disabled: Do not retrieve DNS configuration from the DHCP server
ConfBMCDNSDomain	string	Specifies a default domain name for the DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 48 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), and dot (.).
ConfBMCDNSDomainSearchPath	string	Specifies a list of DNS search paths. Domain names in the list should be delimited by one or more space characters. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null.

Parameter	Type	Description
		The number of characters specifiable is 127 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), dot (.), and space ( ).
ConfBMCDNSServer1	string	Specifies IP address of a DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), colon (:), and dot (.).
ConfBMCDNSServer2	string	Specifies IP address of a DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), colon (:), and dot (.).
ConfBMCDNSServer3	string	Specifies IP address of a DNS server. This is specified if "ConfBMCObtainDNSfromDHCP" is "Disabled." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), colon (:), and dot (.).
ConfBMCDNSRetries	integer	Specifies the number of times of DNS retry in the range of 1 - 5 times. Default setting is twice. If none are set, specifies null.
ConfBMCDNSTimeout	integer	Specifies the timeout value for the DNS response in the range of 1 - 30 seconds. Default setting is five seconds. If none are set, specifies null.
ConfBMCRegisterDNS	string	Specifies a setting method for the DNS name of iRMC. If none are set, specifies null. - Disabled: Do not select - Register DHCP in DNS: Register the DHCP address in DNS - Register FQDN with DHCP in DNS: Use DHCP to register the fully qualified domain name in DNS - DNS Update Enabled: Dynamic DNS Enabled
ConfBMCUseNetworkName	string	Specifies whether to use the iRMC name specified in "ConfBMCNetworkName" as a part of the DNS name. If none are set, specifies null. - Enabled: Use - Disabled: Do not use
ConfBMCNetworkName	string	Specifies the iRMC name which is used as a part of the DNS name.

Parameter	Type	Description
		If none are set, specifies null. Do not use a dot (.) except in the following cases because it may cause unexpected behavior. PRIMERGY RX/TX/CX M4 or later, PRIMEQUEST 3000B The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), and dot (.).
ConfBMCAddSerialNumber	string	Specifies whether to add the last three bytes of the MAC address to the DHCP name of iRMC. If none are set, specifies null. - Enabled: Add - Disabled: Do not add
ConfBMCAddExtension	string	Specifies whether to add an extension name which is specified for "ConfBMCNameExtension" to the DHCP name of iRMC. If none are set, specifies null. - Enabled: Add - Disabled: Do not add
ConfBMCNameExtension	string	Extension Name of iRMC If none are set, specifies null. The number of characters specifiable is 16 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), and dot (.).
ConfBmcSsdpEnable	string	Specifies whether to enable automatic discovery via SSDP. If none are set, specifies null. - Enabled: Enable automatic discovery - Disabled: Disable automatic discovery
ConfBmcSnmpServiceEnable	string	Specifies SNMP service performance at iRMC. If none are set, specifies null. - Enabled: Enables the operation. - Disabled: Disable the operation.
ConfBMCSnmpServicePort	integer	Specifies a port number where the SNMP service is in an idle state. Typically it is the UDP 161 port. If none are set, specifies null.
ConfBMCSnmpServiceEnableV3Only	string	Specifies the SNMP protocol. If none are set, specifies null. - All (SNMPv1/v2c/v3): All protocol support (SNMPv1/v2c/v3) - SNMPv3 only:SNMPv3
ConfBMCSnmpServiceCommunityName	string	Specifies a community name for when it is SNMP v1/v2c. If none are set, specifies null. The number of characters specifiable is 18 at maximum.

Parameter	Type	Description
		Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:,_?;-@&) %!. Blank symbols and \ may not be used.
ConfBMCSnmpV3UserServiceEnabled	string	Specifies SNMPv3 support operations for a user. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBMCSnmpV3UserAuthType	string	Specifies authentication protocols that SNMPv3 uses for authentication. If none are set, specifies null. - SHA: Uses SHA (Secure Hash Algorithm) for authentication. - MD5: Uses MD5 (Message-Digest Algorithm 5) authentication. - none: Does not use authentication. - SHA256: Uses SHA256 (Secure Hash Algorithm 256-bit) for authentication. - SHA384: Uses SHA384 (Secure Hash Algorithm 384-bit) for authentication. - SHA512: Uses SHA512 (Secure Hash Algorithm 512-bit) for authentication.
ConfBMCSnmpV3UserPrivType	string	Specifies privacy protocol that SNMPv3 uses to encrypt SNMPv3 traffic. If none are set, specifies null. - DES: Uses DES (Digital Encryption Standard) for SNMPv3 traffic encryption. - AES: Uses AES (Advanced Encryption Standard) 128 bits encryption for SNMPv3 traffic encryption. - none: Does not use encryption.
ConfBMCSnmpV3UserAccessType	string	Specifies access privilege of a user. "Read only" has been set as fixed. If none are set, specifies null. - Read Only: Read-only
ConfBMCSnmpTrapCommunityName	string	Specifies the SNMP Community Name. If none are set, specifies null. The number of characters specifiable is 18 at maximum. Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:,_?;-@&) %!. Blank symbols and \ may not be used.
ConfBMCSnmpV3UserSelected	string	Specifies a SNMPv3 user already defined as SNMPv3 trap destination. Specifies a user name that has been created on iRMC. If none are set, specifies null. A user name can be specified with 16 characters at maximum.

Parameter	Type	Description
		A valid user name should start with an alphabet. For the remaining part of the name, it can accept only alphabets, digits, under bar, dash, period and at mark (@). Blank symbols may not be used.
ConfBMCSnmpTrapDestName1	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName2	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName3	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName4	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName5	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName6	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpTrapDestName7	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null.

Parameter	Type	Description
		The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
ConfBMCSnmpProtocol1	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol2	string	Specifies the version of SNMP protocol used in reception of trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol3	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol4	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol5	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol6	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3
ConfBMCSnmpProtocol7	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3

Parameter	Type	Description
ConfBmcCasEnable	string	Specifies the CAS service behavior in iRMC. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasServer	string	Specifies the IP address or the DNS name of the CAS server. If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9), hyphen (-), colon (:), and dot (.).
ConfBmcCasPort	string	Specifies the port number which CAS service is standing by. Usually, it is 3170. If none are set, specifies null.
ConfBmcCasVerifyServerCert	string	Specifies the SSL certificate confirmation behavior. If none are set, specifies null. Enabled: Enables it. Disabled: Disable it.
ConfBmcCasAlwaysDisplayLogin	string	Specifies whether to always display the Login page. If none are set, specifies null. - Enabled: Always display the login page - Disabled: Do not always display the login page
ConfBmcCasLoginUri	string	Specifies a Login URL. Usually, it is "/cas/login." If none are set, specifies null. The number of characters specifiable is 32 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of "?/.:~-_%."
ConfBmcCasLogoutUri	string	Specifies a Logout URL. Usually, it is "/cas/logout." If none are set, specifies null. The number of characters specifiable is 32 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of "?/.:~-_%."
ConfBmcCasValidateUri	string	Specifies an authentication URL. Usually, it is "/cas/validate." If none are set, specifies null. The number of characters specifiable is 32 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of "?/.:~-_%."
ConfBmcCasAssignConfiguredPermissions	string	Specifies an access permission. It will always be set to Local.

Parameter	Type	Description
		If none are set, specifies null. - LocalAssignedPermissions: Local
ConfBmcCasNetworkPrivilege	string	Specifies the privilege level of the user. If none are set, specifies null. - User: User - Operator: Operator - Administrator: Administrator - OEM: OEM
ConfBmcCasPermissionRedfish	string	Specifies a Redfish role. If none are set, specifies null. - Administrator: Administrator - Operator: Operator - ReadOnly: Read-only - NoAccess: Do not use Redfish
ConfBmcCasPermissionConfigureUsers	string	Specifies user change privileges. If none are set, specifies null. - Enabled: Enables it. - Disabled: Disable it.
ConfBmcCasPermissionConfigureBmc	string	Specifies iRMC setting change privileges. If none are set, specifies null. - Enabled: Enables it. - Disabled: Disable it.
ConfBmcCasPermissionAvrEnabled	string	Specifies Video Redirection use privileges. If none are set, specifies null. - Enabled: Enables it. - Disabled: Disable it.
ConfBmcCasPermissionRemoteStorage Enabled	string	Specifies Remote Storage use privileges. If none are set, specifies null. - Enabled: Enables it. - Disabled: Disable it.
ConfLcmUpdateRepoAddr	string	Specifies the URL of the repository used for firmware update using eLCM. Usually, it is "https://support.ts.fujitsu.com." If none are set, specifies null. The number of characters specifiable is 128 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of ".:/_."
ConfLcmUpdateUseProxy	string	Specifies whether to use a proxy server to connect to the repository used for firmware update.

Parameter	Type	Description
		If none are set, specifies null. - Enabled: Uses it. - Disabled: Does not use it.
ConfLcmSkipHclVerification	string	Specifies whether to skip VMware HCL Verification. If none are set, specifies null. - Enabled: Skip it. - Disabled: Does not skip it.
ConfConfLcmUpdateSkipCertificateVerification	string	Specifies whether to skip SSL/TLS Certificate Verification. If none are set, specifies null. - Enabled: Skip it. - Disabled: Does not skip it.
ConfLcmDeploymentRepoAddr	string	Specifies the URL of the repository used for deployment (OS installation) using eLCM. Usually, it is "https://webdownloads.ts.fujitsu.com." If none are set, specifies null. The number of characters specifiable is 128 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z), Arabian figures (0-9) and symbols of ".:/_."
ConfLcmDeploymentUseProxy	string	Specifies whether to use a proxy server to connect to the repository used for deployment (OS installation). If none are set, specifies null. - Enabled: Uses it. - Disabled: Does not use it.
ConfConfLcmDeploymentSkipCertificateVerification	string	Specifies whether to skip SSL/TLS Certificate Verification. If none are set, specifies null. - Enabled: Skip it. - Disabled: Does not skip it.
ConfBMCForceHttps	string	Specifies how to use HTTPS. If none are set, specifies null. - Enabled: HTTPS connections only. - Disabled: HTTP connections available.
ConfBMCNetworkTLS11Enabled	string	Specifies enable/disable setting for the security protocol TLS1.1 for web access. If none are set, specifies null. - Enabled: Enables TLS1.1 - Disabled: Disables TLS1.1
ConfBMCNetworkTLS12Enabled	string	Specifies enable/disable setting for the security protocol TLS1.2 for web access. If none are set, specifies null. - Enabled: Enables TLS1.2

Parameter	Type	Description
		- Disabled: Disables TLS1.2
ConfIPTelnetDropTime	integer	Specifies a value from 0-120 minutes for the session drop out time. If none are set, specifies null. 0 = session time out disabled.
ConfKVMRedirType	string	Specifies the KVM redirection type. If none are set, specifies null. - JViewer (JAVA): Use AVR via Java. - HTML5 Viewer: Use AVR via HTML5. - VNC: Connect with VNC.
ConfBmcAvrTitle	string	Specifies the window title for the AVR. If none are set, specifies null. The number of characters specifiable is 64 at maximum.
ConfVT100Enable	string	Specifies enable/disable setting for the console redirection. If none are set, specifies null. - Enabled: Enables console redirection. - Disabled: Disable console redirection.
ConfVT100BaudRate	string	Specifies baud rate of a serial port. Specifies when ConfVT100Enable is Enabled. If none are set, specifies null. 9600 / 19200 / 38400 / 57600 / 115200
ConfVT100FlowControl	string	Specifies flow control of a serial port. Specifies when ConfVT100Enable is Enabled. If none are set, specifies null. - No flow control imposed: Do not execute the flow control. - CTS/RTS (hardware): Communication control is executed by hardware.
ConfSerial1MuxMode	string	Specifies consistency with the multiplexer configuration. Specifies when ConfVT100Enable is Enabled. If none are set, specifies null. - System: Serial - iRMC: LAN
ConfPowerMonitoringEnable	string	Specifies enable/disable setting for monitoring time-lapse of power consumption. If none are set, specifies null. - Enabled: Execute monitoring of power consumption. - Disabled: Do not execute the monitoring of power consumption.
ConfBMCAcctUserPassword	string	Specifies a password for the admin user. Specify a user other than admin as the user specified during node registration (Communication methods). If admin is specified, communication to the node will not be possible.

Parameter	Type	Description
		If none are set, specifies null. Set the password encrypted with AES256+Base64. For the password before encryption, specify a character string of 1-127 characters composed of ASCII characters (0x20 - 0x7e).
ConfBMCLDAPEnable	string	Specifies enable/disable setting for LDAP. If none are set, specifies null. - Enabled: Enables LDAP - Disabled: Disables LDAP
ConfBMCLDAPSSLEnable	string	Specifies enable/disable setting for LDAP SSL/TLS. If none are set, specifies null. - Enabled: Enables LDAP SSL/TLS - Disabled: Disables LDAP SSL/TLS
ConfBMCLDAPServerName	string	Specifies primary LDAP server. If none are set, specifies null. The number of characters specifiable is 64 at maximum.
ConfLDAPAuthorizationType	string	Specifies an authorization type. If none are set, specifies null. - ServerView LDAP Group with Authorization Settings on LDAP Server - Standard LDAP Group with Authorization Settings on iRMC
ConfBMCLDAPDomainName	string	Specifies a domain name. If none are set, specifies null. The number of characters specifiable is 64 at maximum.
ConfLdapGroupDN	string	Specifies the group directory under the base DN. If none are set, specifies null. The number of characters specifiable is 64 at maximum.
ConfBMCLDAPgroupsUserName	string	Specifies the authentication LDAP user name. If none are set, specifies null. The number of characters specifiable is 64 at maximum.
ConfBMCLDAPgroupsUserPasswd	string	Specifies the password for the authenticated LDAP. If none are set, specifies null. Set the password encrypted with AES256+Base64. For the password before encryption, specify a character string of 1-127 characters composed of ASCII characters (0x20 - 0x7e).
ConfLDAPAuthorizationUserGroupNames	string	Specifies an LDAP user group. Specifies when "ConfLDAPAuthorizationType" is "Standard LDAP Group with Authorization Settings on iRMC." Specify this option only if no user group has been created on the node. If a user group already exists, no user group is created on the node side. If none are set, specifies null.

Parameter	Type	Description
		The number of characters specifiable is 64 at maximum.
ConfBmcIpv6Enabled	string	Specifies enable/disable setting for the IPv6 protocol. If none are set, specifies null. - Enabled: Enables IPv6 protocol - Disabled: Disables IPv6 protocol
ConfHpSimIntegrationDisable	string	Specifies enable/disable setting for HP System Insight Manager (HP SIM) integration. If none are set, specifies null. - Enabled: Enables HP SIM integration - Disabled: Enables HP SIM integration
ConfSystemGUIDByteOrderLsbFirst	string	Specifies a response format for the Get System GUID command. If none are set, specifies null. - IPMI specification compatible - SMBIOS 2.6 specification compatible

D.3 IOVirtualization

Parameter	Type	Description
IOVirtualization	object	Settings of Virtual IO If you delete all of the IOVirtualization settings in "4.10.6 Updating Profiles," omit this item.
AdapterConfigIrmc	object	Settings of Virtual IO
UseVirtualAddresses	string	Specifies if Virtual Address should be used in profile. - true: Uses a virtual address. By turning UseVirtualAddresses of the port to false, only virtual address of specific port can be turned to invalid. - false: Does not use a virtual address. Do not specify all of VirtualAddresses of this profile.
BootMenuEnable	string	Specifies if the Boot Menu should be enabled. - true: Enables the boot menu. - false: Disables the boot menu.
SmuxSetting	string	Specifies Settings of SMUX. SMUX means a function to change connection between LAN card and Fabric. Omit this settings for any platform not supported for SMUX setup. Becomes equivalent with a state specified for Fabric4 when omitted. - Fabric3: Uses Fabric3. - Fabric4: Uses Fabric4. - Fabric3+4: LAN1 uses Fabric3 and LAN2 uses Fabric4.
SRIOV	string	Specifies if SR-IOV should be used.

Parameter	Type	Description
		- true: Enables SR-IOV. By turning SRIOV of the port to false, only virtual address of specific port can turned to invalid. - false:Disables SR-IOV.
BootMode	string	Specifies a boot mode for use when there is IO channel to be defined as a boot device. - LegacyFirst: Prioritizes Legacy Boot (BIOS). Uses UEFI Boot as well. - LegacyOnly: Uses only Legacy Boot (BIOS). - UEFIFirst: Prioritizes UEFI Boot. Uses Legacy Boot (BIOS) as well. - UEFIOnly: Uses only UEFI Boot.
Slots	object	Settings of Slot
Slot	array	Settings of Slot
OnboardControllers	object	Specifies settings of onboard. Omits if there is no need to configure onboard.
OnboardController	array	Specifies settings of onboard. Specifies either CNAAdapter, LANAdapter, FCAdapter.
@OnboardControllerIdx	integer	Specifies a number the onboard will attach to. The value starts from 1. If there are multiple on-board slots with different slot numbers, specify them in the order in which the on-board slot numbers are counted from the beginning.
CNAAdapter	object	CNA Adapter Settings Omit if there is no need to configure the CNA adapter. For details, refer to "D.3.1 CNAAdapter."
LANAdapter	object	LAN Adapter Settings For details, refer to "D.3.2 LANAdapter."
FCAdapter	object	FC Adapter Settings For details, refer to "D.3.3 FCAdapter."
AddOnCards	object	Specifies settings of PCI card. Omit if there is no need to configure the PCI card.
AddOnCard	array	Specifies settings of PCI card. Specifies either CNAAdapter, LANAdapter, FCAdapter.
@AddOnCardIdx	integer	Specifies a number the PCI card will attach. The value starts from 1.
CNAAdapter	object	CNA Adapter Settings Omit if there is no need to configure the CNA adapter. For details, refer to "D.3.1 CNAAdapter."
LANAdapter	object	LAN Adapter Settings For details, refer to "D.3.2 LANAdapter."
FCAdapter	object	FC Adapter Settings

Parameter	Type	Description
		For details, refer to "D.3.3 FCAdapter."
DaughterCards	object	Specifies settings of an expansion card. Omit if there is no need to configure an expansion card.
DaughterCard	array	Specifies settings of an expansion card. Specifies either CNAAdapter, LANAdapter, FCAdapter.
@DaughterCardIdx	integer	Specifies a number an expansion card belongs to. The value starts from 1.
CNAAdapter	object	CNA Adapter Settings Omit if there is no need to configure the CNA adapter. For details, refer to "D.3.1 CNAAdapter."
LANAdapter	object	LAN Adapter Settings For details, refer to "D.3.2 LANAdapter."
FCAdapter	object	FC Adapter Settings For details, refer to "D.3.3 FCAdapter."

D.3.1 CNAAdapter

Parameter	Type	Description
CNAAdapter	object	CNA Adapter Settings Omit if there is no need to configure the CNA adapter.
Ports	object	Port Settings
Port	array	Port Settings
@PortIdx	integer	Specifies a number of a port. The value starts from 1.
PortEnable	string	Setting of Port Validity - true: Enables a port. - false: Does not enable a port.
Functions	object	CNA Function Specifies either LANFunction, FCoEFunction, or ISCSIFunction.
Function	array	CNA Function
@FunctionIdx	integer	Specifies a number of Function. The value starts from 1.
LANFunction	object	LAN Function
FunctionEnable	string	Setting of Function Validity - true: Enables Function. - false: Does not enable Function.
VLANId	integer	Specifies the VLAN ID.
Bandwidth	integer	Specifies settings of bandwidth. Specifies respective IO channels so that the total is 100.

Parameter	Type	Description
		If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally accordingly.
RateLimit	integer	Maximum Share Percent of Bandwidth Available in This Function It should be exceeding the value of Bandwidth of this Function.
SRIOV	string	Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV.
RoCE	string	RoCE Use Settings When setting this item, specify "true" for "UseVirtualAddresses" in "D.3 IOVirtualization" When setting this item, specify "false" for "SRIOV." - no: Do not use RoCE - v1: Use RoCE v1 - v2: Use RoCE v2
UseVirtualAddresses	string	Settings of the Use of Virtual Address - true: Uses a virtual address. - false: Does not use virtual address.
VirtualAddress	object	Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards.
MAC	string	Specifies a virtual MAC address. 2-digit half-width alphabetical characters delimited by a colon(:) or hyphen(-). When specifying a virtual address automatically, specify null.
BootProtocol	string	Settings of Boot Methods - None: Does not specify how to boot. - PXE: Uses PXE.
BootPriority	integer	Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used.

Parameter	Type	Description
PXEBootEnvironment	object	Settings of PXE Boot
IPUsage	string	Specifies the IP protocol to use in PXE boot. - IP4first: Uses the IPv4 first. - IP4only: Uses IPv4 only. - IP6first: Uses the IPv6 first. - IP6only: Uses IPv6 only.
FCoEFunction	object	FCoE Function
FunctionEnable	string	Settings of Function Validity - true: Enables Function. - false: Does not enable Function.
Bandwidth	integer	Specifies settings of bandwidth. Specifies respective IO channels so that the total is 100. If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally accordingly.
RateLimit	integer	Maximum Share Percent of Bandwidth Available at This Function It should be exceeding the value of Bandwidth of this Function.
SRIOV	string	Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV.
UseVirtualAddresses	string	Settings of the Use of Virtual Address - true: Uses a virtual address. - false: Does not use virtual address.
VirtualAddress	object	Virtual Address It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards.
WWNN	string	Specifies a virtual WWNN. 2 digit half-width alphabetical characters delimited by a colon (:). When specifying a virtual address automatically, specify null.
WWPN	string	Specifies a virtual WWPN.

Parameter	Type	Description
		2 digit half-width alphabetical characters delimited by a colon (:). WWPN, including other profiles, should be unique as a whole. When specifying a virtual address automatically, specify null.
MAC	string	Specifies a virtual MAC address. 2-digit half-width alphabetical characters delimited by a colon (:) or hyphen (-). When specifying a virtual address automatically, specify null.
BootProtocol	string	Settings of Boot Methods - None: Does not specify how to boot. - FC: Uses FC.
BootPriority	integer	Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used.
FCBootEnvironment	object	FC Boot Settings
FCTargets	object	FC Target Settings
FCTarget	array	FC Target Settings Specifies information of the first and second storages that start up by SAN boot.
@FCTargetIdx	integer	Specifies information of the first and second storages that start up by SAN boot.
TargetWWPN	string	Specifies WWPN of storage that starts up by SAN boot.
TargetLUN	integer	Specifies LUN of storage that starts up by SAN boot.
FCLinkSpeed	string	Specifies speed of connection. - auto: Automatic - 1: 1 Gbit/s - 2: 2 Gbit/s - 4: 4 Gbit/s - 8: 8 Gbit/s - 16: 16 Gbit/s When the connection speed that you want to set is not in the alternatives, specify "auto."
FCTopology	string	Specifies a form of connection. - auto_loop: Automatic (It tries to connect by Arbitrated loop at first) - PtP: Point-to-Point - auto_PtP: Automatic (It tries to connect by Point-to-Point at first) - loop: Arbitrated loop
ISCSIFunction	object	iSCSI Function
FunctionEnable	string	Settings of Function Validity - true: Enables Function.

Parameter	Type	Description
		- false: Does not enable Function.
VLANId	integer	VLAN ID
Bandwidth	integer	Specifies settings of bandwidth. Settings respective IO channels so that the total is 100. If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally accordingly.
RateLimit	integer	Maximum Share Percent of Bandwidth Available at This Function It should be exceeding the value of Bandwidth of this Function.
SRIOV	string	Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV.
UseVirtualAddresses	string	Settings of the Use of Virtual Address - true: Uses a virtual address. - false: Does not use virtual address.
VirtualAddress	object	Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards.
MAC	string	Virtual MAC Address 2-digit half-width alphabetical characters delimited by a colon (:) or hyphen (-). When specifying a virtual address automatically, specify null.
BootProtocol	string	Settings of Boot Methods - None: Does not specify how to boot. - ISCSI: Uses iSCSI.
BootPriority	integer	Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used.
ISCSIBootEnvironment	object	Setting of iSCSI Boot
ISCSIInitiator	object	Setting of iSCSI Initiator
DHCPUsage	string	Settings of Acquiring Method of IP Address for Initiator

Parameter	Type	Description
		- true: Retrieves an address from DHCP server dynamically. - false: Sets up an address statically.
Name	string	Initiator IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-")
IPv4Address	string	IP Address for Initiator Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
SubnetMask	string	Subnet Mask Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
GatewayIPv4Address	string	Gateway Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
VLANId	integer	VLAN ID used to send requirements of HBA
ISCSITarget	object	Setting of iSCSI Target
DHCPUsage	string	Setting of How to Retrieve IP Address of a Target - true: Retrieves an address from DHCP server dynamically. - false: Sets up an address statically.
Name	string	Target IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-") It is possible to omit when the DHCPUsage of the ISCSITarget is true.
IPv4Address	string	Target IP Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
PortNumber	integer	Target Port Number Specifies when DHCPUsage is false. It can be omitted even when DHCPUsage is false. If omitted, set to 3260.
BootLUN	integer	Specifies LUN number (0-255) of the target. Specifies when DHCPUsage is false.
AuthenticationMethod	string	Setting of Authentication Methods - None: No Authentication - CHAP: CHAP Authentication

Parameter	Type	Description
		- MutualCHAP: Mutual CHAP Authentication
ChapUserName	string	Authentication User Name Specifies a string with less than 127 characters consisting of alphametric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters.
ChapSecret	string	Secret of CHAP Authentication Set the password encrypted with AES256+Base64. For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters.
MutualChapSecret	string	Secret of Mutual CHAP Authentication Set the password encrypted with AES256+Base64. For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters.

D.3.2 LANAdapter

Parameter	Type	Description
LANAdapter	object	LAN Adapter Settings
Ports	object	Port Settings
Port	array	Port Settings
@PortIdx	integer	Specifies a number of a port. The value starts from 1.
PortEnable	string	Setting of Port Validity - true: Enables a port. - false: Does not enable a port.
SRIOV	string	Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV.
RoCE	string	RoCE Use Settings When setting this item, specify "true" for "UseVirtualAddresses" in "D.3 IOVirtualization" When setting this item, specify "false" for "SRIOV."

Parameter	Type	Description
		- no: Do not use RoCE - v1: Use RoCE v1 - v2: Use RoCE v2
UseVirtualAddresses	string	Settings of the Use of Virtual Address - true: Uses a virtual address. - false: Does not use virtual address.
VirtualAddress	object	Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards.
MAC	string	Virtual MAC Address Divide into 2-digit half-width English characters using a colon(:) or hyphen(-). When specifying a virtual address automatically, specify null.
BootProtocol	string	Settings of Boot Methods - None: Does not specify how to boot. - PXE: Uses PXE. - ISCSI: Uses iSCSI.
BootPriority	integer	Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used.
ISCSIBootEnvironment	object	Settings of iSCSI Boot
ISCSIInitiator	object	Settings of iSCSI Initiator
DHCPUsage	string	Settings of Acquiring Method of IP Address for Initiator - true: Retrieves an address from DHCP server dynamically. - false: Sets up an address statically.
Name	string	Initiator IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-").
IPv4Address	string	IP Address for Initiator Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.

Parameter	Type	Description
SubnetMask	string	Subnet Mask Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
GatewayIPv4Address	string	Gateway Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
VLANId	integer	VLAN ID used to send requirements of HBA
ISCSITarget	object	Setting of iSCSI Target
DHCPUsage	string	Setting of How to Retrieve IP Address of a Target - true: Retrieves an address from DHCP server dynamically. - false: Sets up an address statically.
Name	string	Target IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-") It is possible to omit when the DHCPUsage of the ISCSITarget is true.
IPv4Address	string	Target IP Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false.
PortNumber	integer	Target Port Number Specifies when DHCPUsage is false. It can be omitted even when DHCPUsage is false. If omitted, set to 3260.
BootLUN	integer	Specifies LUN number (0-255) of the target. Specifies when DHCPUsage is false.
AuthenticationMethod	string	Setting of Authentication Methods None: No Authentication CHAP: CHAP Authentication MutualCHAP: Mutual CHAP Authentication
ChapUserName	string	Authentication User Name Specifies a string with less than 127 characters consisting of alphametric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters.
ChapSecret	string	Secret of CHAP Authentication Set the password encrypted with AES256+Base64. For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware.

Parameter	Type	Description
		It is recommended to use only alphametric characters.
MutualChapSecret	string	Secret of Mutual CHAP Authentication Set the password encrypted with AES256+Base64. For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters.
PXEBootEnvironment	object	Settings of PXE Boot
IPUsage	string	Settings of the IP Protocol to Use in PXE Boot. - IP4first: Uses the IPv4 first. - IP4only: Uses IPv4 only. - IP6first: Uses the IPv6 first. - IP6only: Uses IPv6 only.

D.3.3 FCAdapter

Parameter	Type	Description
FCAdapter	object	FC Adapter Settings
Ports	object	Port Settings
Port	array	Port Settings
@PortIdx	integer	Specifies a number of a port. The value starts from 1.
PortEnable	string	Setting of Port Validity - true: Enables a port. - false: Does not enable a port.
SRIOV	string	Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV.
UseVirtualAddresses	string	Settings of the Use of Virtual Address - true: Uses a virtual address. - false: Does not use virtual address.
VirtualAddress	object	Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time.

Parameter	Type	Description
		Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards.
WWNN	string	Specifies a virtual WWNN. 2-digit half-width alphabetical characters delimited by a colon (:). When specifying a virtual address automatically, specify null.
WWPN	string	Specifies a virtual WWPN. 2 digit half-width alphabetical characters delimited by a colon (:). WWPN, including other profiles, should be unique as a whole. When specifying a virtual address automatically, specify null.
BootProtocol	string	Settings of Boot Methods - None: Does not specify how to boot. - FC: Uses the FC. Set as None or FC when FCAdapter.
BootPriority	integer	Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used.
FCBootEnvironment	object	FC Boot Settings
FCTargets	object	FC Target Settings
FCTarget	array	FC Target Settings Specifies information of the first and second storages that start up by SAN boot.
@FCTargetIdx	integer	Specifies information of the first and second storages that start up by SAN boot.
TargetWWPN	string	Specifies WWPN of storage that starts up by SAN boot.
TargetLUN	integer	Specifies LUN of storage that starts up by SAN boot.
FCLinkSpeed	string	Setting of Connection Speed - auto: Automatic - 1: 1 Gbit/s - 2: 2 Gbit/s - 4: 4 Gbit/s - 8: 8 Gbit/s - 16: 16 Gbit/s When the connection speed that you want to set is not in the alternatives, specify "auto."
FCTopology	string	Setting of Form of Connection - auto_loop: Automatic (It tries to connect by Arbitrated loop at first) - PtP: Point-to-Point - auto_PtP: Automatic (It tries to connect by Point-to-Point at first)

Parameter	Type	Description
		- loop: Arbitrated loop

D.4 OSInstallation

Parameter	Type	Description
OSInstallation	object	Settings of OS Installation If you delete all of the OSInstallation settings in "4.10.6 Updating Profiles," omit this item. When a policy is being referenced, you cannot delete the settings.
Linux	object	Settings of Linux
OsType	object	OS Classification
Type	string	Type of Imported OS Media - Red Hat Enterprise Linux 9.5 (x86_64) - Red Hat Enterprise Linux 9.4 (x86_64) - Red Hat Enterprise Linux 9.3 (x86_64) - Red Hat Enterprise Linux 9.2 (x86_64) - Red Hat Enterprise Linux 9.1 (x86_64) - Red Hat Enterprise Linux 9.0 (x86_64) - Red Hat Enterprise Linux 8.10 (x86_64) - Red Hat Enterprise Linux 8.9 (x86_64) - Red Hat Enterprise Linux 8.8 (x86_64) - Red Hat Enterprise Linux 8.7 (x86_64) - Red Hat Enterprise Linux 8.6 (x86_64) - Red Hat Enterprise Linux 8.5 (x86_64) - Red Hat Enterprise Linux 8.4 (x86_64) - Red Hat Enterprise Linux 8.3 (x86_64) - Red Hat Enterprise Linux 8.2 (x86_64) - Red Hat Enterprise Linux 8.1 (x86_64) - Red Hat Enterprise Linux 8.0 (x86_64) - Red Hat Enterprise Linux 7.9 (x86_64) - Red Hat Enterprise Linux 7.8 (x86_64) - Red Hat Enterprise Linux 7.7 (x86_64) - Red Hat Enterprise Linux 7.6 (x86_64) - Red Hat Enterprise Linux 7.5 (x86_64) - Red Hat Enterprise Linux 7.4 (x86_64) - Red Hat Enterprise Linux 7.3 (x86_64) - Red Hat Enterprise Linux 7.2 (x86_64) - Red Hat Enterprise Linux 7.1 (x86_64)

Parameter	Type	Description
		- Red Hat Enterprise Linux 6.10 (x86_64) - Red Hat Enterprise Linux 6.10 (x86) - Red Hat Enterprise Linux 6.9 (x86_64) - Red Hat Enterprise Linux 6.9 (x86) - Red Hat Enterprise Linux 6.8 (x86_64) - Red Hat Enterprise Linux 6.8 (x86) - Red Hat Enterprise Linux 6.7 (x86_64) - Red Hat Enterprise Linux 6.7 (x86) - Red Hat Enterprise Linux 6.6 (x86_64) - Red Hat Enterprise Linux 6.6 (x86) - SUSE Linux Enterprise Server 15 SP6 (x86_64) - SUSE Linux Enterprise Server 15 SP5 (x86_64) - SUSE Linux Enterprise Server 15 SP4 (x86_64) - SUSE Linux Enterprise Server 15 SP3 (x86_64) - SUSE Linux Enterprise Server 15 SP2 (x86_64) - SUSE Linux Enterprise Server 15 SP1 (x86_64) - SUSE Linux Enterprise Server 15 (x86_64) - SUSE Linux Enterprise Server 12 SP5 (x86_64) - SUSE Linux Enterprise Server 12 SP4 (x86_64) - SUSE Linux Enterprise Server 12 SP3 (x86_64) - SUSE Linux Enterprise Server 12 SP2 (x86_64) - SUSE Linux Enterprise Server 12 SP1 (x86_64) - SUSE Linux Enterprise Server 12 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86)
ServerViewSuiteDVD	object	Settings of ServerView Suite DVD If you specify eLCM in InstallationMode, omit this item.
Version	string	Version Number of DVD to Use at Installation When omitting settings of ServerView Suite DVD, use the newest version from the versions imported.
PostScript	object	Settings of Optional Script for Execution after Installation
FolderPath	string	FTP Directory that Saved a Script for Execution and the Name of the Script File for Execution
ScriptName	string	Name of Script File for Execution
RaidConfig	object	Setting of Array Controller
LogicalDiskType	string	Type of Disk Drive - RAID: RAID - SATA: SATA

Parameter	Type	Description
		- SAS: SAS - FC: FC - ISCSIHBA: iSCSI HBA - PCIeSSD: PCIeSSD - USBSTOR: USBSTOR When using a card which has both SAS controller function and SAS array controller function as the SAS controller card, select "RAID."
RAIDController	string	Types of Array Controllers - Disabled: Uses the existing array configuration. (Select also when do not use RAID.) - OnBoard: Uses onboard array controller. - SasRaid01: Uses array controller enabled for SAS RAID0/1. - SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. When configuring a new array, select the type of the array controller. When using the existing array configuration, select "Disabled."
RAIDLevel	string	RAID Level of Disk Array to be Built - RAID0: RAID level 0 - RAID1: RAID level 1 - RAID1E: RAID level 1E - RAID5: RAID level 5 - RAID6: RAID level 6 - RAID10: RAID level 1+0
RAIDDisk	integer	The Number of Disks to be Built in RAID
ManagementLanInfo	object	Information of LAN to be Used as Management LAN If omitted, use the lead port onboard.
AdapterInfo	object	Information of an Adapter to be Used as Management LAN Specifies either MACAddress or AdapterInfo.
AdapterType	string	Types of Adapters - Onboard: Onboard - AddOnCard: PCI card
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
MACAddress	string	MAC Address to be Used as Management LAN MAC address cannot be set with policies. Set it when creating profiles.
PxeBootInfo	object	Settings of PXE Boot
BootType	string	Class of Boot - Legacy: Legacy - UEFI: UEFI (Unified Extensible Firmware Interface)

Parameter	Type	Description
		Specified operation varies by model. There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration. When unspecified, it will turn out to the following specified states. - For PRIMERGY RX/CX M4 or later and PRIMEQUEST 3000B/3000E: UEFI - For other than the above models: Legacy
InstallationInfo	object	Settings of installation information
InstallationMode	string	OS Installation Mode - PXEBoot: PXE boot - eLCM: eLCM For PRIMEQUEST2000-Partition and PRIMEQUEST3000E-Partition, eLCM cannot be specified. If it is omitted, PXEBoot will be specified.
Volumes	object	Specification of a mount point
boot	object	Settings of /boot
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series.
PartitionSize	integer	Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to max capacity of the partition. - Disabled: Does not use up to max capacity of the partition.
swap	object	Settings of /swap
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - swap: Swap
PartitionSize	integer	Capacity of Partitions (MB)

Parameter	Type	Description
		When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to max capacity of the partition. - Disabled: Does not use up to max capacity of the partition.
root	object	Settings of /root
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File Systems - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. vfat cannot be specified in SUSE Linux Enterprise Server 12 series and 15 series.
PartitionSize	integer	Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or not of up to the maximum allowable value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to max capacity of the partition.
home	object	Settings of /home
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. vfat cannot be specified in SUSE Linux Enterprise Server 12 series.
PartitionSize	integer	Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.

Parameter	Type	Description
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to max capacity of the partition.
var	object	Settings o /var
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. vfat cannot be specified in SUSE Linux Enterprise Server 12 series and 15 series.
PartitionSize	integer	Capacity of partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to max capacity of the partition.
user	object	Settings of /user
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2:ext2 - ext3:ext3 - ext4:ext4 - xfs:XFS - vfat:vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. vfat cannot be specified in SUSE Linux Enterprise Server 12 series.
PartitionSize	integer	Capacity of partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to the partition's max capacity.

Parameter	Type	Description
		- Disabled: Does not use up to the partition's max capacity.
opt	object	Settings of /opt
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. vfat cannot be specified in SUSE Linux Enterprise Server 12 series.
PartitionSize	integer	Capacity of partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or not of up to the maximum allowable value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity.
tmp	object	Settings of /tmp
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. vfat cannot be specified in SUSE Linux Enterprise Server 12 series and 15 series.
PartitionSize	integer	Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity.
AdditionalVolumes	array	Specification of a Mount Point

Parameter	Type	Description
Volume	object	Specification of a Mount Point
MountPoint	string	Name of a Mount Point to Create
CreatePartition	string	Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition.
FileSystem	string	Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series.
PartitionSize	integer	Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted.
FillToMaximumAllowableSize	string	Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity.
BasicSettings	object	Basic Settings
Language	string	Specification of Language - English - German - Japanese
Keyboard	string	Type of Keyboard - United States - English: English Keyboard - German: German Keyboard - Japanese: Japanese Keyboard
TimeZone	string	Specification of Time Zone - GMT Standard Time - Pacific Standard Time - Mountain Standard Time - Central Standard Time - Eastern Standard Time - W. Europe Standard Time - Tokyo Standard Time
SystemClockUsesUTC	string	Use of UTC at the System Clock - Enabled: Uses UTC in system clock. - Disabled: Does not use UTC in system clock.

Parameter	Type	Description
PackageSettings	object	Settings of Packages to Install
SelectPackages	object	Selection of Package Groups
SelectPackageList	array(string)	Package Groups to Install When using ISM to manage the server that installed SLES, specify gnome-basic (or gnome_basic) and sap_server. - 32 bit - additional-devel - apparmor - backup-client - backup-server - base - basic-desktop - base-x - Basis-Devel - cifs-file-server - compat-libraries - console-internet - container-management - core - debugging - desktop-debugging - desktop-platform - desktop-platform-devel - development - devel_basis (SLES15) - dhcp_dns_server - dial-up - directory_server - directory-client - directory-server - documentation - Dom0 - dotnet-core - eclipse - emacs - file_server - file-server

Parameter	Type	Description
		- fonts - ftp-server - gateway_server - general-desktop - german-support - gnome - gnome-basic (SLES11, SLES12) - gnome_basic (SLES15) - gnome-desktop - graphical-admin-tools - graphics - guest-agents - Guest-Desktop-Agents - hardware-monitoring - headless-management - identity-management-server - infiniband - input-methods - internet-browser - japanese-support - java-platform - kde - kde-desktop - kvm_server - kvm_tools - lamp_server - large-systems - legacy-unix - legacy-x - load-balancer - mail_server - mail-server - mainframe-access - mariadb - mariadb-client - multimedia - mysql

Parameter	Type	Description
		- mysql-client - networkmanager-submodules - network-file-system-client - network-server - network-tools - nfs-file-server - ofed - oracle_server - performance - perl-runtime - php - platform-devel - postgresql - postgresql-client - print_server - print-client - printing - print-server - remote-desktop-clients - remote-system-management - RPM-Development-Tools - ruby-runtime - sap_server - scientific - security-tools - server-platform - server-platform-devel - smart-card - standard - storage-client-fcoe - storage-client-iscsi - storage-client-multipath - storage-server - system-tools - system-admin-tools - system-management - system-management-messaging-client

Parameter	Type	Description
		- system-management-snmp - system-management-wbem - technical-writing - tex - texlive - turbogears - virtualization - virtualization-client - virtualization-hypervisor - virtualization-platform - virtualization-tools - WBEM - web-server - web-servlet - x11 - xen_server - xen_tools
SinglePackages	object	Selection of Specific Package
SinglePackageList	array(string)	Names of Packages to install
SystemSettings	object	System Settings
ConfigureXWindowsSystem	string	X Windows System Settings - Enabled: Uses X Window System. - Disabled: Does not use X Window System.
DisplayResolution	string	Specification of Screen Resolution - 640x480 - 800x600 - 1024x768 - 1152x864 - 1280x800 - 1280x1024 - 1400x1050 - 1600x1200 - 1920x1440 - 2048x1536
ColorDepth	string	Specification of the Number of Colors on the Screen - 8 - 16

Parameter	Type	Description
		- 24 - 32
DefaultDesktop	string	Type of Desktop to Use in Default - GNOME: Uses the GNOME. - KDE: Uses KDE. - None: Does not specify.
StartXWindowsSystemOnBoot	string	X Window System Starts up at the System Boot - Enabled: Starts up X Window System. - Disabled: Does not startup X Window System. For SUSE Linux Enterprise Server, it can be omitted.
InstallBootloader	string	Installation of a Boot Loader - Enabled: Installs boot loader. - Disabled: Does not install boot loader.
BootloaderLocation	string	Destination of Installation of a Boot Loader - MBR:Master Boot Record
KernelParameters	string	Kernel Parameter
SELinux	string	Setting for Using SE Linux - Enforcing: Uses enforcing mode. - Disabled: Does use in disabled mode. - Permissive: Uses at the mode is permissive.
UseShadowPasswords	string	Setting for the Use of Shadow Password - Enabled: Uses shadow password. - Disabled: Does not use shadow password.
UseMD5	string	Settings of MD5 for Encryption of Password - Enabled: Uses MD5 for password encryption. - Disabled: Does not use MD5 for password encryption.
EnableNSCD	string	Settings for Using Name Switch Cache - Enabled: Uses Name Switch Cache. - Disabled: Does not use Name Switch Cache.
AdditionalParameters	object	Applications Automatically Installed after OS Install.
SelectApplicationList	array(string)	Applications to Install - ServerView Agentless Service - ServerView CIM Provider - ServerView RAID Manager - AIS Connect - ServerView Operations Manager - Java Runtime [Note] - SV Agent

Parameter	Type	Description
		- SV Agent SLES - SV Update Agent - SV Update Agent SLES - DSNAP - Software Support Guide - Dynamic Reconfiguration utility PQ2 - REMCS Option PQ2 - HBA blockage PQ2 - SIRMS PQ2 - ServerView Mission Critical Option PQ2 [Note]: For ServerView Suite DVD V13.18.12 or later, Java Runtime is not installed even if it is specified.
OsIndividualConfig	object	Individual Settings of OS
BasicSettings	object	Basic Setting by Individual OS
RootPassword	string	root Password
NetworkSettings	object	Network Setting by Individual OS
GetComputerNameViaDNS	string	Setting of How to Use a Host Name for Acquiring DNS - Enabled: Uses DNS retrieved host name. - Disabled: Does not use DNS retrieved host name. When using a policy to change GetComputerNameViaDNS from Enabled to Disabled, set ComputerName of a linked profile in advance.
ComputerName	string	Unspecified Host Name Used when Host Name cannot be Retrieved from DNS Host. Computer names cannot be set with policies. Set these when creating profiles.
DhcpEnable	string	Setting of the Use of DHCP - Enabled: Uses DHCP. - Disabled: Does not use DHCP. When using a policy to change DhcpEnable from Enabled to Disabled, set Address of a linked profile in advance.
NetworkInterface	object	Network Interface Settings
IPv4	object	IPv4 Settings
Address	string	IP Address IP addresses cannot be set with policies. Set these when creating profiles.
SubnetMask	string	Subnet Mask
DefaultGateWay	string	Default Gateway
DnsServer	string	IP Address of DNS Server This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.

Parameter	Type	Description
AdditionalSettings	object	Settings to Add
WaitTimeForFinishOsInstallation	integer	Wait time (minutes) when OS Installation Completed Enabled when InstallationMode is PXEBoot and SUSE Linux Enterprise Server. Use the default value (12 minutes) when omitted.
Windows	object	Settings of Windows
OsType	object	OS Classification
Type	string	Type of Imported OS Media - Azure Stack HCI, Version 23H2 (Microsoft Media) - Azure Stack HCI, Version 22H2 (Microsoft Media) - Azure Stack HCI, Version 21H2 (Microsoft Media) - Azure Stack HCI, Version 20H2 (Microsoft Media) - Windows Server 2025 Datacenter (Fujitsu Media) - Windows Server 2025 Standard (Fujitsu Media) - Windows Server 2025 (Microsoft Media) - Windows Server 2025 (Microsoft VL Media) - Windows Server 2022 Datacenter (Fujitsu Media) - Windows Server 2022 Standard (Fujitsu Media) - Windows Server 2022 (Microsoft Media) - Windows Server 2022 (Microsoft VL Media) - Windows Server 2019 Datacenter (Fujitsu Media) - Windows Server 2019 Standard (Fujitsu Media) - Windows Server 2019 (Microsoft Media) - Windows Server 2019 (Microsoft VL Media) - Windows Server 2016 Datacenter (Fujitsu Media) - Windows Server 2016 Standard (Fujitsu Media) - Windows Server 2016 (Microsoft Media) - Windows Server 2016 (Microsoft VL Media) - Windows Server 2012 R2 Datacenter (Fujitsu Media) - Windows Server 2012 R2 Standard (Fujitsu Media) - Windows Server 2012 R2 (Microsoft Media) - Windows Server 2012 R2 (Microsoft VL Media) - Windows Server 2012 Datacenter (Fujitsu Media) - Windows Server 2012 Standard (Fujitsu Media) - Windows Server 2012 (Microsoft Media) - Windows Server 2012 (Microsoft VL Media) - Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media) - Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media) - Windows Server 2008 R2 Standard + SP1 (Fujitsu Media)

Parameter	Type	Description
		- Windows Server 2008 R2 + SP1 (Microsoft Media) - Windows Server 2008 R2 + SP1 (Microsoft VL Media)
CoreVersion	string	Core Version - Full: Full installation - Core: Core install
Edition	string	Edition - Standard - Datacenter - Enterprise
ServerViewSuiteDVD	object	Settings of ServerView Suite DVD If you specify eLCM in InstallationMode, omit this item.
Version	string	Version Number of DVD to Use at Installation When omitting settings of ServerView Suite DVD, use the newest version from versions imported.
PostScript	object	Optional Script for Execution after Installation
FolderPath	string	FTP Directory that Saved a Script for Execution and the Name of the Script File for Execution
ScriptName	string	Name of Script File for Execution
RaidConfig	object	Setting of Array Controller
LogicalDiskType	string	Type of Disk Drive - RAID: RAID - SATA: SATA - SAS: SAS - FC: FC - ISCSIHBA: iSCSI HBA - PCIeSSD: PCIeSSD - USBSTOR: USBSTOR When using a card which has both SAS controller function and SAS array controller function as the SAS controller card, select "RAID."
RAIDController	string	Types of Array Controllers - Disabled: Uses the existing array configuration. (Select also when do not use RAID.) - OnBoard: Uses onboard array controller. - SasRaid01: Uses array controller enabled for SAS RAID0/1. - SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. When configuring a new array, select a type of the array controller. When using the existing array configuration, select "Disabled."
RAIDLevel	string	RAID Level of Disk Array to be Built - RAID0: RAID level 0

Parameter	Type	Description
		- RAID1: RAID level 1 - RAID1E: RAID level 1E - RAID5: RAID level 5 - RAID6: RAID level 6 - RAID10: RAID level 1+0
RAIDDisk	integer	The Number of Disks to be Built in RAID
ManagementLanInfo	object	Information of LAN to be Used as Management LAN If omitted, use the lead port on board.
AdapterInfo	object	Information of an Adapter to be Used as Management LAN Specifies either MACAddress (MAC Address) or AdapterInfo (Adapter).
AdapterType	string	Types of Adapters - Onboard: Onboard - AddOnCard: PCI card
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
MACAddress	string	MAC Address to be Used as Management LAN Specifies either MAC Address or Adapter. MAC addresses cannot be set with policies. Set these when creating profiles.
PxeBootInfo	object	Settings of PXE Boot
BootType	string	Class of Boot - Legacy: Legacy - UEFI: UEFI (Unified Extensible Firmware Interface) Specified operation varies by model. There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration. When unspecified, it will turn out to the following specified states. - For PRIMERGY RX/CX M4 or later and PRIMEQUEST 3000B/ 3000E: UEFI - For other than the above models: Legacy
InstallationInfo	object	Settings of installation information
InstallationMode	string	OS Installation Mode - PXEBoot: PXE boot - eLCM: eLCM For PRIMEQUEST2000-Partition and PRIMEQUEST3000E-Partition, eLCM cannot be specified. If it is omitted, PXEBoot will be specified.
Volumes	array	Volume List

Parameter	Type	Description
Volume	object	Information of Volume
Label	string	Volume Name
FileSystem	string	Type of File System - NTFS: NT File System
SpecifyPartitionSize	string	Selection of Automatic Setting/Specification of Partition Size - Enabled: Specifies the partition size - Disabled: Partition size is set automatically
PartitionSize	integer	Partition Size (MB) Specifies when SpecifyPartitionSize is Enabled.
QuickFormat	string	Settings for the use of quick format of partition - Enabled: Uses quick format. - Disabled: Does not use quick format.
BasicSettings	object	Basic Settings
TimeZone	string	Time Zone - GMT Standard Time - Pacific Standard Time - Mountain Standard Time - Central Standard Time - Eastern Standard Time - W. Europe Standard Time - Tokyo Standard Time
Language	string	Region and Language - English - German - Japanese
Keyboard	string	Language and Type of Keyboard - United States - English: English Keyboard - United States - International: English international keyboard - German: German Keyboard - Japanese: Japanese Keyboard
ProductID	string	Product Key Product keys cannot be set with policies. Set these when creating profiles.
SystemSettings	object	System Settings
DisplayResolution	string	Screen Resolution - 640x480 - 800x600 - 1024x768

Parameter	Type	Description
		- 1152x864 - 1280x1024 - 1600x1200
RefreshRate	string	Refresh Rate - 60 - 70 - 72 - 75 - 80 - 85 - 100
ColorDepth	string	The Number of Colors Displayed on the Screen - 1 - 4 - 8 - 15 - 16 - 24 - 32
Service	object	Service
Snmp	object	SNMP Settings
Setup	string	SNMP Service Installation Settings - true: Installs SNMP service. - false:Does not install SNMP service.
TrapConfigurations	array	List of SNMP Trap Settings
TrapConfiguration	object	Trap Settings
CommunityName	string	Community Name
TrapDestination	string	IP Address of Trap Transmission Destination
Securities	array	SNMP Security Settings List
Security	object	Security Settings
CommunityName	string	Community Name to Accept
Privilege	string	Community Right - None - Read Create - Read Write - Read Only - Notify
SnmpAgent	object	SNMP Agent Settings

Parameter	Type	Description
ContactName	string	Contact Information (name of administrator)
Location	string	Location (physical position)
SnmpMisc	object	SNMP Misc Settings
AuthenticationTrap	string	Settings for Transmission of Authentication Trap - Enabled: Sends certification trap. - Disabled: Does not send certification trap.
AcceptSnmpPacketsFromLocalhost	string	Settings for Receiving Localhost SNMP Packet - Enabled: Receives SNMP packet of Localhost. - Disabled: Does not receive SNMP packet of Localhost.
AcceptHostName	string	Host Name that Receives the SNMP Packet
ServiceApp	string	Settings of Application Services - Enabled: Uses application service. - Disabled: Does not use application service.
ServiceEndToEnd	string	Settings of End-To-End Service - Enabled: Uses End-To-End service. - Disabled: Does not use End-To-End service.
ServiceInternet	string	Settings of Internet Service - Enabled: Uses Internet service. - Disabled: Does not use Internet service.
ServiceDataLink	string	Settings of Data Link Service - Enabled: Uses data link service. - Disabled: Does not use data link service.
ServicePhysical	string	Settings of Physical Service - Enabled: Uses physical service. - Disabled: Does not use physical service.
AdditionalParameter	object	Settings of Remote Assistance
RemoteDesktop	string	Settings for the Use of Remote Desktop - Enabled: Uses remote desktop. - Disabled: Does not remote desktop.
RemoteAssistance	string	Settings of the Use of Remote Assistance - Enabled: Uses remote assistance. - Disabled: Does not use remote assistance.
FullRemoteControl	string	Settings of Remote Control - Enabled: Uses remote control. - Disabled: Does not remote control.
ExpiredHours	integer	Maximum time to Active an Invitation
ScvmmFirewallException	string	Settings of Firewall Needed to Register in SCVMM. - Enabled: Sets up required firewall to register for SCVMM.

Parameter	Type	Description
		- Disabled: Does not set required firewall for to register for SCVMM.
AddOnConfig	object	Settings of Applications to Add
JavaRuntime	string	Java Runtime Environment (JRE) Installation settings - Enabled: Installs Java Runtime Environment (JRE). - Disabled: Does not install Java Runtime Environment (JRE). Cannot install if CoreVersion is Core. For ServerView Suite DVD V13.18.12 or later, this is not installed even if "Enabled" is specified.
SVAgent	string	Settings of ServerView Agent Installation - Enabled: Installs ServerView Agent. - Disabled: Does not install ServerView Agent.
SVUpdateAgent	string	Settings of ServerView Update Agent Installation - Enabled: Installs ServerView Update Agent. - Disabled: Does not install ServerView Update Agent. Installing ServerView Update Agent calls for installation of ServerView Agent.
AgentlessService	string	Settings of ServerView Agentless Service Installation - Enabled: Installs ServerView Agentless Service. - Disabled: Does not install ServerView Agentless Service.
DSNAP	string	Setting of Installation of DSNAP - Enabled: Installs DSNAP. - Disabled: Does not install DSNAP.
SoftwareSupportGuide	string	Settings of Installation of Software Support Guide. - Enabled: Installs software support guide. - Disabled: Does not install software support guide.
RAIDManager	string	Settings of ServerView RAID Manager Installation - Enabled: Installs ServerView RAID Manager. - Disabled: Does not install ServerView RAID Manager.
OsIndividualConfig	object	Specific Information
BasicSettings	object	Basic Settings
AdministratorPassword	string	Administrator Password
UserName	string	Name of a User
Organization	string	Organization Name
ComputerName	string	Computer Name Computer names cannot be set with policies. Set these when creating profiles.
SystemSettings	object	System Settings
DomainOrWorkgroup	string	Settings for Participating in Work Group Domain - Workgroup: work group

Parameter	Type	Description
		- Domain: Domain
WorkGroupName	string	Work Group Name
DomainName	string	Domain Name
DomainUser	string	Domain User Name
DomainPassword	string	Domain Password
NetworkInterface	object	Network Settings
IPv4	object	IPv4 Address Settings
DhcpEnable	string	Setting of DHCP Validity - Enabled: Enables DHCP. - Disabled: Does not enable DHCP. When using a policy to change DhcpEnable from Enabled to Disabled, set Address of a linked profile in advance.
Address	string	IP Address IP addresses cannot be set with policies. Set these when creating profiles.
SubnetMask	string	Subnet Mask
DefaultGateWay	string	Gateway
DnsDomainName	string	DNS Domain Name This setting can be omitted even when setting IP address, subnet mask and default gateway without using DHCP.
DnsServer	string	IP Address of DNS Server This setting can be omitted even when setting IP address, subnet mask and default gateway without using DHCP.
DnsServer2	string	IP Address of DNS Server Specify the settings when you want to set multiple DNS servers. This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.
Vmware	object	Settings of VMware ESXi
OsType	object	OS Classification
Type	string	Type of Imported OS Media - VMware ESXi 8.0 Update 3 (Fujitsu Media) - VMware ESXi 8.0 Update 2 (Fujitsu Media) - VMware ESXi 8.0 Update 1 (Fujitsu Media) - VMware ESXi 8.0 (Fujitsu Media) - VMware ESXi 7.0 Update 3 (Fujitsu Media) - VMware ESXi 7.0 Update 2 (Fujitsu Media) - VMware ESXi 7.0 Update 1 (Fujitsu Media) - VMware ESXi 7.0 (Fujitsu Media) - VMware ESXi 6.7 Update 3 (Fujitsu Media) - VMware ESXi 6.7 Update 2 (Fujitsu Media)

Parameter	Type	Description
		- VMware ESXi 6.7 Update 1 (Fujitsu Media) - VMware ESXi 6.7 (Fujitsu Media) - VMware ESXi 6.5 Update 3 (Fujitsu Media) - VMware ESXi 6.5 Update 2 (Fujitsu Media) - VMware ESXi 6.5 Update 1 (Fujitsu Media) - VMware ESXi 6.5 (Fujitsu Media) - VMware ESXi 6.0 Update 3 (Fujitsu Media) - VMware ESXi 6.0 Update 2 (Fujitsu Media) - VMware ESXi 6.0 Update 1 (Fujitsu Media) - VMware ESXi 5.5 Update 3 (Fujitsu Media)
ServerViewSuiteDVD	object	Settings of ServerView Suite DVD If you specify eLCM in InstallationMode, omit this item.
Version	string	Version Number of DVD to Use at Installation When omitting settings of ServerView Suite DVD, use the newest version from the versions imported.
PostScript	object	Optional Script for Execution after Installation
FolderPath	string	FTP Directory that Saved a Script for Execution and the Name of the Script File for Execution
ScriptName	string	Name of Script File for Execution
RaidConfig	object	Setting of Array Controller
LogicalDiskType	string	Type of Disk Drive - RAID: RAID - SATA: SATA - SAS: SAS - FC:FC - ISCSIHBA:iSCSI HBA - PCIeSSD: PCIeSSD - USBSTOR: USBSTOR When using a card which has both SAS controller function and SAS array controller function as the SAS controller card, select "RAID."
RAIDController	string	Types of Array Controllers - Disabled: Uses the existing array configuration. (Select also when do not use RAID.) - OnBoard: Uses onboard array controller. - SasRaid01: Uses array controller enabled for SAS RAID0/1. - SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. When configuring a new array, select a type of the array controller. When using the existing array configuration, select "Disabled."
RAIDLevel	string	RAID Level of Disk Array to be Built

Parameter	Type	Description
		- RAID0: RAID level 0 - RAID1: RAID level 1 - RAID1E: RAID level 1E - RAID5: RAID level 5 - RAID6: RAID level 6 - RAID10: RAID level 1+0
RAIDDisk	integer	The Number of Disks to be Built in RAID
ManagementLanInfo	object	Information of LAN to be Used as Management LAN If omitted, use the lead port on board.
AdapterInfo	object	Information of an Adapter to be Used as Management LAN Specifies either MACAddress (MAC Address) or AdapterInfo (Adapter).
AdapterType	string	Types of Adapters - Onboard: Onboard - AddOnCard: PCI card
SlotIndex	integer	Slot Number
PortIndex	integer	Port Number
MACAddress	string	MAC Address to be Used as Management LAN Specifies either MAC Address or Adapter. MAC addresses cannot be set with policies. Set these when creating profiles.
PxeBootInfo	object	Settings of PXE Boot
BootType	string	Class of Boot - Legacy: Legacy - UEFI: UEFI (Unified Extensible Firmware Interface) Specified operation varies by model. There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration. When unspecified, it will turn out to the following specified states. - For PRIMERGY RX/CX M4 or later and PRIMEQUEST 3000B/3000E: UEFI - For other than the above models: Legacy
InstallationInfo	object	Settings of installation information
InstallationMode	string	OS Installation Mode - PXEBoot: PXE boot - eLCM: eLCM For PRIMEQUEST2000-Partition and PRIMEQUEST3000E-Partition, eLCM cannot be specified. If it is omitted, PXEBoot will be specified.

Parameter	Type	Description
BasicSettings	object	Basic Settings
LicenseAgreement	string	Setting of Acknowledgment of a License Agreement - Enabled: Agrees to the license agreement terms. - Disabled: Does not agree to the license agreement terms.
Keyboard	string	Language and Type of Keyboard - United States - English: English Keyboard - German: German Keyboard - Japanese: Japanese Keyboard
NetworkSettings	object	Network Settings
SetupStandardNetworkForVM	string	Configurations for Setting up VM Standard Network - Enabled: Sets up VM standard network. - Disabled: Does not setup VM standard network.
VLanId	integer	VLAN ID
AdditionalParameters	object	Parameters to Add
Cms	object	Information of Cloud Management Software
AddVmHostAfterInstallation	string	Settings of Registration of Cloud Management Software after Installation - Enabled: Registers cloud management software. - Disabled: Does not register cloud management software. For registration, disable DHCP at the network settings and input an IP address.
CmsName	string	Cloud Management Software Name of Cloud Management Software Registered in ServerView Infrastructure Manager
AddLocation	string	Specify a folder name or cluster name of registration destination of a host. When folders are created hierarchically, specify a name of the bottom folder. When there are folders of the identical name, it may be possible that it will not be registered at an intended place.
OsIndividualConfig	object	Settings of Specific Information
BasicSettings	object	Basic Settings
RootPassword	string	Root Password A hash mark (#) cannot be used. If a hash mark (#) is used, the OS installer will fail.
NetworkSettings	object	Network Settings
GetComputerNameViaDNS	string	Setting of How to Use a Host Name for Acquiring DNS - Enabled: Uses DNS retrieved host name. - Disabled: Does not install DNSAP. When using a policy to change GetComputerNameViaDNS from Enabled to Disabled, set ComputerName of a linked profile in advance.

Parameter	Type	Description
ComputerName	string	Host Name Computer names cannot be set with policies. Set these when creating profiles.
DhcpEnable	string	Setting of the Use of DHCP - Enabled: Uses DHCP. - Disabled: Does not use DHCP. When using a policy to change DhcpEnable from Enabled to Disabled, set Address of a linked profile in advance.
NetworkInterface	object	Settings of Network Interface
IPv4	object	Settings of Network Interface
Address	string	Fixed IP Address IP addresses cannot be set with policies. Set these when creating profiles.
SubnetMask	string	Subnet Mask
DefaultGateWay	string	Gateway
DnsDomainName	string	DNS Domain Name This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.
DnsServer	string	IP Address of DNS Server This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.

[Precautions]

- For the information on the OS types and versions that ISM supports, refer to "Support Matrix" - "Supported OSs" sheet and "Server, Chassis" sheet.

  https://support.ts.fujitsu.com/index.asp

  Select [Select a new Product] on the above site and enter "Infrastructure Manager" in [Product Search:].

  Select [DOWNLOADS] and select the target operating system.

  The reference procedures are subject to change without notice.

D.5 MMB

Parameter	Type	Description
MMB	object	Partition Settings of MMB (Management Board) If you delete all of the MMB settings in "4.10.6 Updating Profiles," omit this item. When a policy is being referenced, you cannot delete the settings.
ConfRetryCounterMax	integer	Specifies the number of retrying to restart OS when the OS is shut down due to watchdog or hardware error. If none are set, specifies null. Specify 0 when not to restart. Specify the number of restarts (1-10) when trying to restart.

Parameter	Type	Description
ConfRetryZeroAction	string	Specifies the action when exceeding the number of re-trying. If none are set, specifies null. - Stop rebooting and Power off: Stops reboot and turns the power of the partitions OFF. - Stop rebooting: Stops reboot and stops partitions. - Diagnostic Interrupt assert: Stops reboot and asserts NMI interruption for the partitions.
ConfSoftWatchdogEnable	string	Specifies whether to use Software Watchdog to execute periodic communication confirmations while an OS is running. If none are set, specifies null. - Enabled: Communication monitored. - Disabled: Communication not monitored.
ConfSoftWatchdogBehavior	string	Specifies an operation when the OS does not communicate due to Software Watchdog. Specifies when ConfSoftWatchdogEnable is Enabled. If none are set, specifies null. - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. - NMI: Make NMI occur.
ConfSoftWatchdogTime	integer	Specifies a value from 1-6000 seconds for monitoring time by the Software Watchdog. Specifies when ConfSoftWatchdogEnable is Enabled. It is judged as abnormality when unable to communicate after a specified time here. If none are set, specifies null.
ConfBootWatchdogEnable	string	Specifies the monitoring the period between POST completion and OS start, with use of Boot Watchdog. If none are set, specifies null. - Enabled: Period monitored. - Disabled: Period not monitored.
ConfBootWatchdogBehavior	string	Specifies behavior for the case when an OS does not start within the specified time in Boot Watchdog. Specifies when ConfBootWatchdogEnable is Enabled. If none are set, specifies null. - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once.
ConfBootWatchdogTime	integer	Specifies a value from 1-6000 seconds for the Boot watchdog monitoring time.

Parameter	Type	Description
		Specifies when ConfBootWatchdogEnable is Enabled. It is judged as abnormality when OS cannot start after a specified time here. If none are set, specifies null.

D.6 Monitoring

Parameter	Type	Description
TimeSync	object	Time settings
TimeSyncSource	string	Specifies time setting performance. If none are set, specifies null. - System RTC: Time retrieved from the system clock. - NTP Server: Time synchronized with that of an NTP server which operates based on a specific time as its reference time source by using Network Time Protocol (NTP).
RtcTimeMode	string	Specifies time setting performance. If none are set, specifies null. - UTC: Time displayed in UTC (Coordinated Universal Time) format. - Localtime: Time displayed in local time format.
TimeZoneLocation	string	Specifies the time zone to correspond to the location of a server. If none are set, specifies null. - Asia/Tokyo - US/Pacific - US/Mountain - US/Central - US/Eastern - Europe/Berlin - Europe/London - UTC
NtpServers	arrays	Specifies NTP server settings.
NtpServer	string	Specifies DNS name or IP address of the NTP server. If none are set, specifies null.
Snmp	object	SNMP settings
ServiceEnable	string	Specifies SNMP service performance. If none are set, specifies null. - Enabled: Enables the operation. - Disabled: Disables the operation.
ServicePort	integer	Specifies a port number where the SNMP service is in an idle state. Typically it is the UDP 161 port.

Parameter	Type	Description
		If none are set, specifies null.
ServiceCommunityName	string	Specifies a Community Name for when it is SNMP v1/v2c. If none are set, specifies null. The number of characters specifiable is 18 at maximum. Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:,_?;-@&) %!. Blank symbols and \ may not be used.
TrapCommunityName	string	Specifies a SNMP Community Name for the SNMP trap destination. If none are set, specifies null. The number of characters specifiable is 18 at maximum. Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:,_?;-@&) %!. Blank symbols and \ may not be used.
Traps	arrays	Specifies the list of trap destinations.
TrapDestination	string	Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).
SnmpProtocol	string	Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c

D.7 RAID

Parameter	Type	Description
RAID	object	RAID Settings
RAID_RAIDLevel	string	Specifies the RAID level of the disk array to be configured. - RAID0: RAID level 0 - RAID1: RAID level 1 - RAID1E: RAID level 1E - RAID5: RAID level 5 - RAID6: RAID level 6 - RAID10: RAID level 1+0
RAID DiskCount	integer	Specifies the number of disks per disk group to be added to the RAID. - RAID0: 1 - 32 - RAID1: 2 - RAID1E: 4 - 32

Parameter		Type	Description
			- RAID5: 3 - 32 - RAID6: 4 - 32 - RAID10: 2 -16 - Key omitted or null: Automatically set with minimum configuration for the specified RAID level
	RAID GroupCount	integer	Specifies the number of disk groups to be added to the RAID. - RAID0: 1 - RAID1: 1 - RAID1E: 1 - RAID5: 1 - RAID6: 1 - RAID10: 2 - 8 - Key omitted or null: Automatically set with minimum configuration for the specified RAID level

D.8 BIOSByModel

Parameter		Type	Description
IOSByModel		object	BIOS Settings (per model)
	ModelName	string	Model Name
	AttributeVersion	string	Version of the BIOS settings
	BIOSData	object	Specifies BIOS configuration based on the BIOS settings. Omit items that do not need to be set for the device.

D.9 iRMCByModel

Parameter		Type	Description
iRMCByModel		object	iRMC Settings (per model)
	ModelName	string	Model Name
	AttributeVersion	string	Version of the iRMC settings
	iRMCData	object	Specifies iRMC configuration based on the iRMC settings. Omit items that do not need to be set for the device.

Index

[D]

/datacenters....112,113
/datacenters/{datacenterid}....114,115,116

[E]

/event/actions....223,227
/event/actions/{actionid}....229,233
/event/actions/{actionid}/test....251
/event/alarms....233,236
/event/alarms/eventlist....247
/event/alarms/settings....251
/event/alarms/traplist....247
/event/alarms/{alarmid}....237,239
/event/history....257
/event/history/anomaly/export....269
/event/history/anomaly/logs/{logid}....266
/event/history/anomaly/show....262
/event/history/audit/export....268
/event/history/audit/logs/{logid}....265
/event/history/audit/show....260
/event/history/event/export....267
/event/history/event/logs/{logid}....264
/event/history/event/show....258
/event/history/retentionperiod/settings....270
/event/history/trap....248
/event/history/trap/ignore....249,250
/event/history/trap/ignore/delete....250
/event/snmpmanagers....241,243
/event/snmpmanagers/{snmpserverid}....244,246

[F]

/floors....107,108
/floors/{floorid}....109,110,112

[I]

/ismva/loginstatus....408
/ismva/power/restart....433
/ismva/power/stop....434
/ismva/privilege....396
/ismva/privilege/settings....398,399
/ismva/settings....400
/ismva/settings/backup....437
/ismva/settings/cas....435,436
/ismva/settings/dhcp....427,428
/ismva/settings/dhcp/export....429
/ismva/settings/kerberos....431,432
/ismva/settings/kerberos/init....430
/ismva/settings/kerberos/restore....431
/ismva/settings/locale....410
/ismva/settings/locale/keymap/list....411
/ismva/settings/locale/list....411
/ismva/settings/patch/add....405
/ismva/settings/plugin....406
/ismva/settings/plugin/add....404
/ismva/settings/plugin/delete....407
/ismva/settings/restore....439
/ismva/settings/result....408
/ismva/settings/service....434
/ismva/settings/sslcert....425
/ismva/settings/sslcert/export....426
/ismva/settings/time....412,415
/ismva/settings/timezone....419
/ismva/settings/volume....419,421
/ismva/settings/volume/delete....423
/ismva/settings/volume/extend....424
/ismva/settings/volume/mount....421
/ismva/settings/volume/umount....422
/ismva/webserverlog/export....409

[N]

/networks/connections....369
/networks/differences....371
/networks/nodes/{nodeid}/ifgroups....377
/networks/nodes/{nodeid}/lags....374,375
/networks/nodes/{nodeid}/vfabs....376
/networks/nodes/{nodeid}/vlans....373
/networks/ports....366
/networks/refresh....372
/networks/virtualmachines....368
/networks/virtualrouters....378
/networks/virtualswitches....368
/networks/vlans....373
/networks/vlans/cancel....374
/nodegroups....116,117
/nodegroups/{nodegroupid}....118,119,120
/nodes....73,85
/nodes/aisgateway/scripts/download....132
/nodes/discovery/auto....153
/nodes/discovery/auto/{discoverednodeid}....136,154
/nodes/discovery/manual....140,142
/nodes/discovery/manual/csv....161,163,165
/nodes/discovery/manual/csvitems....162
/nodes/discovery/manual/{manualdiscoveryid}/cancel....163
/nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid}....147
/nodes/firmware/update....327
/nodes/firmware/update/cancel....330
/nodes/inventory....170
/nodes/logs....358
/nodes/logs/archivedlog/downloadfiles....364
/nodes/logs/archivedlog/downloadfiles/create....361
/nodes/logs/archivedlog/downloadfiles/create/cancel....362
/nodes/logs/collection/collect....358
/nodes/logs/collection/collect/cancel....359
/nodes/logs/collection/settings....349,352
/nodes/logs/files....356
/nodes/logs/files/delete....365
/nodes/logs/files/delete/cancel....366
/nodes/logs/nodelog/downloadfiles....363
/nodes/logs/nodelog/downloadfiles/create....360
/nodes/logs/nodelog/downloadfiles/create/cancel....361

/nodes/monitor/items..... 208,211
/nodes/monitor/items/{itemid}..... 213,215
/nodes/monitor/items/{itemid}/history..... 216
/nodes/monitor/network..... 217
/nodes/monitor/prediction/globalthreshold..... 222,223
/nodes/nodegroups/assign..... 120
/nodes/nodes 133
/nodes/nodes/os..... 205,207
/nodes/nodetags..... 132
/nodes/os..... 187
/nodes/profiles/assign/cancel..... 291
/nodes/profiles/backup/cancel..... 315
/nodes/profiles/eim/update/cancel..... 326
/nodes/profiles/restore/cancel..... 322
/nodes/profiles/unassign/cancel..... 291
/nodes/profiles/verify/cancel..... 325
/nodes/{nodeid}..... 89,93,99
/nodes/{nodeid}/accounts..... 121,124
/nodes/{nodeid}/accounts/{accountid}..... 125,126,130
/nodes/{nodeid}/alarmstatus/deactivate..... 130
/nodes/{nodeid}/inventory..... 183
/nodes/{nodeid}/inventory/refresh..... 170
/nodes/{nodeid}/irmcloginsession..... 168
/nodes/{nodeid}/led..... 166,167
/nodes/{nodeid}/maintenancemode..... 131
/nodes/{nodeid}/monitor/itemlist..... 208
/nodes/{nodeid}/monitor/network..... 219
/nodes/{nodeid}/monitor/network/history..... 222
/nodes/{nodeid}/monitor/settings..... 216,217
/nodes/{nodeid}/os..... 184,188,190,193
/nodes/{nodeid}/power..... 166,168
/nodes/{nodeid}/profiles/assign..... 290
/nodes/{nodeid}/profiles/backup..... 314
/nodes/{nodeid}/profiles/eim/update..... 326
/nodes/{nodeid}/profiles/restore..... 321
/nodes/{nodeid}/profiles/unassign..... 291
/nodes/{nodeid}/profiles/verify..... 325

[P]

/pools..... 451,452
/pools/assign..... 453
/pools/unassign 454
/profiles/backups..... 316
/profiles/backups/export..... 318
/profiles/backups/import..... 320
/profiles/backups/policy..... 320
/profiles/backups/profile..... 319
/profiles/backups/{backupid}..... 318
/profiles/categories..... 271,272
/profiles/export..... 306
/profiles/import..... 305
/profiles/packages..... 312
/profiles/policies..... 295,297
/profiles/policies/groups..... 302,303
/profiles/policies/groups/{groupid}..... 304,305
/profiles/policies/{policyid}..... 299,302
/profiles/profiles..... 273,278
/profiles/profiles/groups..... 292
/profiles/profiles/groups/{groupid}..... 293,294
/profiles/profiles/nodes..... 322
/profiles/profiles/{profileid}..... 282,289

[R]

/racks..... 99,101
/racks/{rackid}..... 102,104,106
/resources/clusters..... 383
/resources/clusters/{clusterid}..... 384
/resources/inventory/refresh..... 193
/resources/inventory/virtualmachine/test..... 204
/resources/nodes/{nodeid}/cmsmaintenancemode/set..... 390
/resources/nodes/{nodeid}/cmsmaintenancemode/unset..... 391
/resources/nodes/{nodeid}/restart..... 390
/resources/nodes/{nodeid}/shutdown..... 393
/resources/storagepools..... 379
/resources/storagepools/refresh..... 383
/resources/storagepools/{storagepoolid}..... 380
/resources/storagepools/{storagepoolid}/history..... 391
/resources/virtualmachines..... 194
/resources/virtualmachines/{virtualmachineid}..... 196
/resources/virtualmachines/{virtualmachineid}/move..... 388
/resources/virtualmachines/{virtualmachineid}/power/off..... 389
/resources/virtualmachines/{virtualmachineid}/power/on..... 389
/resources/virtualrouters..... 201
/resources/virtualrouters/{virtualrouterid}..... 202
/resources/virtualswitches..... 198
/resources/virtualswitches/{virtualswitchid}..... 200

[S]

/system/ismva/version..... 435
/system/licenses..... 69,70,72
/system/licenses/delete..... 71
/system/relayroute..... 471
/system/settings/cms..... 441,444
/system/settings/cms/{cmsid}..... 446,447,450
/system/settings/cms/{cmsid}/maintenancemode..... 468
/system/settings/firmware/baseline/allocate..... 342
/system/settings/firmware/baseline/allocate/release..... 343
/system/settings/firmware/baseline/createupdate..... 341
/system/settings/firmware/baseline/delete..... 342
/system/settings/firmware/baseline/list..... 344
/system/settings/firmware/baseline/template..... 340
/system/settings/firmware/documents..... 331
/system/settings/firmware/dvd/import..... 335
/system/settings/firmware/dvd/import/cancel..... 336
/system/settings/firmware/dvd/{repositoryid}..... 338
/system/settings/firmware/firmtool/import..... 347
/system/settings/firmware/firmtool/import/cancel..... 348
/system/settings/firmware/firmtool/list..... 348
/system/settings/firmware/firmtool/{toolid}..... 349
/system/settings/firmware/import..... 337
/system/settings/firmware/import/cancel..... 338
/system/settings/firmware/list..... 332
/system/settings/firmware/repositories..... 332
/system/settings/firmware/template..... 335
/system/settings/firmware/{firmwareid}..... 339

/system/settings/ftp/filelist....440
/system/settings/job/firmwareupdate....339
/system/settings/job/firmwareupdate/{JobId}....340
/system/settings/ldaps....54,57
/system/settings/ldaps/switch....62
/system/settings/proxy....463,465
/system/settings/proxy/test....467
/system/settings/proxy/{proxyid}....465,467
/system/settings/relayroute....469,470
/system/settings/repositories/profiles....311
/system/settings/repositories/profiles/dvd/import....306
/system/settings/repositories/profiles/dvd/import/cancel....310
/system/settings/repositories/profiles/{repositoryid}....312
/system/settings/shareddirectory....457
/system/settings/shareddirectory/mount/{mountid}....461
/system/settings/shareddirectory/umount/{mountid}....463
/system/settings/shareddirectory/{mountid}....458,459,461
/system/settings/shareddirectory/{usergroupid}....455
/system/settings/smtpserver....240,241
/system/settings/snmptrapsettings....252,254
/system/settings/snmptrapsettings/{snmptrapsettingsid} 255,257
/system/snap....402

[T]

/tasks....395
/tasks/{taskid}....394

[U]

/usergroups....36,43
/usergroups/search....41
/usergroups/{usergroupid}....44,47,54
/users....24,27
/users/login....20
/users/logout....23
/users/policy....63,65
/users/{userid}....29,31,36
/users/{userid}/selectgroup....43