FUJITSU

# FUJITSU Software
# ServerView Infrastructure Manager V2.2

# REST API Reference Manual

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# Preface

## Purpose

This manual describes the installation procedure and the general functions of FUJITSU Software ServerView Infrastructure Manager (hereafter referred to as "ISM"). ISM provides APIs that work in link with your own self-created applications. The APIs in ISM 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.

## ISM Manuals

| Manual name | Notation in this manual | Description |
|---|---|---|
| FUJITSU Software ServerView Infrastructure Manager V2.2 User's Manual | ServerView Infrastructure Manager V2.2 User's Manual | This manual describes the ISM functions, the installation procedure, and procedures for operation and troubleshooting. It allows you to quickly grasp all functions and all operations of ISM. |
| FUJITSU Software ServerView Infrastructure Manager V2.2 Start Guide | ServerView Infrastructure Manager V2.2 Start Guide | This manual describes an overview of the functions and a workflow for installing ISM. It allows you to quickly grasp the procedures for installing ISM. |
| FUJITSU Software ServerView Infrastructure Manager V2.2 Operating Procedures | ServerView Infrastructure Manager V2.2 Operating Procedures | This manual describes the operating procedures for initial setup and daily operation (monitoring of nodes, server setups, installation of OSes on servers, updating of server firmware) of ISM. |
| FUJITSU Software ServerView Infrastructure Manager V2.2 REST API Reference Manual | ServerView Infrastructure Manager V2.2 REST API Reference Manual | This manual describes how to use the required API, samples and parameter information when cooperating applications created by the customer with ISM. |
| FUJITSU Software ServerView Infrastructure Manager V2.2 Glossary | ServerView Infrastructure Manager V2.2 Glossary | The glossary describes definitions of the terminology that you require to understand for using ISM. |

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

For the respective hardware products for management, refer to the manuals of the relevant hardware.

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

http://manuals.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 key labeled "Enter"; [Ctrl]+[B] means hold down the key labeled "Ctrl" or "Control" and then press the B key.

#### Symbols

Items that require special caution are preceded by the following symbols.

### Point

Describes the content of an important subject.

### Note

Describes an item that requires your attention.

Variables: <xxx>

Represents variables that require replacement by numerical values or text strings in accordance with the environment you are using.

Example: <IP address>

Abbreviation

This document may use the following abbreviations.

| Official name | Abbreviation | |
|---|---|---|
| Microsoft(R) Windows Server(R) 2016 Datacenter | Windows Server 2016 Datacenter | Windows Server 2016 |
| Microsoft(R) Windows Server(R) 2016 Standard | Windows Server 2016 Standard | |
| Microsoft(R) Windows Server(R) 2016 Essentials | Windows Server 2016 Essentials | |
| Microsoft(R) Windows Server(R) 2012 R2 Datacenter | Windows Server 2012 R2 Datacenter | Windows Server 2012 R2 |
| Microsoft(R) Windows Server(R) 2012 R2 Standard | Windows Server 2012 R2 Standard | |
| Microsoft(R) Windows Server(R) 2012 R2 Essentials | Windows Server 2012 R2 Essentials | |
| Microsoft(R) Windows Server(R) 2012 Datacenter | Windows Server 2012 Datacenter | Windows Server 2012 |
| Microsoft(R) Windows Server(R) 2012 Standard | Windows Server 2012 Standard | |
| Microsoft(R) Windows Server(R) 2012 Essentials | Windows Server 2012 Essentials | |
| Microsoft(R) Windows Server(R) 2008 R2 Datacenter | Windows Server 2008 R2 Datacenter | Windows Server 2008 R2 |
| Microsoft(R) Windows Server(R) 2008 R2 Enterprise | Windows Server 2008 R2 Enterprise | |
| Microsoft(R) Windows Server(R) 2008 R2 Standard | Windows Server 2008 R2 Standard | |
| Red Hat Enterprise Linux 7.4 (for Intel64) | RHEL 7.4 | Red Hat Enterprise Linux or Linux |
| Red Hat Enterprise Linux 7.3 (for Intel64) | RHEL 7.3 | |
| Red Hat Enterprise Linux 7.2 (for Intel64) | RHEL 7.2 | |
| Red Hat Enterprise Linux 7.1 (for Intel64) | RHEL 7.1 | |
| Red Hat Enterprise Linux 6.9 (for Intel64) | RHEL 6.9(Intel64) | |
| Red Hat Enterprise Linux 6.9 (for x86) | RHEL 6.9(x86) | |

| Official name | Abbreviation | |
|---|---|---|
| Red Hat Enterprise Linux 6.8 (for Intel64) | RHEL 6.8(Intel64) | |
| Red Hat Enterprise Linux 6.8 (for x86) | RHEL 6.8(x86) | |
| Red Hat Enterprise Linux 6.7 (for Intel64) | RHEL 6.7(Intel64) | |
| Red Hat Enterprise Linux 6.7 (for x86) | RHEL 6.7(x86) | |
| Red Hat Enterprise Linux 6.6 (for Intel64) | RHEL 6.6(Intel64) | |
| Red Hat Enterprise Linux 6.6 (for x86) | RHEL 6.6(x86) | |
| SUSE Linux Enterprise Server 12 SP3 (for AMD64 & Intel64) | SUSE 12 SP3(AMD64)<br>SUSE 12 SP3(Intel64)<br>or<br>SLES 12 SP3(AMD64)<br>SLES 12 SP3(Intel64) | SUSE Linux Enterprise Server<br>or<br>Linux |
| SUSE Linux Enterprise Server 12 SP2 (for AMD64 & Intel64) | SUSE 12 SP2(AMD64)<br>SUSE 12 SP2(Intel64)<br>or<br>SLES 12 SP2(AMD64)<br>SLES 12 SP2(Intel64) | |
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| SUSE Linux Enterprise Server 11 SP4 (for AMD64 & Intel64) | SUSE 11 SP4(AMD64)<br>SUSE 11 SP4(Intel64)<br>or<br>SLES 11 SP4(AMD64)<br>SLES 11 SP4(Intel64) | |
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| VMware(R) vSphere™ ESXi 6.5 | VMware ESXi 6.5 | VMware ESXi |
| VMware(R) vSphere™ ESXi 6.0 | VMware ESXi 6.0 | |
| VMware(R) vSphere™ ESXi 5.5 | VMware ESXi 5.5 | |

Terms

For the major terms and abbreviations used in this manual, refer to "ServerView Infrastructure Manager V2.2 Glossary."

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# Chapter 1 Overview

This chapter provides an overview of the APIs in ISM.

## 1.1 Outline

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

The APIs in ISM 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 ISM, 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

ISM 2.2 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 |
| Installation location | /datacenters | Data center information |
| | /floors | Floor information |
| | /racks | Rack information |
| Event | /event | Event information<br>(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 |
| | /profiles/backups | Hardware settings backup information |

| Category | Resource name | Description |
|---|---|---|
| System settings | /system | System settings information |
| | /system/licenses | License information |
| | /system/settings | ISM settings information |
| | /system/settings/repositories | ISM repository information |
| | /system/commonsettings | Management information of shared resources |
| ISM VA | /ismva | ISM-VA information |

## 1.3 Preconditions

For using the APIs in ISM, 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 Shared Specifications

This chapter describes the shared specifications for using the ISM REST API.


- 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 explains 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 wish to change the port number, refer to "ServerView Infrastructure Manager V2.2 User's Manual."

- 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, there is no need to specify the IsmBody key itself.

## 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<br>API processing results are returned. For details, refer to "Chapter 4 API Reference." |
| MessageInfo | Array | Message information<br>Errors, warnings, and notification messages regarding API processing are returned.<br>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<br>A unique ID is returned for each message. |
| API | Character string | API type<br>The API type is returned in the format "Method name URI". |
| Message | Character string | API processing results<br>API processing results are returned as response parameters. |
| Timestamp | Character string | Date & time information<br>Information on the date and time when the corresponding message was produced is returned. |

# 2.2 HTTP Header

## 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.<br>If omitted, the latest version is used. |
| X-Ism-Authorization | Session ID | Specify an ID when using session authentication.<br>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.<br>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.<br>Using ETags is recommended for using REST APIs in a given sequence.<br>If omitted, ETag exclusion is not carried out.<br>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.<br>Status code examples:<br>- Normal: 200 OK<br>- When there is an error: 400 Bad Request, etc. | Status line<br>This is always returned without fail.<br>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:<br>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.<br>For details on session authentication, refer to "2.5.1 Session Authentication." |

| Header name | Content | Description |
|---|---|---|
| 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.<br>Using ETags is recommended for using REST APIs in a given sequence.<br>If omitted, ETag exclusion is not carried out.<br>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: xxxxxxxxxxxxxx
```

### 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 carry out 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 carried out. |
| Not matching | Processing is not carried out, 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<br>Results of processing are returned in the HTTP response body. |
| | | 201 | Created | Generated<br>A new resource was generated. |
| Error | 4xx | 400 | Bad Request | Invalid request<br>Due to an invalid request, there was a processing error. |
| | | 401 | Unauthorized | No permission<br>Your request is not authenticated. |

| Classification | Code | Code | Status | Description |
|---|---|---|---|---|
| | | 404 | Not Found | Not found<br>There is no API that matches the URL. |
| | | 405 | Method Not Allowed | Prohibited method<br>The method is not supported by the resource shown in the URL. |
| | | 412 | Precondition failed | Failure due to preconditions<br>(Failure due to ETag exclusive control) |
| Connection not available | 5xx | 500 | Internal Server Error | Internal error<br>An internal ISM error occurred during processing. |
| | | 501 | Not Implemented | Presently not supported<br>Functions required for the request are not supported. |
| | | 503 | Service Unavailable | Service unavailable<br>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, carry out password encryption.

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

### 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

**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.

## 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. Acquire 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.

### 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 according to "2.4 Encryption."

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

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 ISM, each resource is managed by ID. When executing API, there are situations when it is necessary to specify the resource ID.

### 2.6.1 Retrieving the Resource ID

The Resource ID used in ISM 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 | 4.1.9 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 |
| Definition of Power Capping Settings ID | Cappingid | GET /nodes/powercapping | 4.14.2 List Retrieval for Definitions in Settings for Power Capping Function |
| Category ID | CategoryId | GET /profiles/categories | 4.10.1 List Retrieval for Profile Categories |

| Resource ID | Parameter | REST API | Reference |
|---|---|---|---|
| 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 Settings |
| Log ID | Logid | 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 Discovery of Node |
| Manual Discovery Node ID | ManualNodeId | GET /nodes/discovery/manual | 4.4.2 Retrieving Results of Manual Discovery of Node |
| Auto Discovered Node ID | DiscoveredNodeId | GET /nodes/discovery/auto | 4.4.4 Retrieving Results of Automatic Discovery of Node |
| Policy ID | PolicyId | GET /profiles/policies | 4.10.18 List Retrieval for Policies |
| 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<br>GET /system/settings/repositories/profiles | 4.11.4 List Retrieval for Registered Repositories<br>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 Router ID | VirtualRouterId | GET /resources/virtualswitches<br>GET /networks/virtualswitches | 4.6.12 List Retrieval for Virtual Switches<br>4.13.2 Retrieving Virtual Switch Connection Information from All Nodes |
| Storage Pool ID | Pool_id | GET /resources/storagepools | 4.15.1 List Retrieval for Storage Pools |
| Cluster ID | Cluster_id | 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 |

| Resource ID | Parameter | REST API | Reference |
|---|---|---|---|
| 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 Firmware Update 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

### 3.1.1 Preparation

In order to carry out 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 acquired after having created a self-signed SSL server 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 acquired after having created a self-signed SSL server certificate with ISM

1. Create a self-signed SSL server certificate.

   For information on how to create self-signed SSL certificates, refer to "Creation of Self-signed SSL Server Certificates" in "ServerView Infrastructure Manager V2.2 User's Manual."

2. Acquire 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 acquired via the --cacert option of the curl command when issuing the REST API.

   Example of execution with --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 acquire 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 acquired after having created a self-signed SSL server certificate with ISM," or alternatively specify and use a CA certificate acquired 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 --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 to 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 acquire 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 a method described in "2.4 Encryption."

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

Login

Acquire 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 -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 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 please 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 acquire 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 acquired 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, carry out 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

Execute 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 nodes detailed 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 asynchronized processes, such as "4.11.1 Starting Firmware Updates" or "4.10.8 Assigning Profiles to Nodes" might return the TaskID in the reponse 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 Separate Retrieval for 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

User management includes the following functions:

- User management
- ISM authentication
- User group management

### 4.1.1 Login (Session Authentication)

#### [Overview]

Perform a login during user session authentication.

#### [Format]

```
POST /users/login
```

#### [Query Parameter]

None

#### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserName | string | User Name |
| Password | string | Password<br>Assign an encrypted password. Refer to "2.4 Encryption" for encryption method. |
| SetCookie | string | Cookie Settings<br>Specifies whether or not a Cookie setting response header is returned.<br>- Enable: Return Cookie setting response header.<br>- Disable: Does not return Cookie setting response header.<br>When the key is omitted or when the setting value is empty (" "), the Cookie settings will not be carried out.<br>With this configuration, when login succeeds, it outputs session ID in the response header for Cookie setting. |

#### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Auth | string | Session ID<br>The session ID retrieved after login is output. |
| SetCookie | string | Cookie Settings<br>The same parameter as the request parameter is output. |
| UserId | string | User ID<br>The user ID of the user that logged in is output. |
| MessageId | string | Login message ID<br>The message ID corresponding to the notification message at the time of login. |
| Message | string | Login message<br>The notification message at the time of login. |

### [Precautions]

- The following are precautions for when login fails:
  - With consecutive failures, one cannot log in for a certain time. When unable to login with this threshold value, it is assigned in the security policy.
  - After the set amount of time has passed, the failure count will return to 0.
  - You cannot login because 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.
- When SetCookie is assigned, 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, however, the following message is notified as a reference in the results which call up API.

| ID | Content |
|---|---|
| 30061903 | Password is no longer valid. Change the password immediately. |
| 30061904 | The password will soon be invalid. Change your password. |
| 30061905 | The default password has not been changed. Change your password. |

## 4.1.2 Logout (Session Authentication)

### [Overview]

Performs user logout.

### [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]

Register ISM user.

### [Format]

```
POST /users
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserName | string | User Name<br>Contains the following restrictions:<br>- Max length: 32<br>- Half-width alphanumeric characters<br>- Numbers, letters(Upper and lower cases), underscore, $, period and hyphen can be used.<br>- Cannot begin with "-", can only use "$" at the end. |
| Password | string | Password<br>Assign an encrypted password. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 32 characters or less.<br>Also, you can use Japanese language for a decrypted password. |
| UserRoles | array(string) | List of User Role Information<br>Specify a role to be assigned to a user from the following ID:<br>- Administrator<br>- Operator<br>- Monitor<br>More than one can be assigned but the highest role will be added. |
| UserGroupId | string | User Group ID<br>Assigns a user group ID to the group 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:<br>- English: (Default)<br>- Japanese |
| Authentication | string | Authentication method<br>Specify an authentication method.<br>- ISM : ISM authentication<br>- null: Follows the authentication method of a user group.<br>If left blank, it assumes null was assigned. |
| Description | string | Description<br>Comment column where free information can be set. Will not be used in controls. |
| MomUser | string | Assign availability of cooperate with ISM.<br>- Enable: links.<br>- Disable: does not link. (Initial value) |
| InnerControl | string | Information for Internal Controls<br>Do not configure because this information will be used in the internal controls of the ISM. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| UserId | string | User ID<br>Outputs IDs of users added. |
| UserName | string | User Name<br>The same parameter as the request parameter is outputted. |
| Password | string | Password<br>The same parameter as the request parameter is outputted. |
| UserRoles | array(string) | List of User Role Information<br>A role assigned to a user is outputted. |
| UserGroupId | string | User Group ID<br>The same parameter as the request parameter is outputted. |
| NodeGroups | array | List of Information of Node Group<br>Outputs information of node groups corresponding to a user group. |
| NodeGroupId | string | Node Group ID |
| Description | string | Description<br>The same parameter as the request parameter is outputted. |
| MomUser | string | Availability of cooperate with ISM is outputted.<br>The same parameter as the request parameter is outputted. |
| Language | string | Language |

| Parameter | Type | Description |
|---|---|---|
| | | The same parameter as the request parameter is outputted. |
| Authentication | string | Authentication method<br>The same parameter as the request parameter is outputted. |
| InnerControl | string | Information for Internal Controls |
| Modified | string | Date of Update<br>Time and date added in UTC hours is outputted. |

### [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 Administrator role.
- The following names cannot be used as they have been used by 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 becomes unique in the whole context of ISM.
- Only an user holding an Administrator role in the Administrator group can set MomUser parameter to Enable.

## 4.1.4 List Retrieval for Users

### [Overview]

Retrieve all user information of ISM.

### [Format]

```
GET /users
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserGroupId | string | User Group ID<br>Specify the range of users to retrieve. If omitted, users of the user group executed by the user 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<br>Enrolled user groups is outputted by array. |
| UserGroupId | string | User Group ID |
| UserGroupName | string | User Group Name |
| Authentication | string | Authentication method<br>Authentication method is outputted.<br>- ISM : ISM authentication<br>- LDAP: LDAP authentication |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - null: Unable to retrieve data<br>For this value, the following values will be output.<br>- User authentication method: If it is ISM authentication<br>ISM will output<br>- User authentication method: If used in user group<br>Outputs authentication method for user group |
| | Description | string | Description |
| | MomUser | string | Availability of cooperate with ISM is outputted.<br>- Enable: links<br>- Disable: does not link |
| | LastAccessTime | string | Time and date of last access<br>Time and date of last access by a user in UTC is outputted. |

### [Precautions]

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

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

    The user who executes can retrieve all users in the same user group.
- Depending on the role of the user who executes, summary of outputted range is as follows:
  - When holding an Administrator role

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

    Outputs only executed users

## 4.1.5 Separate Retrieval for User

### [Overview]

Retrieve detailed user information of ISM.

### [Format]

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

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserId | string | User ID |
| UserName | string | User Name |

| Parameter | Type | Description |
|---|---|---|
| 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<br>- English<br>- Japanese |
| Authentication | string | Authentication method<br>Authentication method is outputted.<br>- ISM : ISM authentication<br>- null: Follows the authentication method of a user group. |
| Description | string | Description |
| MomUser | string | Availability of cooperate with ISM is outputted.<br>- Enable: links.<br>- Disable: does not link. |
| SessionCount | integer | Session count |
| LastAccessTime | string | Time and date of last access |
| Modified | string | Date of Update<br>Outputs time and date added or changed in UTC hours. |
| InnerControl | string | Information for Internal Controls |
| Status | string | Status<br>Login enabled status is outputted.<br>- OK<br>Login enabled<br>- LoginLock<br>Unable to log in due to consecutively failed login attempts. Login enabled after a certain time elapsed.<br>- ExpirePassword<br>Unable to login because password is no longer valid. Can login after re-setting password. |
| PasswordValidTime | integer | Validity Period of Password<br>When the password validity period has been set, this period is outputted (in days).<br>If less than a day it is outputted in truncated form.<br>When validity of a password is not set, null is outputted. |
| 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 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | NodeRoleId | string | Node Roll ID |
| | | NodeGroupId | string | Node Group ID |

### [Precautions]

- Other user details can only be retrieved if the user who executed holds the role of Administrator.
- If the user does not hold an Administrator role, only user's own details can be retrieved.
- A range in which this API can output is shown below:
  - When the user who executes is part of the Administrator group.

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

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

## 4.1.6 Updating User Information

### [Overview]

Update ISM user information.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserName | string | User Name<br>Contains the following restrictions:<br>- Max length: 32<br>- Half-width alphanumeric characters<br>- Numerical alphabets (Upper and lower cases), under bar, $, period and hyphen can be used.<br>- Cannot begin with "-", can only use "$" at the end. |
| Password | string | Password<br>Assign an encrypted password. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 32 characters or less. |
| UserRoles | array(string) | List of User Role Information<br>Specify a role to be assigned to a user from the following ID:<br>- Administrator |

| Parameter | Type | Description |
|---|---|---|
| | | - Operator<br>- Monitor |
| UserGroupId | string | User Group ID<br>Assigns a user group ID to the group which the user belongs. |
| Authentication | string | Authentication method<br>Specify an authentication method.<br>- ISM : ISM authentication<br>- null: Complies with the authentication method of a user group.<br>If left blank(""), it assumes null was assigned.<br>When the key is omitted, change of this parameter does not take place. |
| Description | string | Description<br>Comment column where free information can be set. Will not be used in controls. |
| MomUser | string | Assign availability of cooperate with ISM.<br>- Enable: links.<br>- Disable: does not link. (Initial value) |
| InnerControl | string | Information for Internal Controls<br>Do not configure because this information will be used in the internal controls of the ISM. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserId | string | User ID |
| UserName | string | User Name<br>The same parameter as the request parameter is outputted. |
| Password | string | Password<br>The same parameter as the request parameter is outputted. |
| UserRoles | array(string) | List of User Role Information |
| UserGroupId | string | User Group ID<br>The same parameter as the request parameter is outputted. |
| AccessibleUserGroups | array | List of information of Accessible User Groups |
| UserGroup | object | User Group Information |
| UserGroupId | string | User Group ID |
| NodeGroups | array | List of Information of Node Group |
| NodeRoleId | string | Node Roll ID<br>Only "" is outputted. |
| NodeGroupId | string | Node Group ID |
| Description | string | Description |

| Parameter | Type | Description |
|---|---|---|
| | | The same parameter as the request parameter is outputted. |
| MomUser | string | Availability of cooperate with ISM is outputted.<br>The same parameter as the request parameter is outputted. |
| Authentication | string | Authentication method<br>The same parameter as the request parameter is outputted. |
| Modified | string | Date of Update<br>Outputs update time and date in UTC hours. |
| InnerControl | string | Information for Internal Controls<br>The same parameter as the request parameter is outputted. |

### [Precautions]

- A range of users changeable by this API is as shown below:
  - When the user who executes is part of the Administrator group.

    Can change any user.
  - When the user who executes is not part of the Administrator group.

    The user who executes can change users in the same user group.
- Shown below for conditions necessary by change
  - When changing UserGroupId

    Can be changed by executing user holding Administrator role and belonging to Administrator group.
  - When changing UserRoles

    Can be changed by an executing user holding Administrator role.
  - When changing UserName, Password, Language, Description, InnerControl

    Only users executing with Administrator role or user's own information can change.
  - 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 assigned in the modified content, the content will be deleted.
- The following names cannot be used as they have been used by 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 becomes unique in the whole context of ISM.
- Only an user holding an Administrator role in the Administrator group can set MomUser parameter to Enable.

## 4.1.7 Deletion of Users

### [Overview]

Delete ISM users.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

### [Precautions]

- Cannot delete so that all users with Administrator role of the Administrator group will disappear.
- A range of users changeable by this API is as shown below:
  - When the user who executes is part of the Administrator group.

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

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

## 4.1.8 Registration of User Groups

### [Overview]

Register ISM user groups.

### [Format]

```
POST /usergroups
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserGroupName | string | User Group Name<br>Contains the following restrictions:<br>- Max length: 64<br>- All these can be used: Japanese, numbers, letters(Upper and lower cases), underscore, $, period and hyphen.<br>The following cannot be used.<br>- Single Quotation<br>- Slash<br>- Begins with a period |
| Authentication | string | Authentication method<br>Authentication method can be selected from the following.<br>- ISM<br>ISM Authentication (initial value)<br>- LDAP<br>Open LDAP or Microsoft Active Directory coordination authentication |
| ParentsUserGroupId | string | Parent User Group ID<br>Only assign "". |

| Parameter | Type | Description |
|---|---|---|
| AccessRange | string | Access Range<br>Assign if access range of a user group should be made identical with those of other groups.<br>- Administrator: An identical range of access with the Administrator group<br>- null: No assignment<br>- "": Not assignment<br>Cannot assign other than those mentioned above. |
| Description | string | Description<br>Comment column where free information can be set. Will not be used in controls. |
| NodeGroupId | integer | Node Group ID<br>Assigns a node group ID for linking.<br>When the key is omitted and assigned with null, it is not associated. |
| DirSize | object | Information on Size of Directory |
| All | object | Information on directory size of user group<br>Assign information on directory size for a user group (Unit: MB)<br>When the key is omitted and assigned with null, it is not set. |
| MaxSize | integer | Maximum size of directory used by a user group<br>In case of null, it does not set the maximum value.<br>When the key is omitted, it assumes null is assigned |
| Threshold | integer | Threshold value of directory size used by a user group<br>When the key is omitted, it assumes null is assigned |
| ArchiveLogDir | object | Information of directory's size where Archive node log is stored<br>Assigns a directory size (MB) to be used in Archive.<br>When the key is omitted and assigned with null, it sets with the maximum value as 0 and threshold value of 0. |
| MaxSize | integer | Maximum size of directory where node log is stored<br>When the key is omitted and assigned with null, it is set to 0GB. |
| Threshold | integer | Threshold value of directory where node logs are saved<br>Assumes 0(%) was assigned when null was specified.<br>Assumes 0(%) was assigned when key is omitted. |
| ArchiveMaterialDir | object | Information of directory size to store archived log of Archive.<br>Assigns a directory size (MB) to be used in Archive.<br>When the key is omitted and assigned with null, it sets the maximum value to 0 and threshold value to 0%. |
| MaxSize | integer | Maximum size of archived log saving directory |

| Parameter | Type | Description |
|---|---|---|
| | | When the key is omitted and assigned with null, it is set to 0GB. |
| Threshold | integer | Threshold value of directory where archived log is saved<br>Assumes 0(%) was assigned when null was specified.<br>Assumes 0(%) was assigned when key is omitted. |
| ArchiveLogDirForSearch | object | Information of Archive's node log directory size used for search.<br>Assigns a directory size (MB) to be used in Archive.<br>When the key is omitted and assigned with null, it sets the maximum value to 0 and threshold value to 0%. |
| MaxSize | integer | Maximum size of node log directory used for search<br>When the key is omitted and assigned with null, it is set to 0GB. |
| Threshold | integer | Threshold value of node log directory used for search<br>Assumes 0(%) was assigned when null was specified.<br>Assumes 0(%) was assigned when key is omitted. |
| RepositoryDirectory | object | Directory Size Information of Repositories<br>Information on directory size of repositories is outputted. (Unit: MB)<br>When the key is omitted and assigned with null, it is not set. |
| MaxSize | integer | Maximum Size of Directory<br>In case of null, it does not set the maximum value.<br>When the key is omitted, it assumes null is assigned |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| UserGroupId | string | User Group ID |
| UserGroupName | string | User Group Name<br>The same parameter as the request parameter is outputted. |
| Authentication | string | Authentication method<br>The same parameter as the request parameter is outputted. |
| ParentsUserGroupId | string | Parent User Group ID<br>Only "" is outputted. |
| AccessRange | string | Access Range<br>The same parameter as the request parameter is outputted. |
| Description | string | Description<br>The same parameter as the request parameter is outputted. |
| NodeGroupId | integer | Node Group ID<br>Related node group ID |
| 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 Size of Directory<br>The same parameter as the request parameter is outputted. |
| All | object | Information on directory size of user group<br>The same parameter as the request parameter is outputted. |
| 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 directory's size where Archive node log is stored<br>The same parameter as the request parameter is outputted. |
| MaxSize | integer | Maximum size of directory where node log is stored |
| Threshold | integer | Threshold value of directory where node logs are saved |
| ArchiveMaterialDir | object | Information of directory size to store archived log of Archive.<br>The same parameter as the request parameter is outputted. |
| MaxSize | integer | Maximum size of archived log saving directory |
| Threshold | integer | Threshold value of directory where archived log is saved |
| ArchiveLogDirForSearch | object | Information of Archive's node log directory size used for search.<br>The same parameter as the request parameter is outputted. |
| MaxSize | integer | Maximum size of node log directory used for search |
| Threshold | integer | Threshold value of node log directory used for search |
| RepositoryDirectory | object | Directory Size Information of Repositories<br>The same parameter as the request parameter is outputted. |
| MaxSize | integer | Maximum Size of Directory |
| UserList | array(string) | List of related user IDs |
| Modified | string | Date of Update<br>Time and date added in UTC hours is outputted. |

## [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- Administrator precautions will display below.
  - Only one authentication method can be specified for the entire ISM.
  - Only Open LDAP or Microsoft Active Directory can be assigned as certification method in the LDAP.
  - Without any specified authentication method, it shall be assumed that ISM has been specified.
- A registered user cannot be assigned when creating a user group.

  If you wish to register a user, conduct a user group change or user change after creating a user group.
- The following names cannot be used as they have been used by ISM:
  - Names starting with __
  - Administrator

- AbstractionLayer
- anonymous

- A user group becomes unique in the whole context of ISM.

## 4.1.9 List Retrieval for User Groups

### [Overview]

Retrieve all user group information of ISM.

### [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 Roll ID |
| NodeGroupId | string | Node Group ID |
| Authentication | string | Authentication method |
| UserCount | integer | Number of Users |
| ParentsUserGroupId | string | Parent User Group ID<br>Only "" is outputted. |
| ChildUserGroupCount | integer | Subordinate User Group Number<br>Only 0 is outputted. |
| ChildUserGroups | array(string) | List of Subordinate User Group Information<br>Only [ ] is outputted. |
| UserGroupId | string | User Group ID |
| AccessRange | string | Access Range<br>Announces if access range of a user group should be made identical with those of other groups.<br>- Administrator: An identical range of access with the Administrator group<br>- null: No assignment<br>- "": Not assignment |
| Description | string | Description |

## 4.1.10 Separate Retrieval of User Group

## [Overview]

Retrieve detailed user group information of ISM.

## [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 Roll ID |
| NodeGroupId | string | Node Group ID |
| Authentication | string | Authentication method |
| UserCount | integer | Number of Users |
| ParentsUserGroupId | string | Parent User Group ID |
| ChildUserGroupCount | integer | Subordinate User Group Number<br>Only "" is outputted. |
| ChildUserGroups | array(string) | Subordinate User Group Information List |
| UserGroupId | string | User Group ID |
| AccessRange | string | Access Range<br>Announces if access range of a user group should be made identical with those of other groups.<br>- Administrator: An identical range of access with the Administrator group<br>- null: No assignment<br>- "": Not assignment |
| Description | string | Description |
| DiskSize | integer | Disk size allocated for user group<br>When the value is null, the disk has not been configured. |
| DirSize | object | Information on Size of Directory<br>Outputs information on directory size for a user group |
| All | object | Information on directory size of user group<br>Outputs information on directory size for a user group (Unit: MB) |
| MaxSize | integer | Maximum size of directory used by a user group<br>When a value is null, it is not configured. |
| Threshold | integer | Threshold value of directory size used by a user group<br>When a value is null, it is not configured. |

| Parameter | Type | Description |
|---|---|---|
| UsedSize | integer | Directory size being used |
| ArchiveLogDir | object | Information of directory's size where Archive node log is stored<br>Information of directory's size where Archive node log is stored is outputted. (Unit: MB) |
| MaxSize | integer | Maximum size of directory where node log is stored |
| Threshold | integer | Threshold value of directory where node logs are saved |
| UsedSize | integer | Size of directory where node logs are saved currently in use |
| ArchiveMaterialDir | object | Information of directory size to store archived log of Archive.<br>Outputs information of directory size to store archived log of Archive. (Unit: MB) |
| MaxSize | integer | Maximum size of archived log saving directory |
| Threshold | integer | Threshold value of directory where archived log is 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.<br>Outputs information of directory size to store node log of Archive. (Unit: MB) |
| MaxSize | integer | Maximum size of node log directory used for search |
| Threshold | integer | Threshold value of 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 Repositories<br>Information on directory size of repositories is outputted. (Unit: MB) |
| MaxSize | integer | Maximum Size of Directory<br>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 | Date of Update<br>Outputs time and date added or changed in UTC hours. |

## [Precautions]

- Can only be executed by a user executing with an Administrator role.
- A range in which this API can output is shown below:
  - When the user who executes is part of the Administrator group.

    Can obtain details of any user group.
  - When the user who executes is not part of the Administrator group.

    Obtains details of user group that the user executed belongs.

## 4.1.11 Updating of User Group Information

### [Overview]

Update user group information of ISM.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserGroupName | string | User Group Name<br>Contains the following restrictions:<br>- Max length: 64<br>- All these can be used: Japanese, numbers, letters(Upper and lower cases), underscore, $, period and hyphen.<br>The following cannot be used.<br>- Single Quotation<br>- Slash<br>- Begins with a period |
| Authentication | string | Authentication method<br>Authentication method can be selected from the following.<br>- ISM<br>ISM Authentication (initial value)<br>- LDAP<br>Open LDAP or Microsoft Active Directory coordination authentication |
| ParentsUserGroupId | string | Parent User Group ID<br>Only"" |
| AccessRange | string | Access Range<br>Assign if access range of a user group should be made identical with those of other groups.<br>- Administrator: An identical range of access with the Administrator group<br>- null: No assignment<br>- "": Not assignment<br>Cannot assign other than those mentioned above. |
| Description | string | Description<br>Comment column where free information can be set. Will not be used in controls. |

| Parameter | Type | Description |
|---|---|---|
| NodeGroupId | integer | Node Group ID<br>Assigns a node group ID for linking.<br>- null: Does not associate with a node group. Deselects a link when it has been linked.<br>- Node group ID: Connects with a node group. Changes a link when it has been linked. |
| DirSize | object | Information on Size of Directory<br>Assign information on directory size for a user group.<br>When the key is omitted, it does not change the settings.<br>Settings should be deleted (all in default value) when null is specified. |
| All | object | Information on directory size of user group<br>Assign information on directory size for a user group. Unit: MB<br>When the key is omitted, it does not change the settings.<br>Delete settings when null is specified. |
| MaxSize | integer | Maximum size of directory used by a user group<br>When the key is omitted, it does not change the settings.<br>Delete settings when null is specified. |
| Threshold | integer | Threshold value of directory size used by a user group<br>When the key is omitted, it does not change the settings.<br>Delete settings when null is specified. |
| ArchiveLogDir | object | Information of directory's size where Archive node log is stored<br>Assigns information of directory size to store node log of Archive. (Unit: MB)<br>When the key is omitted, the settings do not change.<br>Settings should be 0 when null is specified. |
| MaxSize | integer | Maximum size of directory where node log is stored<br>When the key is omitted, it does not change the settings.<br>Assumes 0(%) was assigned when null was specified. |
| Threshold | integer | Threshold value of directory where node logs are saved<br>When the key is omitted, it does not change the settings.<br>Assumes 0(%) was assigned when null was specified. |
| ArchiveMaterialDir | object | Information of directory size to store archived log of Archive.<br>Assigns information of directory size to store node log of Archive. (Unit: MB)<br>When the key is omitted, the settings do not change.<br>Delete settings when null is specified. |
| MaxSize | integer | Maximum size of archived log saving directory<br>When the key is omitted, it does not change the settings. |

| Parameter | Type | Description |
|---|---|---|
| | | Assumes 0(%) was assigned when null was specified. |
| Threshold | integer | Threshold value of directory where archived log is saved<br>When the key is omitted, it does not change the settings.<br>Assumes 0(%) was assigned when null was specified. |
| ArchiveLogDirForSearch | object | Information of Archive's node log directory size used for search.<br>Assigns information of directory size to store node log of Archive. (Unit: MB)<br>When the key is omitted, the settings do not change.<br>Delete settings when null is specified. |
| MaxSize | integer | Maximum size of node log directory used for search<br>When the key is omitted, it does not change the settings. Assumes 0(%) was assigned when null was specified. |
| Threshold | integer | Threshold value of node log directory used for search<br>When the key is omitted, it does not change the settings.<br>Assumes 0(%) was assigned when null was specified. |
| RepositoryDirectory | object | Directory Size Information of Repositories<br>Assigns information on directory size of repositories (Unit: MB)<br>When the key is omitted, the settings do not change.<br>Delete settings when null is specified. |
| MaxSize | integer | Maximum Size of Directory<br>When the key is omitted, it does not change the settings.<br>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 |
| NodeGroupId | integer | Node Group ID<br>ID of node group to link |
| AccessableNodeGroups | array | List of Information of Node Group |
| NodeRoleId | string | Node Roll ID |
| NodeGroupId | string | Node Group ID |
| Users | array | User Information |
| UserId | string | User ID |
| UserName | string | User Name |
| ParentsUserGroupId | string | Parent User Group ID<br>Only "" is outputted. |

| Parameter | Type | Description |
|---|---|---|
| AccessRange | string | Access Range<br>Announces if access range of a user group should be made identical with those of other groups.<br>- Administrator: An identical range of access with the Administrator group<br>- null: No assignment<br>- "": No assignment |
| DiskSize | integer | Disk size allocated for user group<br>When the value is null, the disk has not been configured. |
| DirSize | object | Information on Size of Directory |
| All | object | Information on directory size of user group |
| MaxSize | integer | Maximum size of directory used by a user group |
| Threshold | integer | Threshold value of directory size used by a user group |
| UsedSize | integer | Directory size being used |
| ArchiveLogDir | object | Information of directory's size where Archive node log is stored |
| MaxSize | integer | Maximum size of directory where node log is stored |
| Threshold | integer | Threshold value of directory where node logs are saved |
| UsedSize | integer | Size of directory where node logs are saved currently in use |
| ArchiveMaterialDir | object | Information of directory size to store archived log of Archive. |
| MaxSize | integer | Maximum size of archived log saving directory |
| Threshold | integer | Threshold value of directory where archived log is 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 node log directory used for search |
| Threshold | integer | Threshold value of 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 Repositories |
| MaxSize | integer | Maximum Size of Directory |
| UsedDirSize | integer | Directory size being used |
| Modified | string | Date of Update<br>Outputs update date in UTC hours. |

## [Precautions]

- Can be executed with a user holding Administrator role and belonging to Administrator group.
- Administrator precautions will display below.
  - Only one authentication method can be specified for the entire ISM.
  - Only Open LDAP or Microsoft Active Directory can be assigned as certification 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 assigned in the modified content, the content will be deleted.
- The following names cannot be used as they have been used by ISM:
    - Names starting with __
    - Administrator
    - AbstractionLayer
    - anonymous
- A user group becomes unique in the whole context 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 doesn't exist cannot be associated.

## 4.1.12 Deletion of User Groups

### [Overview]

Delete 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 Administrator role and belonging to 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 before deleting.
- 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.

## 4.1.13 Retrieval of LDAP Information

### [Overview]

Retrieves LDAP information set by ISM.

### [Format]

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

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Ldaps | | array | LDAP Information<br>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<br>Outputs availability/unavailability of a SSL certificate.<br>- "On": Assigned SSL certificate<br>- "Off": No assigned SSL certificate |
| | Status | string | State of LDAP<br>Outputs a state of LDAP.<br>- "Used": This information is currently being used.<br>- "Reserved": This information is currently being reserved. |
| | Modified | string | Date of Update<br>Outputs update date in UTC hours. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- In case of no settings of LDAP information taking place, it retrieves all "".

## 4.1.14 Updating of LDAP Information

### [Overview]

Sets the LDAP information in the ISM.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Ldaps | | array | LDAP Information<br>Assigns 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 |
| | BindPassword | string | Bind Password<br>Assign an encrypted password. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 128 characters or less. |
| | SSLcertificate | string | SSL Certificate<br>Assigns when connecting to directory server via SSL.<br>Assigns a file name of SSL certificate that has been registered in the "Administrator" directory by ftp. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Ldaps | | array | LDAP Information<br>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 |
| | BindPassword | string | Bind Password<br>Outputs a parameter as specified. |
| | SSLcertificate | string | SSL Certificate<br>Outputs an SSL certificate as specified. |
| | Status | string | State of LDAP<br>Outputs a state of LDAP.<br>- "Used": This information is currently being used.<br>- "Reserved": This information is currently being reserved. |

| Parameter | | Type | Description |
|---|---|---|---|
| | Modified | string | Date of Update<br>Outputs update date in UTC hours. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- LDAP information safety precautions will display below.
  - Authentication method can be specified only one as primary and secondary choices respectively.
  - Only OpenLDAP or Microsoft Active Directory can be assigned as certification method in the LDAP.
- SSL certificate should be assigned in the following steps.

  Case of AD server

  1. Select [Control Panel] - [Management Tools] - [Certification Authority].
  2. Right-click the target server and select [Property] - [General] - [CA certificate]
  3. Confirm a certificate and select [Display of Certificate].
  4. Select detailed dialog shown, and choose copy to a file.
  5. Select [Next] in export wizard of a certificate, then choose [Base64 encoded X509(CER)(S)] for specifying a saving path and choose [Finish].
  6. A saved file can be uploaded to a directory of "Administrator/ftp/" by ftp.
  7. Assign the name of above (There is no need to specify Administrator/ftp.)

## 4.1.15 Switching of LDAP Information

### [Overview]

Switch LDAP information.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Ldaps | | array | LDAP Information<br>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 |

| Parameter | | Type | Description |
|---|---|---|---|
| | BindDn | string | Account for binding |
| | SSLcertificate | string | SSL Certificate<br>Outputs availability/unavailability of a SSL certificate.<br>- "On": Assigned SSL certificate<br>- "Off": No assigned SSL certificate |
| | Status | string | State of LDAP<br>Outputs a state of switched LDAP.<br>- "Used": This information is currently being used.<br>- "Reserved": This information is currently being reserved. |
| | Modified | string | Date of Update<br>Outputs update date in UTC hours. |

### [Precautions]

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

## 4.1.16 Retrieval of Policy Information

### [Overview]

Retrieves security policy information configured by user control.

### [Format]

```
GET /users/policy
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| PasswordPolicy | | object | Password policy |
| | UnavailablePastData | integer | Past passwords unusable<br>Setting Range : 0-4<br>Initial value: 0 (Does not restrict passwords in the past) |
| | MinimumLength | integer | The Minimum Password Length<br>Setting Range : 1-2<br>Initial value : 1<br>Not word count but byte number |
| | UseCharacterType | integer | Characters may be used in password<br>Outputs how many types should be used from the following.<br>- Number<br>- Lowercase<br>- Uppercase |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Special characters<br>Setting Range : 0-4<br>Initial value: 0 (unspecified) |
| | ValidPeriod | integer | Password expiration date<br>Setting Range : 0-365 (days)<br>Initial value 0 (Indefinite) |
| | InValidUserAction | string | User Operation after Duration Exceeded<br>- "Warning": Only warning message<br>- "Lock": Login locked (indefinitely) |
| | UseUserName | boolean | Is it possible to assign a password that is identical with the name of a user?<br>- true: Can be assigned<br>- false: Unable to designate |
| | UnavailableString | array(string) | Outputs a character string that cannot be assigned as a password as a string.<br>Only 0-256 are outputted.<br>Outputs a character string that cannot be assigned 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 Local<br>Log in will be locked with consecutive fails in row for more than this value.<br>Setting Range : 6-256<br>Initial value : 6 |
| | LockTime | integer | Lock Time<br>Setting Range : 1-1440 (minutes)<br>Initial value : 30 |
| SessionTime | | integer | Session termination time<br>Setting Range : 2-0 minutes<br>Initial value : 30 minutes |
| Modified | | string | Date of Update<br>Outputs update date in UTC hours. |

**[Precautions]**

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

## 4.1.17 Updating of Policy Information

## [Overview]

Updates security policy information configured by user control.

Operations by each item are shown as follows:

- "Past passwords unusable"

  Becomes valid immediately after the change User updating checks this configuration as a password is set. When violating this, user updating will result end 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 the change User addition and user updating check this configuration as a password is set. When violating this, user addition and user update will result end error.

- Password expiration date

  Becomes valid immediately after the change With specifying valid period with any other than 0, it will operate as follows:

  - User Operation after Duration Exceeded: Case of "Warning"

    At logging in, when a validity has already expired, it displays " Validity of your password is over. Change the password immediately. Outputs a message

    At logging in, when a validity will end within two weeks, it displays " Validity of your password is coming to end. Change your password." Outputs a message

  - User Operation after Duration Exceeded: Case of "Lock"

    At logging in, when a validity has already expired, it displays " Validity of your password is over. Change the password immediately. As outputting a message, login cannot be accepted afterward.

    By changing a password after outputting a message, you can continue to log in.

- "Lock threshold value", "Lock time" and " Session termination time "

  Becomes valid immediately after the change

## [Format]

```
PATCH /users/policy
```

## [Query Parameter]

None

## [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| PasswordPolicy | | object | Password policy |
| | UnavailablePastData | integer | Past passwords unusable<br>Setting Range : 0-24<br>Initial value: 0 (Does not restrict passwords in the past) |
| | MinimumLength | integer | The Minimum Password Length<br>Setting Range : 1-32<br>Initial value : 1<br>Not word count but byte number |
| | UseCharacterType | integer | Characters that can be used in your password<br>Outputs how many types should be used from the following.<br>- Number |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Lowercase<br>- Uppercase<br>- Special characters<br>Setting Range : 0-4<br>Initial value: 0 (unspecified) |
| | ValidPeriod | integer | Password expiration date<br>Setting Range : 0-365 (days)<br>Initial value 0 (Indefinite) |
| | InValidUserAction | string | User Operation after Duration Exceeded<br>- "Warning": Only warning message<br>- "Lock": Login locked (indefinitely) |
| | UseUserName | boolean | Is it possible to assign a password that is identical with the name of a user?<br>- true: Can be assigned<br>- false: Unable to designate<br>Initial value: false |
| | UnavailableString | array(string) | Assigns a character string that cannot be assigned as a password as a string.<br>Can assign 0-256 pieces.<br>Initial value : 0<br>Assigns a encrypted character string that cannot be assigned as a password as a string. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 32 characters or less. |
| LoginLockPolicy | | object | Policy for login lock |
| | Threshold | integer | Threshold of a Local<br>Log in will be locked with consecutive fails in row for more than this value.<br>Setting Range : 6-256<br>Initial value : 6 |
| | LockTime | integer | Lock Time<br>Setting Range : 1-1440 (minutes)<br>Initial value : 30 |
| SessionTime | | integer | Session termination time<br>Setting Range : 2-60 minutes<br>Initial value : 30 minutes |

**[Response Parameter]**

| Parameter | | Type | Description |
|---|---|---|---|
| PasswordPolicy | | object | Password policy |
| | UnavailablePastData | integer | Past passwords unusable<br>Setting Range : 0-24<br>Initial value: 0 (Does not restrict passwords in the past) |
| | MinimumLength | integer | The Minimum Password Length<br>Setting Range : 1-32<br>Initial value : 1<br>Not word count but byte number |
| | UseCharacterType | integer | Characters that can be used in your password<br>Specify how many types should be used from the following.<br>- Number<br>- Lowercase<br>- Uppercase<br>- Special characters<br>Setting Range : 0-4<br>Initial value: 0 (unspecified) |
| | ValidPeriod | integer | Password expiration date<br>Setting Range : 0-365 (days)<br>Initial value 0 (Indefinite) |
| | InValidUserAction | string | User Operation after Duration Exceeded<br>- "Warning": Only warning message<br>- "Lock": Login locked (indefinitely) |
| | UseUserName | boolean | Is it possible to assign a password that is identical with the name of a user?<br>- true: Can be assigned<br>- false: Unable to designate |
| | UnavailableString | array(string) | Assigns a character string that cannot be assigned as a password as a string.<br>Only 0-256 are outputted.<br>Outputs a character string encrypted that cannot be assigned 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 Local<br>Log in will be locked with consecutive fails in row for more than this value.<br>Setting Range : 6-256<br>Initial value : 6 |
| | LockTime | integer | Lock Time<br>Setting Range : 1-1440 (minutes) |

| Parameter | Type | Description |
|---|---|---|
| | | Initial value : 30 |
| SessionTime | integer | Validity of Session ID<br>Setting Range : 2-60 minutes<br>Initial value : 30 minutes |
| Modified | string | Date of Update<br>Outputs update date in UTC hours. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- Cannot be locked in login by a user holding Administrator role and belonging to Administrator group, regardless of this settings. Outputs a message at all time.

# 4.2 License Management

## 4.2.1 Setting Licenses

### [Overview]

Registers 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<br>Outputs types of licenses added. |
| Grade | string | License Grade<br>Outputs grade of licenses added. |
| ManagementNodeNumber | integer | Number of Licenses<br>Outputs the number of licenses added.<br>It become meaningful only when a license type is Node, but otherwise it becomes null. |
| ExpirationDate | integer | License Validity |

| Parameter | Type | Description |
|---|---|---|
| | | Outputs time limit of licenses added.<br>When it has no license expiration, it becomes null. |
| Restart | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - License setting: ismadm license set-mode
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.2.2 List Retrieval for License Information

### [Overview]

Retrieves 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 | Class of License<br>- Server<br>- Node<br>- Option |
| Grade | string | License Grade<br>- DC<br>- Enterprise<br>- I4P<br>- Trial |
| InvalidFlag | boolean | Invalid flag<br>- true : invalid<br>- false : valid |

| Parameter | | Type | Description |
|---|---|---|---|
| | ExpirationDate | integer | When a type of license is Server and license grade is Trial, it is the number of days until its expiration.<br>For all cases other than that, fix to 0. |
| | ManagementNodeNumber | integer | When a type of license is Node, it is the number of controlled nodes<br>For all cases other than that, fix to 0. |
| | RegistrationTimestampInfomation | string | Date of registration |
| | UpdateTimestampInfomation | string | Update day |
| ManagementNodeTotalNumber | | integer | Total Number of Management Nodes |
| ManagementNodeLeftNumber | | integer | Total number of control nodes remaining<br>Number subtracted the number of nodes registered by ISM from the number of controlled nodes |

## 4.2.3 Deleting Licenses

### [Overview]

Deletes a license.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Key | string | License Key |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| License | | object | Information of the deleted license |
| | LicenseId | string | License Key |
| | Type | string | License Type<br>Outputs types of licenses added. |
| | Grade | string | License Grade<br>Outputs grade of licenses added. |
| | ManagementNodeNumber | integer | Number of Licenses<br>Outputs the number of licenses added.<br>It become meaningful only when a license type is Node, but otherwise it becomes null. |
| | ExpirationDate | integer | License Validity<br>Outputs time limit of licenses added. |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | When it has no license expiration, it becomes null. |
| Restart | | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become valid after the restart. |

### [Precautions]

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

## 4.2.4 Replacing Licenses

### [Overview]

Replaces 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 Supplanted |
| | LicenseId | string | License Key |
| | Type | string | License Type<br>Outputs types of licenses added. |
| | Grade | string | License Grade<br>Outputs grade of licenses added. |
| | ManagementNodeNumber | integer | Number of Licenses<br>Outputs the number of licenses added.<br>It become meaningful only when a license type is Node, but otherwise it becomes null. |
| | ExpirationDate | integer | License Validity |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Outputs time limit of licenses added.<br>When it has no license expiration, it becomes null. |
| ReplacedLicenseList | | array | Information of License Replaced |
| | LicenseId | string | License Key |
| | Type | string | License Type<br>Outputs a type of the deleted license. |
| | Grade | string | License Grade<br>Outputs a grade of the deleted license. |
| | ManagementNodeNumber | integer | License Number<br>Outputs the number of deleted licenses.<br>It become meaningful only when a license type is Node, but otherwise it becomes null. |
| | ExpirationDate | integer | License Validity<br>Outputs expiration date of the deleted license.<br>When it has no license expiration, it becomes null. |
| Restart | | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become valid after the restart. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - License deleting: ismadm license delete
  - License setting: ismadm license set
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

# 4.3 Node Management

## 4.3.1 Node Registration

### [Overview]

Register a node.

### [Format]

```
POST /nodes
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Node | object | Node Information |
| Name | string | Node Name<br>Designate a unique name in the ISM. |
| Type | string | Node Type<br>Specify a node type to correspond with an equipment.<br>Refer to the node type information for the [Node Type] that can be assigned. |
| Model | string | Model Name<br>Specify a model name of an equipment. For machines supported, it may not work normally unless specifying a correct model name. |
| IpAddress | string | IP address:<br>Designate a unique IP address in the ISM. |
| IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | string | WebURL (such as WebUI of device) to use in main<br>Key can be omitted |
| Urls | array | Miscellaneous WebURL information<br>Key can be omitted |
| Url | string | WebURL |
| UrlName | string | WebURL name |
| Description | string | Description<br>Key can be omitted |
| NodeTagList | array | Node Tag information<br>Key can be omitted |
| NodeTag | string | Node Tag Name |
| ManagementLanOption | object | Information of management LAN<br>Key can be omitted<br>Sets management LAN to be used when executing PXE boot in the server. |
| ManagementLanMode | string | Specifying mode for management LAN<br>- null: No assignment<br>For PXE boot, a port with smaller order in slot 0 is used.<br>- MAC Address: Assign MAC address<br>- Adapter: Adapter is specified. |
| AdapterInfo | object | Information of an adapter to be used as management LAN<br>When a specified mode is "Adapter", assigning is compulsory. |
| SlotIndex | integer | Slot Number<br>Specifies 0 for on board. |

| Parameter | Type | Description |
|---|---|---|
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as management LAN<br>When a specified mode is "MACAddress", assigning is compulsory.<br>Check the input format only when it is enabled. |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Specify unit number at the bottom that a node possesses.<br>When displaying on the GUI, refer to the safety precautions. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>Key can be omitted<br>- Rack: Type to install as same as normal nodes<br>- 0U: type to be installed beside the rack |
| PduPosition | string | Do not use it.<br>Key can be omitted |
| Outlet | array | Summary of PDU connection information<br>Key can be omitted<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| Accounts | array | Account Information<br>Key can be omitted<br>Set up information for access to the node. As for account information required, refer to the manual. |
| AccountType | string | Account Type<br>Only relevant information for account type specified is used.<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| PortNum | integer | Port number used |

| Parameter | Type | Description |
|---|---|---|
| | | In case of null, it sets a port number described in the ISM settings file. |
| AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Password | string | Account Password<br>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type |
| Ipmi | string | Ipmi information<br>Key can be omitted<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Key can be omitted<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>Key can be omitted<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>Key can be omitted<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>Key can be omitted<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>Specify AccountName for account information and Password for your password.<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv" .<br>- DES: Encryption by DES |

| Parameter | Type | Description |
|---|---|---|
| | | - AES: Encryption by AES |
| PrivPassword | string | Encrypted password<br>Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv". |
| 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 |
| Model | string | Model Name |
| IpAddress | string | IP Address |
| IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | string | WebURL (such as WebUI of 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<br>Sets management LAN to be used when executing PXE boot in the server. |
| ManagementLanMode | string | Outputs mode for management LAN<br>- null: No assignment<br>For PXE boot, a port with smaller order in slot 0 is used.<br>- MAC Address: MAC address<br>- Adapter: Adapter |
| AdapterInfo | object | Information of an adapter to be used as management LAN |
| SlotIndex | integer | Slot Number |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as management LAN |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number) |

| Parameter | Type | Description |
|---|---|---|
| | | Outputs unit number at the bottom that a node possesses. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: Type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| SlotNum | integer | Slot Number of Chassis<br>For CX server, BX server blade and connection blade, it is automatically set at the time of acquiring node information. |
| ParentNodeId | integer | Node ID of Parent Node<br>When acquiring node information, it is automatically created. For BX server blade and connection blade, it is set at the time of acquiring node information of BX chassis. |
| ParentFabricId | integer | Node ID of fabric node it belongs to<br>In case of fabric switch, it is automatically configured at the time of acquiring node information of the fabric. |
| ChildNodeList | array | Child Node Information<br>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 fabric |
| NodeId | integer | Node ID of Switch Node |
| Status | string | Status of a node<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| AlarmStatus | string | Alarm status of a node<br>In case of a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.<br>- Error: Error<br>- Warning: Warning |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Info: Information<br>- Normal: No Notification<br>Priority of Status Normal < Info < Warning < Error |
| | MaintenanceMode | string | Maintenance Mode<br>- Normal: Regular Mode<br>- Maintenance: Maintenance Mode |
| | NodeGroupId | integer | Node Group ID |
| | UniqInfo | string | Specific Information for Internal Control |
| | AdditionalData | object | Internal Control Information |
| | UpdateDate | string | Last Update Time |

## [Precautions]

- Can only be executed by ISM administrators
- Node name with its head starting with under bar "_" cannot be used as it has been used by 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 conducted.
  - Information of installation position of a rack

    In case of a node type is facility, assign 101. Displayed as Rack CDU at upper position of the rack.

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

    Displayed as nodes of height of 44.5mm 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 | Acquisition of Node Information | Deletion of Node | Setting of Maintenance Mode |
|---|---|---|---|---|---|
| server | PRIMERGY RX server and others | Y | Y | Y | Y |
| server-primequest3000b | PRIMEQUEST 3000B | 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 RX server | Y | Y | Y | Y |
| server-snmp | Server (SNMP monitoring) | Y | Y | Y | Y |

| Node Type | Model | Node Registration | Acquisition of Node Information | Deletion of Node | Setting of Maintenance Mode |
|---|---|---|---|---|---|
| server-ping | Server (Ping monitoring) | Y | Y | Y | Y |
| primequest | PRIMEQUEST 2000series | Y | Y | Y [Note13] | Y |
| primequest-3000e | PRIMEQUEST 3000Eseries | Y | Y | Y [Note13] | Y |
| partition | PRIMEQUEST partition | - [Note1] | - [Note7] | - [Note14] | - [Note21] |
| extended-partition | PRIMEQUEST expansion partition | - [Note1] | - [Note7] | - [Note14] | - [Note21] |
| chassis | PRIMERGY CX chassis | - [Note2] | - [Note8] | Y [Note15] | Y |
| chassis-primergybx | PRIMERGY BX chassis (MMB) | Y | Y | Y [Note15] | Y |
| fabric-brocade | Brocade VCS Fabric | Y | Y | Y [Note16] | Y |
| fabric-cfx | FUJITSU C fabric | Y | Y | Y [Note16] | Y |
| fabricswitch-brocade | Brocade VDX Switch | - [Note3] | - [Note9] | Y | - [Note22] |
| fabricswitch-cfx | CFX Switch | - [Note4] | - [Note10] | Y | - [Note23] |
| fabricswitch-bxsbax3 | PY CB Eth Switch 10/40Gb 18/8+2 (Fabric mode) | - [Note4] | - [Note10] | Y | - [Note23] |
| switch | Switch | Y | Y | Y | Y |
| switch-fos | PSWITCH | Y | Y | Y | Y |
| switch-nexus | Cisco Nexus switch | Y | 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-snmp | Switch (SNMP monitoring) | 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 |
| storage | ETERNUS DX | Y | Y | Y [Note17] | Y |
| storage-nr | NetApp (ERNUS NR) | - [Note5] | - [Note11] | - [Note18] | - [Note24] |
| storage-snmp | Storage (SNMP monitoring) | Y | Y | Y | Y |
| storage-ping | Storage (Ping monitoring) | Y | Y | Y | Y |
| cluster-nr | NetApp (ETERNUS NR) cluster | Y | Y | Y [Note19] | Y |

| Node Type | Model | Node Registration | Acquisition of Node Information | Deletion of Node | Setting of Maintenance Mode |
|---|---|---|---|---|---|
| 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 |
| facility-ping | Facility machine (Ping monitoring) | Y | Y | Y | Y |
| drive-enclosure | ETERNUS DX drive enclosure. | - [Note6] | - [Note12] | - [Note20] | - [Note25] |
| driveenclosure-nr | NetApp (ETERNUS NR) external attachment disk shelf | - [Note5] | - [Note11] | - [Note18] | - [Note24] |
| other | Others | Y | Y | Y | Y |

[Note1]: When acquiring node information of PRIMEQUEST 2000/3000E series, nodes are automatically created.

[Note2]: When acquiring node information of PRIMERGY CX servers, nodes are automatically created.

[Note3]: When acquiring node information of Brocade VCS fabric, nodes are automatically created.

[Note4]: When acquiring FUJITSU C fabric node information, nodes are automatically created.

[Note5]: When acquiring NetApp (ETERNUS NR) cluster node information, nodes are automatically created.

[Note6]: Execute the acquiring of ETERNUS DX node information.

[Note7]: Execute the acquiring node information of PRIMEQUEST 2000/3000E series.

[Note8]: Execute the acquiring node information of PRIMERGY CX servers

[Note9]: Execute the acquiring of node information for Brocade VCS fabric.

[Note10]: Execute the acquiring of FUJITSU C fabric node information.

[Note11]: Execute the acquiring of NetApp (ETERNUS NR) cluster node information.

[Note12]: Execute the acquiring of ETERNUS DX node information.

[Note13]: Both subordinate partitions and expansion partitions will be deleted altogether.

[Note14]: In case of its disappearance, its node is deleted automatically at acquiring of node information by PRIMEQUEST 2000/3000E series.

[Note15]: Server nodes and switch blades installed in the chassis are to be deleted altogether.

[Note16]: Switches composing fabric are to be deleted altogether.

[Note17]: Deletes storage in clusters as well as external disk shelf altogether.

[Note18]: In case of its disappearance, its node is deleted automatically at acquiring of node information by NetApp (ETERNUS NR) cluster.

[Note19]: A drive enclosure that is connected will be deleted collectively

[Note20]: In case of its disappearance, its node is deleted automatically at acquiring of node information by ETERNUS DX.

[Note21]: Set PRIMEQUEST 2000/3000E series to maintenance mode.

[Note22]: Set Brocade VCS fabric to maintenance mode.

[Note23]: Set FUJITSU C fabric to maintenance mode.

[Note24]: Set NetApp (ETERNUS NR) cluster to maintenance mode.

[Note25]: Set ETERNUS DX to maintenance mode.

## 4.3.2 List Retrieval for Nodes

### [Overview]

Retrieves information of all nodes under management of a user group to which users belong.

It is possible refine nodes to retrieve by query parameters.

### [Format]

```
GET /nodes
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| name | string | Refining by node name |
| type | string | Refining by node type<br>For the information on node type that can be assigned, refer to [Node Type] in "4.3.1 Node Registration." |
| model | string | Narrowing by Model Name |
| ipaddress | string | Narrowing by IP Address |
| rackid | integer | Refining by rack ID |
| floorid | integer | Narrowing by floor ID |
| dcid | integer | Narrowing by Data Center ID |
| status | string | Narrowing by Status<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| alarmstatus | string | Refining by Status<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification |
| nodetag | string | Refining by node tag name |
| uniqinfo | string | For Internal Control |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Nodes | array | Node Information |
| NodeId | integer | Node ID |

| Parameter | | Type | Description |
|---|---|---|---|
| Name | | string | Node Name |
| Type | | string | Node Type |
| Model | | string | Model Name |
| IpAddress | | string | IP Address |
| IpVersion | | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | | string | WebURL (such as WebUI of 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 |
| RackInfo | | object | Information of installation position of a rack |
| | RackId | integer | Rack ID installed |
| | Position | integer | Installed Position (Unit number)<br>Outputs unit number at the bottom that a node possesses. |
| | OccupySize | integer | Number of units occupying racks |
| MountType | | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: Type to be installed beside the rack |
| PduPosition | | string | Do not use it. |
| Outlet | | array | Summary of PDU connection information<br>Presently it is not supported. |
| | PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| | NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| SlotNum | | integer | Slot Number in Chassis<br>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<br>When acquiring 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<br>In case of fabric switch, it is automatically configured at the time of retrieving node information by the fabric. |
| ChildNodeList | | array | Child Node Information |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | 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 fabric |
| | | NodeId | integer | Node ID of Switch Node |
| | Status | | string | Status of a node<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| | AlarmStatus | | string | Alarm status of a node<br>In case of a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification<br>Priority of Status Normal < Info < Warning < Error |
| | MaintenanceMode | | string | Maintenance Mode<br>- Normal: Regular Mode<br>- Maintenance: Maintenance Mode |
| | NodeGroupId | | integer | Node Group ID |
| | UniqInfo | | string | Specific Information for Internal Control |
| | UpdateDate | | string | Last Update Time |

## 4.3.3 Separate Retrieval for Node

### [Overview]

Retrieves information of 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<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | string | WebURL (such as WebUI of 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<br>Sets management LAN to be used when executing PXE boot in the server. |
| ManagementLanMode | string | Outputs mode for management LAN<br>- null: No assignment<br>For PXE boot, a port with smaller order in slot 0 is used.<br>- MAC Address: MAC address<br>- Adapter: Adapter |
| AdapterInfo | object | Information of an adapter to be used as management LAN |
| SlotIndex | integer | Slot Number |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as management LAN |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Outputs unit number at the bottom that a node possesses. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: Type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |

| Parameter | Type | Description |
|---|---|---|
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| SlotNum | integer | Slot Number in Chassis<br>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<br>When acquiring 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<br>In case of fabric switch, it is automatically configured at the time of retrieving node information by the fabric. |
| ChildNodeList | array | Child Node Information<br>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 fabric |
| NodeId | integer | Node ID of Switch Node |
| Status | string | Status of a node<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| AlarmStatus | string | Alarm status of a node<br>In case of a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification<br>Priority of Status Normal < Info < Warning < Error |
| MaintenanceMode | string | Maintenance Mode<br>Normal: Normal mode<br>Maintenance: Maintenance mode |
| NodeGroupId | integer | Node Group ID |
| UniqInfo | string | Specific Information for Internal Control |

| Parameter | | Type | Description |
|---|---|---|---|
| | AdditionalData | object | Internal Control Information |
| | UpdateDate | string | Last Update Time |

## 4.3.4 Updating of Nodes

### [Overview]

Updates registration information of specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

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

| Parameter | Type | Description |
|---|---|---|
| | | Sets management LAN to be used when executing PXE boot in the server. |
| ManagementLanMode | string | Specifying mode for management LAN<br>- null: No assignment<br>For PXE boot, a port with smaller order in slot 0 is used.<br>- MAC Address: Assign MAC address<br>- Adapter: Specify an adapter. |
| AdapterInfo | object | Information of an adapter to be used as management LAN<br>When a specified mode is" Adapter", assigning is compulsory |
| SlotIndex | integer | Slot Number<br>Specifies 0 for on board. |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as management LAN<br>When a specified mode is "MACAddress", assigning is compulsory<br>Check the input format only when it is enabled. |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Specify unit number at the bottom that a node possesses.<br>When displaying on the GUI, refer to the safety precautions. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>Key can be omitted<br>- Rack: Type to install as same as normal nodes<br>- 0U: Type to be installed beside the rack |
| PduPosition | string | Do not use it.<br>Key can be omitted |
| Outlet | array | Summary of PDU connection information<br>Key can be omitted<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| Node | object | Node Information |

| Parameter | Type | Description |
|---|---|---|
| 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<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | string | WebURL (such as WebUI of 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<br>Sets management LAN to be used when executing PXE boot in the server. |
| ManagementLanMode | string | Outputs mode for management LAN<br>- null: No assignment<br>For PXE boot, a port with smaller order in slot 0 is used.<br>- MACAddress: MAC address<br>- Adapter: Adapter |
| AdapterInfo | object | Information of an adapter to be used as management LAN |
| SlotIndex | integer | Slot Number |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as management LAN |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Outputs unit number at the bottom that a node possesses. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: Type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number |

| Parameter | Type | Description |
|---|---|---|
| | | Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| SlotNum | integer | Slot Number of Chassis<br>For CX server, BX server blade and connection blade, it is automatically set at the time of acquiring node information. |
| ParentNodeId | integer | Node ID of parent node<br>When acquiring node information, it is automatically set. For BX server blade and connection blade, it is set at the time of acquiring node information of BX chassis. |
| ParentFabricId | integer | Node ID of fabric node it belongs to<br>In case of fabric switch, it is automatically configured at the time of acquiring node information by the fabric. |
| ChildNodeList | array | Child Node Information<br>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 fabric |
| NodeId | integer | Node ID of Switch Node |
| Status | string | Status of a node<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| AlarmStatus | string | Alarm status of a node<br>In case of a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification<br>Priority of Status Normal < Info < Warning < Error |
| MaintenanceMode | string | Maintenance Mode<br>- Normal: Regular Mode<br>- Maintenance: Maintenance Mode |
| NodeGroupId | integer | Node Group ID |
| UniqInfo | string | Specific Information for Internal Control |
| AdditionalData | object | Internal Control Information |

| Parameter | | Type | Description |
|---|---|---|---|
| | UpdateDate | string | Last Update Time |

### [Precautions]

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

  RackId, Position, OccupySize, MountType, PduPosition
- Node Name with its head starting with under bar "_" cannot be used as it has been used by 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 conducted.
  - Information of installation position of a rack

    In case of a node type is facility, assign 101. Displayed as Rack CDU at upper position of the rack.

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

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

## 4.3.5 Deletion of Nodes

### [Overview]

Deletes 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<br>Designate a unique name in the ISM. |
| | Unit | integer | Unit Size<br>When displaying on the GUI, refer to the safety precautions. |
| | Width | integer | Width of the rack<br>Unit: millimeter<br>When displaying on the GUI, refer to the safety precautions. |
| | Depth | integer | Depth of the rack<br>Unit: millimeter<br>When displaying on the GUI, refer to the safety precautions. |
| | Height | integer | Height of the rack<br>Unit: millimeter<br>When displaying on the GUI, refer to the safety precautions. |
| | FloorId | integer | Floor ID where the rack is installed<br>Can be omitted |
| | Angle | integer | Placement angle of the rack<br>Can be omitted<br>When displaying on the GUI, refer to the safety precautions. |
| | Xposition | integer | X coordinate position where the rack is installed<br>Unit: millimeter<br>Can be omitted<br>Increasing to the right in plan view. When displaying on the GUI, refer to the safety precautions. |
| | Yposition | integer | Y coordinate position where the rack is installed<br>Unit: millimeter<br>Can be omitted<br>Increasing downward in plan view. When displaying on the GUI, refer to the safety precautions. |
| | Description | string | Description<br>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<br>Unit: millimeter |
| | Depth | integer | Depth of the rack<br>Unit: millimeter |
| | Height | integer | Height of the rack<br>Unit: millimeter |
| | FloorId | integer | Floor ID where the rack is installed |
| | Angle | integer | Placement angle of the rack |
| | Xposition | integer | X coordinate position where the rack is installed<br>Unit: millimeter |
| | Yposition | integer | Y coordinate position where the rack is installed<br>Unit: millimeter |
| | Description | string | Description |
| | Status | string | Status of a rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update 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 10-15.
  - For the width of the rack , set it within a range of 1-3000. When it is 500 or less, GUI displays 500mm.
  - For the depth of the rack , set it within a range of 1-3000. When it is 700 or less, GUI displays 700mm.
  - For the height of the rack , set it within a range of 1-3000. When it is smaller than a value of automatically computed based on a unit size, the value of automatic computing is displayed.

    Automatic Calculation 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.

It is possible refine racks to retrieve by query parameters.

### [Format]

```
GET /racks
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| floorid | integer | Narrowing by floor ID |
| dcid | integer | Narrowing by Data Center ID |

### [Response Parameter]

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

## 4.3.8 Separate Retrieval for Rack

### [Overview]

Retrieves information of 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<br>Unit: millimeter |
| Depth | integer | Depth of the rack<br>Unit: millimeter |
| Height | integer | Height of the rack<br>Unit: millimeter |
| FloorId | integer | Floor ID where the rack is installed |
| Angle | integer | Placement angle of the rack |
| Xposition | integer | X coordinate position where the rack is installed<br>Unit: millimeter |
| Yposition | integer | Y coordinate position where the rack is installed<br>Unit: millimeter |
| Description | string | Description |
| Status | string | Status of a rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| AlarmStatus | string | Alarm Status of a rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| UpdateDate | string | Last Update Time |
| Nodes | array | Information of node installed in the rack |
| NodeId | integer | Node ID |
| Name | string | Node Name |
| Type | string | Node Type |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Outputs unit number at the bottom that a node possesses. |

| Parameter | Type | Description |
|---|---|---|
| OccupySize | integer | Occupying Volume of Rack by Node |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: A type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |
| PowerSocket | integer | Socket number<br>Presently it is not supported. |
| NodeId | integer | Node ID of connection destination<br>Presently it is not supported. |
| SlotNum | integer | Slot Number in Chassis<br>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<br>When acquiring 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<br>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<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| AlarmStatus | string | Alarm status of a node<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification |
| UpdateDate | string | Last Update Time |

## 4.3.9 Updating of Racks

### [Overview]

Updates information of specified racks.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Rack | | object | Rack Information |
| | Name | string | Rack Name<br>Designate a unique name in the ISM. |
| | Unit | integer | Unit Size<br>When displaying on the GUI, refer to the safety precautions. |
| | Width | integer | Width of the Rack<br>Unit: millimeter<br>When displaying on the GUI, refer to the safety precautions. |
| | Depth | integer | Depth of Rack<br>Unit: millimeter<br>When displaying on the GUI, refer to the safety precautions. |
| | Height | integer | Height of Rack<br>Unit: millimeter<br>When displaying on the GUI, refer to the safety precautions. |
| | FloorId | integer | Floor ID where the rack is installed<br>Can be omitted |
| | Angle | integer | Placement angle of the rack<br>Can be omitted<br>When displaying on the GUI, refer to the safety precautions. |
| | Xposition | integer | X coordinate position where the rack is installed<br>Unit: millimeter<br>Can be omitted<br>Increasing to the right in plan view. When displaying on the GUI, refer to the safety precautions. |
| | Yposition | integer | Y coordinate position where the rack is installed<br>Unit: millimeter<br>Can be omitted<br>Increasing downward in plan view. When displaying on the GUI, refer to the safety precautions. |
| | Description | string | Description<br>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<br>Unit: millimeter |
| | Depth | integer | Depth of Rack<br>Unit: millimeter |
| | Height | integer | Height of Rack<br>Unit: millimeter |
| | FloorId | integer | Floor ID where the rack is installed |
| | Angle | integer | Placement angle of the rack |
| | Xposition | integer | X coordinate position where the rack is installed<br>Unit: millimeter |
| | Yposition | integer | Y coordinate position where the rack is installed<br>Unit: millimeter |
| | Description | string | Description |
| | Status | string | Status of a Rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update 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 10-15.
  - For the width of the rack , set it within a range of 1-3000. When it is 500 or less, GUI displays 500mm.
  - For the depth of the rack , set it within a range of 1-3000. When it is 700 or less, GUI displays 700mm.
  - For the height of the rack , set it within a range of 1-3000. When it is smaller than a value of automatically computed based on a unit size, the value of automatic computing is displayed.

    Automatic Calculation: 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 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<br>Designate a unique name in the ISM. |
| | DcId | integer | Data Center ID that floors have been installed<br>Can be omitted |
| | Xsize | integer | X Width of a Floor<br>Unit: meter<br>When displaying on the GUI, refer to the safety precautions. |
| | Ysize | integer | Y Width of a Floor<br>Unit: meter<br>When displaying on the GUI, refer to the safety precautions. |
| | Description | string | Description |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Can be omitted |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Floor | | object | Floor Information |
| | FloorId | integer | Floor ID |
| | Name | string | Floor name |
| | DcId | integer | Data Center ID that floors have been installed |
| | Xsize | integer | X Width of a Floor<br>Unit: meter |
| | Ysize | integer | Y Width of a Floor<br>Unit: meter |
| | Description | string | Description |
| | Status | string | Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update 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 information of all floors.

It is possible refine floors to retrieve by query parameters.

### [Format]

```
GET /floors
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| dcid | integer | Narrowing by Data Center ID |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Floors | | array | Floor Information |
| | FloorId | integer | Floor ID |
| | Name | string | Floor name |
| | DcId | integer | Data Center ID that floors have been installed |
| | Xsize | integer | X Width of a Floor<br>Unit: meter |
| | Ysize | integer | Y Width of a Floor<br>Unit: meter |
| | Description | string | Description |
| | Status | string | Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update Time |

## 4.3.13 Separate Retrieval for Floor

### [Overview]

Retrieves information of a 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 | Data Center ID that floors have been installed |
| | Xsize | integer | X Width of a Floor<br>Unit: meter |
| | Ysize | integer | Y Width of a Floor |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | Unit: meter |
| | Description | | string | Description |
| | Status | | string | Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | | string | Alarm Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | | string | Last Update 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<br>Unit: millimeter |
| | | Depth | integer | Depth of Rack<br>Unit: millimeter |
| | | Height | integer | Height of Rack<br>Unit: millimeter |
| | | FloorId | integer | Floor ID where the rack is installed |
| | | Angle | integer | Placement angle of the rack |
| | | Xposition | integer | X coordinate position where the rack is installed<br>Unit: millimeter |
| | | Yposition | integer | Y coordinate position where the rack is installed<br>Unit: millimeter |
| | | Description | string | Description |
| | | Status | string | Status of a Rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | | AlarmStatus | string | Alarm Status of a Rack<br>A status installed node with highest severity will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | | UpdateDate | string | Last Update Time |

## 4.3.14 Updating of Floors

### [Overview]

Updates information of specified floor.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Floor | | object | Floor Information |
| | Name | string | Floor name<br>Designate a unique name in the ISM. |
| | DcId | integer | Data Center ID that floors have been installed<br>Can be omitted |
| | Xsize | integer | X Width of a Floor<br>Unit: meter<br>When displaying on the GUI, refer to the safety precautions. |
| | Ysize | integer | Y Width of a Floor<br>Unit: meter<br>When displaying on the GUI, refer to the safety precautions. |
| | Description | string | Description<br>Can be omitted |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Floor | | object | Floor Information |
| | FloorId | integer | Floor ID |
| | Name | string | Floor name |
| | DcId | integer | Data Center ID that floors have been installed |
| | Xsize | integer | X Width of a Floor<br>Unit: meter |
| | Ysize | integer | Y Width of a Floor<br>Unit: meter |
| | Description | string | Description |
| | Status | string | Status of a Floor<br>A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Floor |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | A status of node with the highest severity in a floor will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update 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 information of a 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 |

| Parameter | | Type | Description |
|---|---|---|---|
| | Name | string | Datacenter Name<br>Designate a unique name in the ISM. |
| | Description | string | Description<br>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<br>A status of node with the highest severity in a data center will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of Datacenter<br>A status of node with the highest severity in a data center will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update Time |

### [Precautions]

- Can only be executed by ISM administrators

## 4.3.17 List Retrieval for Datacenters

### [Overview]

Retrieve 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 |

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

## 4.3.18 Separate Retrieval for Datacenter

### [Overview]

Retrieve assigned 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<br>A status of node with the highest severity in a data center will be shown.<br>Priority of Status: Updating < Normal < Unknown < Warning < Error |
| AlarmStatus | string | Alarm Status of Datacenter<br>A status of node with the highest severity in a data center will be shown.<br>Priority of Status: Normal < Info < Warning < Error |
| UpdateDate | string | Last Update Time |
| Floors | array | Information on Floors within Datacenter |
| FloorId | integer | Floor ID |
| Name | string | Floor name |
| DcId | integer | Datacenter ID that floors have been installed |
| Xsize | integer | X Width of a Floor |

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

## 4.3.19 Updating of Datacenters

### [Overview]

Updates information of specified datacenter.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| DataCenter | | object | Datacenter Information |
| | Name | string | Datacenter Name<br>Designate a unique name in the ISM. |
| | Description | string | Description<br>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 |

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

### [Precautions]

- Can only be executed by ISM administrators

## 4.3.20 Deletion of Datacenters

### [Overview]

Delete assigned 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 |
| | Name | string | Node Group Name<br>Designate a unique name in the ISM. |
| | ParentGroupId | integer | Parent Node Group<br>Can be omitted<br>Presently it is not supported. |
| | Type | integer | Node group type<br>Can be omitted<br>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<br>Presently it is not supported. |
| | Type | integer | Node group type<br>- 0:Node Group Created by User<br>- 1:ISMDefaultGroup<br>- 2:ISMSharedGroup |
| | UpdateDate | string | Last Update Time |

### [Precautions]

- Can only be executed by ISM administrators.
- A node cannot be specified at creating a node group. When a node is set to a node group, execute allocation of node group for the node after creating a node group.
- The following node names cannot be used as they have been used by ISM.
  - A name starting with under bar "_" .
  - ISMDefaultGroup
  - ISMSharedGroup

## 4.3.22 List Retrieval for Node Groups

### [Overview]

Retrieves information of all nodes under management of a user group to which users belong.

It is possible refine node groups to retrieve by query parameters.

### [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<br>Presently it is not supported. |
| Type | integer | Node group type<br>- 0:Node Group Created by User<br>- 1:ISMDefaultGroup<br>- 2:ISMSharedGroup |
| Nodes | array | Node Information within a Node Group |
| NodeId | integer | Node ID |
| NodeGroups | array | Information of Node Group within a Node Group<br>Only ISMDefaultGroup information is stored. |
| NodeGroupId | integer | Node Group ID |
| UpdateDate | string | Last Update Time |

## 4.3.23 Separate Retrieval for Node Group

### [Overview]

Retrieves information of 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<br>Presently it is not supported. |
| Type | integer | Node group type |

| Parameter | Type | Description |
|---|---|---|
| | | - 0:Node Group Created by User<br>- 1:ISMDefaultGroup<br>- 2:ISMSharedGroup |
| Nodes | array | Node Information within a Node Group |
| NodeId | integer | Node ID |
| NodeGroups | array | Information of Node Group within a Node Group<br>Only ISMDefaultGroup information is stored. |
| NodeGroupId | integer | Node Group ID |
| UpdateDate | string | Last Update Time |

## 4.3.24 Updating of Node Groups

### [Overview]

Updates information of 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<br>Designate a unique name in the ISM. |
| ParentGroupId | integer | Parent Node Group<br>Can be omitted<br>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<br>Presently it is not supported. |
| Type | integer | Node group type<br>- 0:Node Group Created by User<br>- 1:ISMDefaultGroup<br>- 2:ISMSharedGroup |

| Parameter | | Type | Description |
|---|---|---|---|
| | UpdateDate | string | Last Update Time |

### [Precautions]

- Can only be executed by ISM administrators
- Cannot assign the ISMDefaultGroup as well as the ISMSharedGroup.
- The following node names cannot be used as they have been used by 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 assign the ISMDefaultGroup as well as the ISMSharedGroup.

## 4.3.26 Allocation of Nodes to Node Groups

### [Overview]

Allocates specified nodes to 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<br>Cannot assign ISMDefaultGroup, |

### [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 a same node group.

## 4.3.27 Account Registration

### [Overview]

Registers an account information to a node.

Set up information for access to the node. As for account information required, 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<br>Only relevant information for account type specified is used.<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| | PortNum | integer | Port number used |

| Parameter | Type | Description |
|---|---|---|
| | | In case of null, it sets a port number described in the ISM settings file. |
| AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Password | string | Account Password<br>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type |
| Ipmi | string | Ipmi information<br>Key can be omitted<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Key can be omitted<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>Key can be omitted<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>Key can be omitted<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>Key can be omitted<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>Specify AccountName for account information and Password for your password.<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv".<br>- DES: Encryption by DES |

| Parameter | Type | Description |
|---|---|---|
| | | - AES: Encryption by AES |
| PrivPassword | string | Encrypted password<br>Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv". |
| 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<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| PortNum | integer | Port number used |
| AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type |
| Ipmi | string | Ipmi information<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled |

| Parameter | Type | Description |
|---|---|---|
| | | - authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv".<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| ContextName | string | Context Name |
| EngineId | string | Engine ID |
| UpdateDate | string | Last Update Time |

## 4.3.28 List Retrieval for Accounts

### [Overview]

Retrieves all of account information for the nodes specified.

### [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<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| AccountName | string | User Account Name<br>It is used when an account type is as follows. |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| | UpdateDate | string | Last Update Time |

## 4.3.29 Separate Retrieval for Account Information

### [Overview]

Retrieves account information of 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<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| | PortNum | | integer | Port number used |
| | AccountName | | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| | Property | | object | Additional information according to account type |
| | | Ipmi | string | Ipmi information<br>Presently it is not supported. |
| | | Ssh | string | Ssh information<br>Presently it is not supported. |
| | | SnmpV1 | object | SnmpV1 Information<br>It is used when an account type is SnmpV1. |
| | | | CommunityName | string | Community Name |
| | | SnmpV2 | object | SnmpV2 Information |

| Parameter | Type | Description |
|---|---|---|
| | | It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv".<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| ContextName | string | Context Name |
| EngineId | string | Engine ID |
| UpdateDate | string | Last Update Time |

## 4.3.30 Updating of Account Information

### [Overview]

Updates account information of specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Account | object | Account information |
| AccountType | string | Account type<br>Only relevant information for account type specified is used.<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. |

| Parameter | Type | Description |
|---|---|---|
| | | - SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| PortNum | integer | Port number used<br>In case of null, it sets a port number described in the ISM settings file. |
| AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Password | string | Account Password<br>When not updating, key can be omitted.<br>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type<br>The key can be omitted unless updating. |
| Ipmi | string | Ipmi information<br>Key can be omitted<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Key can be omitted<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>Key can be omitted<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>Key can be omitted<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>Key can be omitted<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>- MD5 : Certification from MD5 |

| Parameter | Type | Description |
|---|---|---|
| | | - SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv".<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| PrivPassword | string | Encrypted password<br>The key can be omitted unless updating.<br>Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv". |
| 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<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| PortNum | integer | Port number used |
| AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type |
| Ipmi | string | Ipmi information<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>It is used when an account type is SnmpV2. |

| Parameter | Type | Description |
|---|---|---|
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>Specify AccountName for account information and Password for your password.<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv".<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| ContextName | string | Context Name |
| EngineId | string | Engine ID |
| UpdateDate | string | Last Update Time |

## 4.3.31 Deletion of Accounts

### [Overview]

Deleates account information of specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.3.32 Canceling of Node Alarms

### [Overview]

Cancels an alarm of a specified node.

With an alarm canceled, alarm status of the node turns to Normal.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

### [Precautions]

- In case of a node with subordinate node such as ChildNodeList or Fabric, it shows higher severity alarm status including such subordinate nodes. In case that alarm status of a subordinate node is not Normal, its alarm status will not become Normal even after releasing of the alarm. Execute alarm release 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 is "Maintenance" cannot perform retrieval of node information for monitoring and regular schedule as well as notification of events.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Node | | object | Node Information |
| | MaintenanceMode | string | Maintenance Mode<br>- Normal: Maintenance Mode Disabled<br>- Maintenance: Maintenance Mode Enabled |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Node | | object | Node Information |
| | MaintenanceMode | string | Maintenance Mode<br>- Normal: Maintenance Mode Disabled<br>- Maintenance: Maintenance Mode Enabled |

### [Precautions]

- Refer to "4.3.1 Node Registration" for which [Node Type] can be changed.

## 4.3.34 List Retrieval for Node Tags

### [Overview]

Retrieves information of all node tags under management of a user group to which users belong.

### [Format]

```
GET /nodes/nodetags
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| NodeTagList | array | Node Tag information |
| NodeTag | string | Node Tag Name |

# 4.4 Node Discovery

## 4.4.1 Execution of Manual Discovery of Node

### [Overview]

Execute manual discovery of node according to assigned conditions.

### [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 searching |
| IpAddressRange | string | IP Address Range<br>Refer to the precaution for assigning method. |
| IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| Accounts | array | Account information<br>Set up information for access to the node. |

| Parameter | Type | Description |
|---|---|---|
| AccountType | string | Account type<br>Only relevant information for account type specified is used.<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| PortNum | integer | Port number used<br>In case of null, it sets a port number described in the ISM settings file. |
| AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Password | string | Account Password<br>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type |
| Ipmi | string | IPMI information<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>Specify AccountName for account information and Password for your password.<br>- MD5 : Certification from MD5 |

| Parameter | Type | Description |
|---|---|---|
| | | - SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv" .<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| PrivPassword | string | Encrypted password<br>Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv". |
| ContextName | string | Context Name |
| EngineId | string | Engine ID |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| ManualDiscoveryId | integer | ID for Manual Detection of Node |

### [Precautions]

- Manual discovery of nodes is controlled by unit of session ID for the user. Detected result can be retrieved for only requests in the same session IDs.

  How to assign a range of IP Address (a case)

  - "192.168.1.10": A case of assigning a specific IP address
  - "192.168.2.10-90": For assigning a range, it should be assigned by linking only the last digit with "-" .

  As for account information required for node detection, refer to the manual.

## 4.4.2 Retrieving Results of Manual Discovery of Node

### [Overview]

Retrieves manual discovery results of all nodes under management of a user group to which users belong.

### [Format]

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

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| manualdiscoveryid | integer | Narrowing by Node ID manually discovery |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| ManualDiscoveryList | array | Result of Manual Discovery of Node |
| ManualDiscoveryId | integer | ID for Manual Discovery of Node |
| Status | string | Status of detection process<br>- Running: Execution in progress |

| Parameter | Type | Description |
|---|---|---|
| | | - Complete: Finished |
| ManualDiscoveredNodes | array | Manual Discovered Node |
| ManualNodeId | integer | ID of Manual Discovered Node |
| IpAddress | string | IP Address of Manual Discovered Node |
| IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| NodeStatus | string | Status of Manual Discovered Node<br>- Success :Success (supported)<br>- Not Supported: Not supported<br>- Error: Failed to detect (Ping communication is successful.) (Failed to retrieve information)<br>- Only automatic registration: Not handled by node registration (if fabric switch) |
| NodeType | string | Node Type<br>For the information on node type, refer to [Node Type] in "4.3.1 Node Registration."<br>For not supported or failed to detect, "other" is set. |
| Model | string | Model name of an equipment |
| SerialNumber | string | Serial number of an equipment |
| Chassis | object | Chassis Information<br>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 searching equipment |
| Accounts | array | Information of Account that succeeded in connection<br>Only account information displayed would be registered as account information of a node at the time registration of manually detected node. |
| AccountType | string | Account type<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| DiscoveredDate | string | Detection time |
| ManualDiscoverySetting | object | Information on Setting of Manual Detection |
| Ranges | array | Range of IP addresses of targets for searching |
| IpAddressRange | string | IP Address Range |

| Parameter | Type | Description |
|---|---|---|
| IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| Accounts | array | Account information |
| AccountType | string | Account type<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| PortNum | integer | Port number used |
| AccountName | string | User Account Name |
| Property | object | Additional information according to account type |
| Ipmi | string | Ipmi information<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv".<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| ContextName | string | Context Name |

| Parameter | | | | | | Type | Description |
|---|---|---|---|---|---|---|---|
| | | | | | EngineId | string | Engine ID |

### [Precautions]

- Manual discovery of nodes is controlled by unit of session ID for the user. Detected result can be retrieved for only requests in the same session IDs.
- IP addresses already registered when nodes are not detected.

## 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<br>For the information on node type that can be assigned, refer to [Node Type] in "4.3.1 Node Registration."<br>Specify the node type retrieve d in manual retrieval of detection result 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<br>Specify the model name retrieved in manual retrieval of detection result 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<br>Key can be omitted<br>When the key is omitted, the setting of device is not performed.<br>Refer to the precaution for assigning method. |
| | | IpModifyMode | string | IP address change mode<br>It works with NotModifyDevice when not specified.<br>- ModifyDevice: Set (change) IP address of the device.<br>- NotModifyDevice: Do not set the device. |
| | | IpAddress | string | IP Address to set for the device |

| Parameter | Type | Description |
|---|---|---|
| | | Specify when IpModifyMode is ModifyDevice. |
| IpVersion | string | IP Version of IP Address to set for the device<br>Specify when IpModifyMode is ModifyDevice.<br>Specify the same IP version as the detected IP address.<br>- V4 : IPv4<br>- V6 : IPv6 |
| Subnet | string | Subnet of IP address to set for the device<br>Specify when IpModifyMode is ModifyDevice.<br>Specify IP address format when IP version is IPv4 and prefix format in case of IPv6.<br>E.g.)<br>For IPv4: "255.255.255.0"<br>For IPv6: "64" |
| Gateway | string | Gateway to set for device<br>Specify when IpModifyMode is ModifyDevice. |
| WebUrl | string | WebURL (such as WebUI of device) to use in main |
| Description | string | Description |
| NodeTagList | array | Node Tag information<br>Key can be omitted |
| NodeTag | string | Node Tag Name |
| RackInfo | object | Information of installation position of a rack<br>For PRIMERGY CX servers, it is registered as information on rack installation position of a chassis. |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Specify unit number at the bottom that a node possesses.<br>When displaying on the GUI, refer to the safety precautions. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: A type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| Chassis | object | Chassis Information |

| Parameter | Type | Description |
|---|---|---|
| | | 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 |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| Node | object | Node Information |
| NodeId | integer | Node ID |
| Name | string | Node Name |
| Type | string | Node Type<br>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<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | string | WebURL (such as WebUI of device) to use in main |
| Description | string | Description |
| NodeTagList | array | Node Tag information |
| NodeTag | string | Node Tag Name |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Outputs unit number at the bottom that a node possesses. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: A type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>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 acquiring node information. |
| | ParentNodeId | integer | Node ID of Parent Node<br>When acquiring node information, it is automatically created. For BX server blade and connection blade, it is set at the time of acquiring node information of BX chassis. |
| | ParentFabricId | integer | Node ID of fabric node it belongs to<br>In case of fabric switch, it is automatically configured at the time of acquiring node information by the fabric. |
| | ChildNodeList | array | Child Node Information<br>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 fabric |
| | NodeId | integer | Node ID of Switch Node |
| | Status | string | Status of a node<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| | AlarmStatus | string | Alarm status of a node<br>In case of a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification<br>Priority of Status: Normal < Info < Warning < Error |
| | MaintenanceMode | string | Maintenance Mode<br>- Normal: Regular Mode<br>- Maintenance: Maintenance Mode |
| | NodeGroupId | integer | Node Group ID |
| | UniqInfo | string | Specific Information for Internal Control |
| | UpdateDate | string | Last Update Time |

## [Precautions]

- Manual detection of nodes is controlled by unit of session ID for the user. Manually detected node can be registered for only requests in the same session IDs.

- IP address of a node is set up with detected values.
- Sets account information used in the detection as account information of a node.
- When displaying on the GUI, the controls below are conducted.
  - Information of installation position of a rack

    In case of a node type is facility, assign 101. Displayed as Rack CDU at upper position of the rack.

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

    Displayed as nodes of height of 44.5mm 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 specified fixed IP address is set. When the fixed IP address is already set, IP address cannot be changed.
  - Specify the same IP version as the detected IP address.
  - The target models are as follows.
    - PRIMERGY server
    - PRIMEQUEST 3000B series

## 4.4.4 Retrieving Results of Automatic Discovery of Node

### [Overview]

Retrieve all automatically discovered nodes.

### [Format]

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

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| DiscoveredNodeList | array | Automatic discovery result of node |
| DiscoveredNodeId | integer | Automatically discovered Node ID |
| DiscoveryType | string | Automatic discovery type<br>- Upnp : Automatic detected by Upnp<br>- Redfish : Automatic detected by Redfish |
| Ipv4Address | string | Detected IPv4 Address |
| Ipv6Address | string | Detected IPv6 Address<br>When DiscoveryType is Upnp/Redfish, IPv6 link local address is detected. Node registration cannot be performed for IPv6 link local address. |
| NodeStatus | string | Auto discovery node status<br>- Success :Success (supported)<br>- Not Supported: Not supported |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Error: Detection failure |
| | NodeType | string | Node Type<br>For the information on node type, refer to [Node Type] in "4.3.1 Node Registration."<br>For not supported or failed to detect, "other" is set. |
| | Model | string | Model name of an equipment |
| | SerialNumber | string | Serial number of an equipment |
| | Chassis | object | Chassis Information<br>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 searching equipment |
| | DiscoveredDate | string | Detection time |

### [Precautions]

- Corresponding models of automatic discovery are as follows.
  - Upnp : PSWITCH
  - Redfish : PRIMERGY server, PRIMEQUEST3000B
- Devices already registered in ISM are not detected.
- When notification is not received from the device for more than 30 minutes after the device is detected, it will be deleted from the detection result. Devices removed from the network will be deleted from the detection result after 30 minutes.
- After connecting the device to the network, it takes time only for the periodic notification interval that is set for the device until it is displayed in the automatic detection result.

## 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<br>For the information on node type that can be assigned, refer to [Node Type] in "4.3.1 Node Registration." |

| Parameter | Type | Description |
|---|---|---|
| | | Specify the node type retrieved in retrieval of automatic detection result 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<br>Specify the model name retrieved in retrieval of automatic detection result 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<br>Specify the IP version to be registered in ISM. |
| ModifyIpAddress | object | Device IP address setting (change) information<br>Key can be omitted<br>When the key is omitted, the setting of device is not performed.<br>Refer to the precaution for assigning method. |
| IpModifyMode | string | IP address change mode<br>It works with NotModifyDevice when not specified.<br>- ModifyDevice: Set (change) IP address of the device<br>- NotModifyDevice: Do not set the device |
| IpAddress | string | IP Address to set for the device<br>Specify when IpModifyMode is ModifyDevice. |
| IpVersion | string | IP Version of IP Address to set for the device<br>Specify when IpModifyMode is ModifyDevice.<br>- V4 : IPv4<br>- V6 : IPv6 |
| Subnet | string | Subnet of IP address to set for the device<br>Specify when IpModifyMode is ModifyDevice.<br>Specify IP address format when IP version is IPv4 and prefix format in case of IPv6.<br>E.g.)<br>For IPv4: "255.255.255.0"<br>For IPv6: "64" |
| Gateway | string | Gateway to set for device<br>Specify when IpModifyMode is ModifyDevice. |
| WebUrl | string | WebURL (such as WebUI of device) to use in main |
| Description | string | Description |
| NodeTagList | array | Node Tag information<br>Key can be omitted |
| NodeTag | string | Node Tag Name |
| RackInfo | object | Information of installation position of a rack |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | For PRIMERGY CX servers, it is registered as information on rack installation position of a chassis. |
| | | RackId | integer | Rack ID installed |
| | | Position | integer | Installed Position (Unit number)<br>Outputs unit number at the bottom that a node possesses.<br>When displaying on the GUI, refer to the safety precautions. |
| | | OccupySize | integer | Number of units occupying racks |
| | MountType | | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: A type to be installed beside the rack |
| | PduPosition | | string | Do not use it. |
| | Outlet | | array | Summary of PDU connection information<br>Presently it is not supported. |
| | | PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| | | NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| | Chassis | | object | Chassis Information<br>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<br>Set up information for access to the node. |
| | | AccountType | string | Account type<br>Only relevant information for account type specified is used.<br>- Ipmi: Used when iRMC/BMC/MMB etc. is transmitted by IPMI.<br>- Ssh: Used for communication by Ssh.<br>- SnmpV1: Used for communication by SNMP v1.<br>- SnmpV2: Used for communication by SNMP v2c.<br>- SnmpV3: Used for communication by SNMP v3. |
| | | PortNum | integer | Port number used<br>In case of null, it sets a port number described in the ISM settings file. |
| | | AccountName | string | User Account Name<br>It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |

| Parameter | Type | Description |
|---|---|---|
| Password | string | Account Password<br>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.<br>Ipmi, Ssh, Ssh-Privileged, SnmpV3 |
| Property | object | Additional information according to account type |
| Ipmi | string | Ipmi information<br>Presently it is not supported. |
| Ssh | string | Ssh information<br>Presently it is not supported. |
| SnmpV1 | object | SnmpV1 Information<br>It is used when an account type is SnmpV1. |
| CommunityName | string | Community Name |
| SnmpV2 | object | SnmpV2 Information<br>It is used when an account type is SnmpV2. |
| CommunityName | string | Community Name |
| SnmpV3 | object | SnmpV3 Information<br>It is used when an account type is SnmpV3. |
| SecurityLevel | string | Security level<br>- authPriv: Authentication and encryption enabled<br>- authNoPriv: Authentication enabled, No encryption<br>- noAuthNoPriv: No authentication nor encryption |
| AuthProtocol | string | Authentication protocol<br>Used when security level is "authPriv" or "authNoPriv".<br>Specify AccountName for account information and Password for your password.<br>- MD5 : Certification from MD5<br>- SHA : Authentication by SHA |
| PrivProtocol | string | Encrypted protocol<br>Used when security level is "authPriv" .<br>- DES: Encryption by DES<br>- AES: Encryption by AES |
| PrivPassword | string | Encrypted password<br>Encrypt the password with a method described in "2.4 Encryption." Used when security level is "authPriv". |
| 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<br>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<br>- V4 : IPv4<br>- V6 : IPv6 |
| WebUrl | string | WebURL (such as WebUI of device) to use in main |
| Description | string | Description |
| NodeTagList | array | Node Tag information |
| NodeTag | string | Node Tag Name |
| RackInfo | object | Information of installation position of a rack |
| RackId | integer | Rack ID installed |
| Position | integer | Installed Position (Unit number)<br>Specify unit number at the bottom that a node possesses. |
| OccupySize | integer | Number of units occupying racks |
| MountType | string | PDU Mount Type<br>- Rack: Type to install as same as normal nodes<br>- 0U: A type to be installed beside the rack |
| PduPosition | string | Do not use it. |
| Outlet | array | Summary of PDU connection information<br>Presently it is not supported. |
| PowerSocket | integer | Socket Number<br>Presently it is not supported. |
| NodeId | integer | Node ID at the destination of connection<br>Presently it is not supported. |
| SlotNum | integer | Slot Number in Chassis<br>For CX server, BX server blade and connection blade, it is automatically set at the time of acquiring node information. |
| ParentNodeId | integer | Node ID of Parent Node<br>When acquiring node information, it is automatically created. For BX server blade and connection blade, it is set at the time of acquiring node information of BX chassis. |
| ParentFabricId | integer | Node ID of fabric node it belongs to<br>In case of fabric switch, it is automatically configured at the time of acquiring node information by the fabric. |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | ChildNodeList | | array | Child Node Information<br>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 fabric |
| | | NodeId | integer | Node ID of Switch Node |
| | Status | | string | Status of a node<br>- Error: Error<br>- Warning: Warning<br>- Unknown: Communication impossible<br>- Normal: Normal<br>- Updating: During transmission |
| | AlarmStatus | | string | Alarm status of a node<br>In case of a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.<br>- Error: Error<br>- Warning: Warning<br>- Info: Information<br>- Normal: No Notification<br>Priority of Status: Normal < Info < Warning < Error |
| | MaintenanceMode | | string | Maintenance Mode<br>- Normal: Regular Mode<br>- Maintenance: Maintenance Mode |
| | NodeGroupId | | integer | Node Group ID |
| | UniqInfo | | string | Specific Information for Internal Control |
| | UpdateDate | | string | Last Update Time |

## [Precautions]

- When displaying on the GUI, the controls below are conducted.
  - Information of installation position of a rack
    - In case of a node type is facility

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

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

    Displayed as nodes of height of 44.5mm 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 specified fixed IP address 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. In case of DHCP setting, IP address cannot be changed. Set the correct IP address on the device and detect it.

# 4.5 Node Operation

## 4.5.1 Instruction to Change Power Status

### [Overview]

Instructs a change 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<br>Sets PowerManagement. |
| | PowerStatus | string | State of Power Sources<br>Configures operation to change a status. Sets a value for any of PowerOn, Reset or Shutdown. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Parts | | array | List of Power Sources |
| | Name | string | Name of Power Source<br>Sets PowerManagement. |
| | PowerStatus | string | State of Power Sources<br>The value of either On, Off, Standby or Unknown is set. |

## 4.5.2 Retrieval of Node LED Information

### [Overview]

Retrieves LED information in specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Parts | | array | List of LEDs |
| | Name | string | LED Name<br>The LED Name will be set.<br>For the LED name, there is Power LED Status, Global Error LED Status, CSS LED Status, and Identify LED Status. |
| | LedStatus | string | Status of LEDs<br>The value of either On, Off, or Blinking is set. |
| | LedChoices | array(string) | Options for LED<br>Sets all choices operational. As for alternatives, you can choose On, Off or Blinking.<br>It become an empty list ([ ]) when unable to operate. |

## 4.5.3 Instruction to Change Node LED Status

### [Overview]

Instructs a change of state of identification LED in specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Parts | | array | List of LEDs |
| | Name | string | LED Name<br>Sets up Identify LED Status. |
| | LedStatus | string | Status of LEDs<br>Configures a state you want to change. Sets a value for any of On, Off, Blinking. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Parts | array | List of LEDs |

| Parameter | | Type | Description |
|---|---|---|---|
| | Name | string | LED Name<br>Identify LED Status is set up. |
| | LedStatus | string | Status of LEDs<br>Sets a status of LED. The value of either On, Off, or Blinking is set. |

### 4.5.4 Output of Power Statuses

**[Overview]**

Retrieves information of power statuses.

**[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<br>Sets PowerManagement. |
| | PowerStatus | string | State of Power Sources<br>The value of either On, Off, Standby or Unknown is set. |
| | PowerChoices | array(string) | Choices of Power Sources<br>Sets all choices operational. As for alternatives, you can choose PowerOn, Reset or Shutdown.<br>Operational choices other than PowerOn, Reset, and Shutdown are different according to the node.<br>It become an empty list ([ ]) when unable to operate. |

## 4.6 Nodes Detailed Information Management

### 4.6.1 Instruction to Execute Retrieval of Node Information

**[Overview]**

Retrieves information from machines for specified nodes.

When OS information is registered, execute to retrieve information from the OS also.

**[Format]**

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

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| RefreshDate | string | Execution time of instruction for acquiring node information |

### [Precautions]

- It takes time to obtain node information. Outputs a message (10020303) at an operation log. Check the operation log.
- If retrieving the node information failed, the error is output on the operation log.
- Progress of retrieval of information of node can be confirmed by acquiring nodes detailed information.
- When giving execution instruction to retrieve node information during execution of acquiring node information, it will execute information retrieval after the previous node information retrieval is completed.
- When OS information is registered, execute to retrieve 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 Nodes Detailed Information

### [Overview]

Retrieves nodes detailed information under management of a user group to which users belong.

It is possible specify contents to display by query parameters.

### [Format]

```
GET /nodes/inventory
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| level | string | Retrieving process level<br>Assigns if VariableData should be obtained. Unless specified, it operates by Top.<br>- Top: No information on VariableData<br>- All: VariableData available<br>It is recommended to use it in combination with a query target. |
| target | string | Specifying type of parts<br>Assign parameters inside VariableData. Displays only specified information. Specify All for the retrieving process level.<br>Example of assignment) |

| Parameter | Type | Description |
|---|---|---|
| | | /nodes/inventory?level=All&target=Firmware -> Displays only Firmware in VariableData. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| Nodes | array | Nodes detailed 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 |
| HardwareLogTarget | integer | Node log collection availability-disavailability information<br>Used in log management function.<br>- 0: Disable<br>- 1: Enable |
| SoftwareLogTarget | integer | OS Log Collection Possibility Information<br>Used in log management function.<br>- 0: Disable<br>- 1: Enable |
| ServerViewLogTarget | integer | ServerView Log Collection Availability-Unavailability Information<br>Used in log management function.<br>- 0: Disable<br>- 1: Enable |
| RaidLogTarget | integer | RAID Log Collection Possibility Information<br>Used in log management function.<br>- 0: Disable<br>- 1: Enable |
| Progress | string | Progress of Retrieval of Node Information<br>- Updating: During retrieval. Displays the information retrieved last time.<br>- Complete: Retrieval finished Displays the most up-to-dated information.<br>- Error: Failed to retrieve information. Information will not be renewed. |
| VariableData | object | Port Detail Information |
| Slot | string | Slot Number<br>Displays for PRIMERGY CX servers. |
| PartitionId | string | Number of Partitions |

| Parameter | Type | Description |
|---|---|---|
| | | Displayed at PRIMEQUEST partition/expansion partition. |
| ParentId | string | Number of Parent Partitions<br>Displays at PRIMEQUEST expansion partition. |
| PartitioningMode | string | State of Partitions<br>Displayed at PRIMEQUEST partition/expansion partition.<br>- Enable: Partition is enabled. It is in a state of being able to use with startup of OS.<br>- 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<br>When a virtual address is assigned, the virtual address is displayed. |
| PortWWNN | string | WWNN<br>When a virtual address is assigned, the virtual address is displayed. |
| PortWWPN | string | WWPN<br>When a virtual address is assigned, the virtual address is displayed. |
| ManufactureMacAddress | string | Physical Port MAC Address |
| ManufactureWWNN | string | Physical WWNN |
| ManufactureWWPN | string | Physical WWPN |
| Category | string | Port Category<br>LAN/ FC/ FCoE/ iSCSI/ IB/ CNA/ Unknown |
| SubCategory | string | Port Sub-category |

| Parameter | Type | Description |
|---|---|---|
| InterfaceType | string | Type of Interface |
| LinkStatus | string | Status of Link |
| Speed | object | Communication speed |
| Value | string | Value |
| Unit | string | Unit |
| Duplex | string | duplex<br>Unknown/ Half/ Full |
| VLans | array | VLAN Information |
| VLanId | integer | VLAN ID |
| Tag | string | tag: available/unavailable |
| Ctag | integer | CTag Information |
| Lldp | string | LLDP Settings<br>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 |
| 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 |
| Component | object | Information of configuration unit<br>Displays which component it exists on. |
| Type | string | Type of configuration unit<br>E.g.) "PCIe" |
| Name | string | Name of configuration unit<br>E.g.) PCIe Name of PCIe |
| ParentName | string | Installation Source Information |
| DetectedOrder | integer | Detection number<br>Displays for PRIMERGY servers. |
| PCIes | array | PCIe Information |
| Name | string | PCIe Name |
| Model | string | Model Name |
| Type | string | PCIe Type |
| SlotId | string | Slot Number of Card |
| BusNumber | integer | Bus Number of Card |

| Parameter | Type | Description |
|---|---|---|
| DeviceNumber | integer | Device Number of Card |
| FunctionNumber | integer | Function Number of Card |
| Component | object | Information of configuration unit<br>Displays which component it exists on. |
| Type | string | Type of configuration unit<br>E.g.) MMB |
| Name | string | Name of configuration unit<br>E.g.) MMB Name of MMB |
| Firmware | array | Firmware Information |
| 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 |
| Function | string | Function Number |
| Version | string | Version of iRMC<br>Displays for PRIMERGY servers. |
| ParentName | string | Installation Source Information |
| Unified | string | Unified Model |
| 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<br>Enable/ Disable |
| Mlags | array | MLAG Information |
| Domain | string | MLAG Domain |
| MlagId | string | MLAG ID |
| MlagStatus | string | MLAG Status |

| Parameter | Type | Description |
|---|---|---|
| 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 Condition |
| VtepMode | string | Information to determine if Vtep should be used |
| Vteps | array | Vtep Information |
| VxlanId | string | VXLAN interface name |
| IpAddress | string | IP Address |
| UdpPort | string | UDP Port Number |
| BumTraffic | string | Method of BUM traffic transfer |
| MalticastGroup | string | Multi-cast group |
| 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 |

| Parameter | Type | Description |
|---|---|---|
| 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 |
| Drive | string | Drive Name |
| OwnerNodeName | string | Controller Name |
| Volume | array | Information of Volume |
| Number | string | Volume Number |
| Status | string | Status |
| Type | string | Type of Volume |
| Capacity | string | Volume |
| SizeUsed | string | Capacity Used |
| Name | string | Volume Name |
| Aggregate | string | Aggregate Name |
| Aggregate | array | Aggregate Information |
| 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 |
| FreeCapacity | integer | RAID Empty Capacity |
| Disks | integer | RAID Disk Number |

| Parameter | Type | Description |
|---|---|---|
| MMBs | array | MMB Information |
| Name | string | MMB Name |
| Role | string | Status<br>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 |
| 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<br>Displays which component it exists on. |
| LogicalComponent | string | Logical Number |
| Type | string | Type of configuration unit<br>E.g.) IOU |
| Name | string | Name of configuration unit<br>E.g.) IOU Name of IOU |
| DUs | array | DU Information |
| Name | string | DU Name |
| PartNumber | string | Parts Number |
| SerialNumber | string | Serial Number |
| FabricInformation | object | Fabric Information |

| Parameter | Type | Description |
|---|---|---|
| | | Displays in a case of 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 |
| SwitchPriority | string | VCS principal switch<br>null/ Principal |
| FirmwareVersion | string | Firmware Version Number |
| SwitchRole | string | C-Fabric Switch Role<br>master/ slave/ unknown |
| MacAddress | string | MAC Address |
| FirmwareUpdateMode | string | Firmware Update Mode |
| PortInformation | array | Port Information |
| PortName | string | Port Name |
| PortNumber | string | Port Number |
| Catergory | string | Port Category |
| SubCategory | string | Port Subcategory |
| 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 |

| Parameter | Type | Description |
|---|---|---|
| | | Displays in a case of fabric switch |
| FabricId | integer | Fabric ID |
| DomainId | integer | Domain ID |
| SwitchId | integer | Switch ID |
| SwitchPriority | string | VCS principal switch<br>null/ Principal |
| SwitchRole | string | C-Fabric Switch Role<br>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 |
| ControllerList | array | Controller Information<br>Display if 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 |
| DiskShelfList | array | Information of internal disk shelves<br>Display if NetApp storage. |
| Name | string | Disk Shelf Name |
| ProductName | string | Model Name |
| 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 |
| UpdateDate | string | Update time and date |

## 4.6.3 Separate Retrieval for Nodes Detailed Information

### [Overview]

Retrieves detailed information of specified nodes.

### [Format]

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

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| level | string | Retrieving process level<br>Assigns if VariableData should be obtained. Unless specified, it operates by All.<br>- Top: No information on VariableData<br>- All: VariableData available |
| target | string | Specifying type of parts<br>Assign parameters inside VariableData. Displays only specified information. Specify All for the retrieving process level.<br>Example of assignment)<br>/nodes/{nodeid}/inventory?level=All&target=Firmware -> Displays only Firmware in VariableData. |

### [Response Parameter]

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

## 4.6.4 Registration of OS Information

### [Overview]

Registers OS information to specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Host | object | OS Information |
| OsType | string | OS Type<br>- CentOS : CentOS<br>- RedHat : Red Hat Enterprise Linux<br>- SUSELinuxEnterprise : SUSE Linux Enterprise Server<br>- Windows : Microsoft Windows<br>- VMware : VMware ESXi |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - IPCOM OS : IPCOM OS |
| | OsVersion | string | OS Version Number<br>- CentOS : 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4<br>- RedHat : 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4<br>- SUSELinuxEnterprise : 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3<br>- Windows : 2008R2/ 2012/ 2012R2/ 2016<br>- VMware : 5.5/ 6.0/ 6.5<br>- IPCOM OS : 1.x |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| | OsDomain | string | Domain Name<br>Specify a name of FQDN for a realm.<br>E.g.) ISMDOMAIN.LOCAL |
| | OsAccount | string | Account Name<br>Specify a account name excluding a realm.<br>E.g.) ismadmin |
| | OsPassword | string | Password<br>Encrypt the password with a method described in "2.4 Encryption." |
| | OsPortNum | integer | Port number used<br>In case of null, it sets a port number described in the ISM settings file.<br>Connecting protocols for respective OS are as follows:<br>- CentOS, RedHat, SUSELinuxEnterprise, IPCOM OS : SSH<br>- Windows : WinRM<br>- VMware : CIM |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Host | | object | OS Information |
| | NodeId | integer | Node ID |
| | OsType | string | OS Type<br>- CentOS : CentOS<br>- RedHat : Red Hat Enterprise Linux<br>- SUSELinuxEnterprise : SUSE Linux Enterprise Server |

| Parameter | Type | Description |
|---|---|---|
| | | - Windows : Microsoft Windows<br>- VMware : VMware ESXi<br>- IPCOM OS : IPCOM OS |
| OsVersion | string | OS Version Number |
| OsIpAddress | string | OS IP Address |
| OsIpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| OsDomain | string | Domain Name |
| OsAccount | string | Account Name |
| OsPortNum | integer | Port number used |
| HostName | string | Host name<br>Automatically set after acquiring the node information. |
| MemorySize | string | Memory Capacity as recognized by OS<br>Automatically set after acquiring the node information. |
| MemorySizeUnit | string | Unit of Memory Capacity as recognized by OS<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| IpAddress | array | IP Address Information<br>Automatically set after acquiring the node information. |
| DeviceName | string | Port Device Name<br>Automatically set after acquiring the node information. |
| MacAddress | string | Port MAC Address<br>Automatically set after acquiring the node information. |
| V4 | string | IP Address for IPv4<br>Automatically set after acquiring the node information. |
| V4SubMask | string | Subnet Mask for IPv4<br>Automatically set after acquiring the node information. |
| V6 | string | IP Address for IPv6<br>Automatically set after acquiring the node information. |
| V6SubMask | string | Subnet Mask for IPv6<br>Automatically set after acquiring the node information. |
| DiskUnits | array | Disk Information<br>Automatically set after acquiring the node information. |
| MountPosition | string | Volume Name<br>Automatically set after acquiring the node information. |
| UseSize | string | Volume in Use<br>Automatically set after acquiring the node information. |
| UseSizeUnit | string | Unit of Volume in Use |

| Parameter | Type | Description |
|---|---|---|
| | | B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| VolumeSize | string | Capacity of Volume<br>Automatically set after acquiring the node information. |
| VolumeSizeUnit | string | Capacity unit of volume created in OS<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| CmsId | integer | Cloud Management Software ID managed by the OS |
| UpdateDate | string | Last Update Time |

### [Precautions]

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

## 4.6.5 List Retrieval for OSes

### [Overview]

Retrieves OS information of all nodes under management of a user group to which users belong.

### [Format]

```
GET /nodes/os
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Hosts | array | OS Information |
| NodeId | integer | Node ID |
| OsType | string | OS Type<br>- CentOS : CentOS<br>- RedHat : Red Hat Enterprise Linux<br>- SUSELinuxEnterprise : SUSE Linux Enterprise Server<br>- Windows : Microsoft Windows<br>- VMware : VMware ESXi<br>- IPCOM OS : IPCOM OS |
| OsVersion | string | OS Version Number |
| OsIpAddress | string | OS IP Address |
| OsIpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| OsDomain | string | Domain Name |

| Parameter | | Type | Description |
|---|---|---|---|
| | OsAccount | string | Account Name |
| | OsPortNum | integer | Port number used |
| | HostName | string | Host Name<br>Automatically set after acquiring the node information. |
| | CmsId | integer | Cloud Management Software ID managed by the OS |
| | UpdateDate | string | Last Update Time |

## 4.6.6 Separate Retrieval for OS

### [Overview]

Retrieves OS information of 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<br>- CentOS : CentOS<br>- RedHat : Red Hat Enterprise Linux<br>- SUSELinuxEnterprise : SUSE Linux Enterprise Server<br>- Windows : Microsoft Windows<br>- VMware : VMware ESXi<br>- IPCOM OS : IPCOM OS |
| | OsVersion | string | OS Version Number |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| | OsDomain | string | Domain Name |
| | OsAccount | string | Account Name |
| | OsPortNum | integer | Port number used |
| | HostName | string | Host name<br>Automatically set after acquiring the node information. |
| | MemorySize | string | Memory Capacity as recognized by OS<br>Automatically set after acquiring the node information. |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | MemorySizeUnit | | string | Unit of Memory Capacity as recognized by OS<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| | IpAddress | | array | IP Address Information<br>Automatically set after acquiring the node information. |
| | | DeviceName | string | Port Device Name<br>Automatically set after acquiring the node information. |
| | | MacAddress | string | Port MAC Address<br>Automatically set after acquiring the node information. |
| | | V4 | string | IP Address for IPv4<br>Automatically set after acquiring the node information. |
| | | V4SubMask | string | Subnet Mask for IPv4<br>Automatically set after acquiring the node information. |
| | | V6 | string | IP Address for IPv6<br>Automatically set after acquiring the node information. |
| | | V6SubMask | string | Subnet Mask for IPv6<br>Automatically set after acquiring the node information. |
| | DiskUnits | | array | Information of Disk<br>Automatically set after acquiring the node information. |
| | | MountPosition | string | Volume Name<br>Automatically set after acquiring the node information. |
| | | UseSize | string | Volume in Use<br>Automatically set after acquiring the node information. |
| | | UseSizeUnit | string | Unit of Volume in Use<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| | | VolumeSize | string | Capacity of Volume<br>Automatically set after acquiring the node information. |
| | | VolumeSizeUnit | string | Capacity unit of volume created in OS<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| | CmsId | | integer | Cloud Management Software ID managed by the OS |
| | UpdateDate | | string | Last Update Time |

## 4.6.7 Updating of OS Information

### [Overview]

Updates OS information of specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Host | object | OS Information |
| OsType | string | OS Type<br>- CentOS : CentOS<br>- RedHat : Red Hat Enterprise Linux<br>- SUSELinuxEnterprise : SUSE Linux Enterprise Server<br>- Windows : Microsoft Windows<br>- VMware : VMware ESXi<br>- IPCOM OS : IPCOM OS |
| OsVersion | string | OS Version Number<br>- CentOS : 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4<br>- RedHat : 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4<br>- SUSELinuxEnterprise : 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3<br>- Windows : 2008R2/ 2012/ 2012R2/ 2016<br>- VMware : 5.5/ 6.0/ 6.5<br>- IPCOM OS : 1.x |
| OsIpAddress | string | OS IP Address |
| OsIpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| OsDomain | string | Domain Name<br>Specify a name of FQDN for a realm.<br>E.g.) ISMDOMAIN.LOCAL |
| OsAccount | string | Account Name<br>Specify a account name excluding a realm.<br>E.g.) ismadmin |
| OsPassword | string | Password<br>Encrypt the password with a method described in "2.4 Encryption."<br>Omit the key unless updating. |
| OsPortNum | integer | Port number used |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | In case of null, it sets a port number described in the ISM settings file.<br>Connecting protocols for respective OS are as follows:<br>- CentOS, RedHat, SUSELinuxEnterprise, IPCOM OS : SSH<br>- Windows : WinRM<br>- VMware : CIM |

**[Response Parameter]**

| Parameter | | | Type | Description |
|---|---|---|---|---|
| Host | | | object | OS Information |
| | NodeId | | integer | Node ID |
| | OsType | | string | OS Type<br>- CentOS : CentOS<br>- RedHat : Red Hat Enterprise Linux<br>- SUSELinuxEnterprise : SUSE Linux Enterprise Server<br>- Windows : Microsoft Windows<br>- VMware : VMware ESXi<br>- IPCOM OS : IPCOM OS |
| | OsVersion | | string | OS Version Number |
| | OsIpAddress | | string | OS IP Address |
| | OsIpVersion | | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| | OsDomain | | string | Domain Name |
| | OsAccount | | string | Account Name |
| | OsPortNum | | integer | Port number used |
| | HostName | | string | Host name<br>Automatically set after acquiring the node information. |
| | MemorySize | | string | Memory Capacity as recognized by OS<br>Automatically set after acquiring the node information. |
| | MemorySizeUnit | | string | Unit of Memory Capacity as recognized by OS<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| | IpAddress | | array | IP Address Information<br>Automatically set after acquiring the node information. |
| | | DeviceName | string | Port Device Name<br>Automatically set after acquiring the node information. |
| | | MacAddress | string | Port MAC Address |

| Parameter | Type | Description |
|---|---|---|
| | | Automatically set after acquiring the node information. |
| V4 | string | IP Address for IPv4<br>Automatically set after acquiring the node information. |
| V4SubMask | string | Subnet Mask for IPv4<br>Automatically set after acquiring the node information. |
| V6 | string | IP Address for IPv6<br>Automatically set after acquiring the node information. |
| V6SubMask | string | Subnet Mask for IPv6<br>Automatically set after acquiring the node information. |
| DiskUnits | array | Disk Information<br>Automatically set after acquiring the node information. |
| MountPosition | string | Volume Name<br>Automatically set after acquiring the node information. |
| UseSize | string | Volume in Use<br>Automatically set after acquiring the node information. |
| UseSizeUnit | string | Unit of Volume in Use<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| VolumeSize | string | Capacity of Volume<br>Automatically set after acquiring the node information. |
| VolumeSizeUnit | string | Capacity unit of volume created in OS<br>B/ KB/ MB/ GB/ TB<br>Automatically set after acquiring the node information. |
| CmsId | integer | Cloud Management Software ID managed by the OS |
| UpdateDate | string | Last Update Time |

### [Precautions]

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

## 4.6.8 Deletion of OS Information

### [Overview]

Deletes OS information of 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 Cloud Management Software under management of a user group to which users belong.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| CmsIds | array(integer) | ID of Cloud Management Software<br>Specify this when limiting Cloud Management Software at a destination of retrieval. Retrieves information from all of Cloud Management Software under management of 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 obtain virtual information. Outputs a message (10021503) at an operation log. Check the operation log.
- If there is any Cloud Management Software that failed in acquiring virtual information, an error message will appear on the operation log.

## 4.6.10 List Retrieval for Virtual Machines

### [Overview]

Retrieves all virtual machines on OS of the nodes under management of a user group to which users belong.

It is possible refine information to retrieve by query parameters.

### [Format]

```
GET /resources/virtualmachines
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| nodeid | integer | Narrowing 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<br>- vCenter : VMware vCenter Server<br>- MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| CmsVersion | string | Version Number of Cloud Management Software |
| OperatingSystem | string | OS Information of Virtual Machine |
| VirtualMachineInstanceId | string | Identification ID of Virtual Machine<br>Displays IDs numbered by Cloud Management Software |
| VirtualMachineName | string | Virtual Machine Name |
| VirtualMachinePowerStatus | string | Launch Condition of Virtual Machine<br>- ON: Startup conditions<br>- OFF: Outside startup conditions |
| VirtualCpuCoreNum | integer | The number of virtual CPU cores |
| VirtualMachineMemoryMax | integer | Setting of Maximum Value of Memory Capacity<br>With no setting of maximum and minimum values, the same value fill in for both. |
| VirtualMachineMemoryMaxUnit | string | Unit of Maximum Value of Memory Capacity<br>B/ KB/ MB/ GB/ TB |
| VirtualMachineMemoryMin | integer | Setting of Minimum Value of Memory Capacity<br>With no setting of maximum and minimum values, the same value fill in for both. |
| VirtualMachineMemoryMinUnit | string | Unit of Minimum Value of Memory Capacity<br>B/ KB/ MB/ GB/ TB |
| VirtualDiskTotal | integer | Disk Storage Capacity<br>Displays a total value when allocating several disks |
| VirtualDiskTotalUnit | string | Unit of Disk Storage Capacity<br>B/ KB/ MB/ GB/ TB |
| VirtualMachineOptionVCenter | object | Additional information for vCenter |
| ManagementObjectId | string | ID assigned to each ManagementObjectReference |
| VirtualAdapterInformation | array | Virtual Adopter Information |

| Parameter | Type | Description |
|---|---|---|
| VirtualAdapterName | string | Virtual Adopter Name |
| VirtualAdapterNumber | string | Virtual Adopter Number |
| MacAddress | string | MAC Address |
| VlanInformation | array | VLAN Information |
| VlanId | string | VLAN ID<br>For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-).<br>E.g.) "1-10,21,22,30-45" |
| VlanType | string | VLAN Type<br>VLAN/ Trunk/ Private-Primary |
| RemoteVirtualSwitchInformation | object | Information of Virtual Switch ID at the destination of connection |
| SwitchType | string | Virtual Switch Type at the destination of connection<br>Standard/ Distributed |
| RemoteVirtualSwitchId | integer | Virtual switch ID at the destination of connection |
| RemoteVirtualSwitchPortName | string | Port Name of Virtual Switch at the destination of connection |
| UpdateDate | string | Last Update Time/Date |

### [Precautions]

- For displaying of information on a virtual machine, it is necessary to register a Cloud Management Software and to instruct an execution to retrieve virtual information.

## 4.6.11 Separate Retrieval for Virtual Machine

### [Overview]

Retrieves information of a virtual machine as specified.

### [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<br>- vCenter : VMware vCenter Server |

| Parameter | Type | Description |
|---|---|---|
| | | - MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| CmsVersion | string | Version Number of Cloud Management Software |
| OperatingSystem | string | OS Information of Virtual Machine |
| VirtualMachineInstanceId | string | Identification ID of Virtual Machine<br>Displays IDs numbered by Cloud Management Software |
| VirtualMachineName | string | Virtual Machine Name |
| VirtualMachinePowerStatus | string | Launch Condition of Virtual Machine<br>- ON: Startup conditions<br>- OFF: Outside startup conditions |
| VirtualCpuCoreNum | integer | The number of virtual CPU cores |
| VirtualMachineMemoryMax | integer | Setting of Maximum Value of Memory Capacity<br>With no setting of maximum and minimum values, the same value fill in for both. |
| VirtualMachineMemoryMaxUnit | string | Unit of Maximum Value of Memory Capacity<br>B/ KB/ MB/ GB/ TB |
| VirtualMachineMemoryMin | integer | Setting of Minimum Value of Memory Capacity<br>With no setting of maximum and minimum values, the same value fill in for both. |
| VirtualMachineMemoryMinUnit | string | Unit of Minimum Value of Memory Capacity<br>B/ KB/ MB/ GB/ TB |
| VirtualDiskTotal | integer | Disk Storage Capacity<br>Displays a total value when allocating several disks |
| VirtualDiskTotalUnit | string | Unit of Disk Storage Capacity<br>B/ KB/ MB/ GB/ TB |
| VirtualMachineOptionVCenter | object | Additional information for vCenter |
| ManagementObjectId | string | ID assigned to each ManagementObjectReference |
| VirtualAdapterInformation | array | Virtual Adopter Information |
| VirtualAdapterName | string | Virtual Adopter Name |
| VirtualAdapterNumber | string | Virtual Adopter Number |
| MacAddress | string | MAC Address |
| VlanInformation | array | VLAN Information |
| VlanId | string | VLAN ID<br>For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by |

| Parameter | Type | Description |
|---|---|---|
| | | linking with hyphen (-).<br>E.g.) "1-10,21,22,30-45" |
| VlanType | string | VLAN Type<br>VLAN/ Trunk/ Private-Primary |
| RemoteVirtualSwitchInformation | object | Information of Virtual Switch ID at the destination of connection |
| SwitchType | string | Virtual Switch Type at the destination of connection<br>Standard/ Distributed |
| RemoteVirtualSwitchId | integer | Virtual switch ID at the destination of connection |
| RemoteVirtualSwitchPortName | string | Port Name of Virtual Switch at the destination of connection |
| UpdateDate | string | Update time and date |

### [Precautions]

- For displaying of information on a virtual machine, it is necessary to register a Cloud Management Software and to instruct an execution to retrieve virtual information.

## 4.6.12 List Retrieval for Virtual Switches

### [Overview]

Retrieves all virtual switches on OS of the nodes under management of a user group to which users belong.

### [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<br>Standard/ Distributed |
| VirtualSwitchInstanceId | string | Virtual Switch Identification ID<br>Displays IDs numbered by Cloud Management Software |
| VirtualSwitchName | string | Virtual Switch Port Name |
| Nodes | array | Node Information<br>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 |

| Parameter | Type | Description |
|---|---|---|
| VirtualSwitchPortNumber | string | Virtual Switch Port Number |
| VirtualMachineInformation | object | Virtual Machine Information<br>It is displayed when a virtual switch port is connected with a virtual machine. |
| VirtualMachineId | integer | Virtual Machine ID |
| VirtualAdapterName | string | Virtual Adopter Name |
| RemoteVirtualSwitchInformation | object | Information of Virtual Switch ID at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualSwitchId | integer | Virtual switch ID at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualSwitchPortName | string | Port Name of Virtual Switch at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualRouterInformation | object | Virtual Router Information at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualRouterId | integer | Virtual Router ID at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualRouterPortName | string | Virtual Router Port Name at the destination of connection<br>Presently it is not supported. |
| PhysicalAdapterInformation | object | Physical Adopter Information<br>It is displayed when a virtual switch port is connected with a physical adapter. |
| NodeId | integer | Node ID |
| PhysicalAdapterName | string | Physical Adopter Name |
| VlanInformation | array | VLAN Information |
| VlanId | string | VLAN ID<br>For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-).<br>E.g.) "1-10,21,22,30-45" |
| VlanType | string | VLAN Type<br>VLAN/ Trunk/ Private-Primary |
| UpdateDate | string | Last Update Time/Date |

### [Precautions]

- For displaying of information on a virtual switch, it is necessary to register a Cloud Management Software and to instruct an execution to retrieve virtual information.

## 4.6.13 Separate Retrieval for Virtual Switch

### [Overview]

Retrieves virtual switch information specified.

### [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<br>Standard/ Distributed |
| VirtualSwitchInstanceId | string | Virtual Switch Identification ID<br>Displays IDs numbered by Cloud Management Software |
| VirtualSwitchName | string | Virtual Switch Port Name |
| Nodes | array | Node Information<br>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 |
| VirtualMachineInformation | object | Virtual Machine Information<br>It is displayed when a virtual switch port is connected with a virtual machine. |
| VirtualMachineId | integer | Virtual Machine ID |
| VirtualAdapterName | string | Virtual Adopter Name |
| RemoteVirtualSwitchInformation | object | Information of Virtual Switch ID at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualSwitchId | integer | Virtual switch ID at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualSwitchPortName | string | Port Name of Virtual Switch at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualRouterInformation | object | Virtual Router Information at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualRouterId | integer | Virtual Router ID at the destination of connection<br>Presently it is not supported. |
| RemoteVirtualRouterPortName | string | Virtual Router Port Name at the destination of connection<br>Presently it is not supported. |
| PhysicalAdapterInformation | object | Physical Adopter Information |

| Parameter | Type | Description |
|---|---|---|
| | | It is displayed when a virtual switch port is connected with a physical adapter. |
| NodeId | integer | Node ID |
| PhysicalAdapterName | string | Physical Adopter Name |
| VlanInformation | array | VLAN Information |
| VlanId | string | VLAN ID<br>For values, it should be displayed by linking with comma (,). Continuous values of three or more should be displayed by linking with hyphen (-).<br>E.g.) "1-10,21,22,30-45" |
| VlanType | string | VLAN Type<br>VLAN/ Trunk/ Private-Primary |
| UpdateDate | string | Last Update Time/Date |

### [Precautions]

- For displaying of information on a virtual switch, it is necessary to register a Cloud Management Software and to instruct an execution to retrieve virtual information.

# 4.7 Monitoring

## 4.7.1 List Retrieval for Information on Monitoring Items

### [Overview]

Retrieves all information of monitored items for specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Items | array | Monitor Item List |
| ItemName | string | Monitor Item Name<br>E.g.) Ambient Temperature |
| Type | string | Monitor Item Type<br>E.g.) Temperature |
| ValueType | string | It shows a form of values. It falls under any of the following.<br>- integer<br>- real (decimal)<br>- string |

| Parameter | | Type | Description |
|---|---|---|---|
| | Unit | string | Unit<br>E.g.) Degree Celsius |

## 4.7.2 Registration of Monitoring Settings

### [Overview]

Registers settings for monitoring.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| NodeId | | integer | Specify node ID as target. |
| ItemName | | string | Assigns the name of a monitor items. |
| IsActive | | string | Assigns a state of performance monitoring<br>- Enabled: Enabled<br>- Disabled: Disabled |
| IsThresholdMonitoringActive | | string | Specify a state of threshold value monitoring.<br>- Enabled: Enabled<br>- Disabled: Disabled<br>In order to enable threshold value monitor, a performance monitor (IsActive) should be enabled.<br>For a monitor item with its value type is string, Enabled cannot be specified. |
| UpperCritical | | object | Designates a Threshold (Abnormality in Upper error) |
| | Value | string | Specifies the threshold value of upper error limit by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Error) is applied.<br>Select one of the following.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | | object | Designates information on a Threshold (Abnormality in upper limit) |
| | Value | string | Specify the threshold value of upper error limit by either integer or decimal. |

| Parameter | | Type | Description |
|---|---|---|---|
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Warning) is applied.<br>Select one of the following.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | | object | Designates a Threshold (Abnormality in lower limit) |
| | Value | string | Assigns value of the lower limit of threshold for abnormality by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Error) is applied.<br>Select one of the following.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | | object | Designates information on a Threshold (Abnormality in lower limit) |
| | Value | string | Specify value of Lower limit of error threshold by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Warning) is applied.<br>Select one of the following.<br>- Error<br>- Warning<br>- Info<br>- Normal |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| ItemId | string | Monitor Item ID |
| NodeId | integer | Node ID of the object |
| ItemName | string | Monitor Item Name |
| IsActive | string | Performance monitoring<br>- Enabled: Enabled<br>- Disabled: Disabled |
| IsThresholdMonitoringActive | string | State of threshold value monitoring<br>- Enabled: Enabled |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Disabled: Disabled |
| UpperCritical | | object | Information on Threshold (Abnormality in Upper error) |
| | Value | string | Threshold for abnormality at upper limit. |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | | object | Information on a Threshold (Abnormality in Upper limit) |
| | Value | string | Upper error threshold value |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | | object | Information on Threshold (Abnormality in lower limit) |
| | Value | string | Lower limit of threshold for abnormality |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | | object | Information on a Threshold (Abnormality in lower limit) |
| | Value | string | Lower limit of error threshold value |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |

## 4.7.3 Retrieval of Monitoring Settings

### [Overview]

Retrieves settings for monitoring.

### [Format]

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

### [Query Parameter]

| Parameter | Description |
|---|---|
| NodeId | Assigns a node ID.<br>Retrieves all settings of monitoring as assigned in specified node IDs. Cannot be used with ItemId parameters. |
| ItemId | Assigns the monitor setting ID.<br>Retrieves monitor rule ID specified. Cannot be used with NodeId parameters. |

**[Response Parameter]**

| Parameter | | Type | Description |
|---|---|---|---|
| Items | | array | Monitor Item Information (List) |
| | ItemId | string | Monitor Item ID |
| | NodeId | integer | Node ID of the object |
| | ItemName | string | Monitor Item Name |
| | ValueType | string | It shows a form of values. It falls under any of the following.<br>- integer<br>- real (decimal)<br>- string |
| | Unit | string | Unit |
| | IsActive | string | Performance monitoring<br>- Enabled: Enabled<br>- Disabled: Disabled |
| | IsThresholdMonitoringActive | string | State of threshold value monitoring<br>- Enabled: Enabled<br>- Disabled: Disabled |
| UpperCritical | | object | Information on Threshold (Abnormality in Upper error) |
| | Value | string | Threshold for abnormality at upper limit. |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | | object | Information on a Threshold (Abnormality in Upper limit) |
| | Value | string | Upper error threshold value |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | | object | Information on Threshold (Abnormality in lower limit) |

| Parameter | | Type | Description |
|---|---|---|---|
| | Value | string | Lower limit of threshold for abnormality |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | | object | Information on a Threshold (Abnormality in lower limit) |
| | Value | string | Lower limit of error threshold value |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |

## 4.7.4 Updating of Monitoring Settings

### [Overview]

Updates settings of monitoring specified.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| IsActive | | string | Assigns a state of performance monitoring<br>- Enable: Enabled<br>- Disable: Disabled |
| IsThresholdMonitoringActive | | string | Specify a state of threshold value monitoring.<br>- Enable: Enabled<br>- Disable: Disabled<br>In order to enable threshold value monitor, a performance monitor (IsActive) should be enabled.<br>For a monitor item with its value type is string, Enabled cannot be specified. |
| UpperCritical | | object | Designates a Threshold (Abnormality in Upper error) |
| | Value | string | Specifies the threshold value of upper error limit by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value. |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | In case of specifying null, default value (Error) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | | object | Designates information on a Threshold (Abnormality in upper limit) |
| | Value | string | Specify the threshold value of upper error limit by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Warning) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | | object | Designates a Threshold (Abnormality in lower limit) |
| | Value | string | Assigns value of the lower limit of threshold for abnormality by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Error) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | | object | Designates information on a Threshold (Abnormality in lower limit) |
| | Value | string | Specify value of Lower limit of error threshold by either integer or decimal. |
| | Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Warning) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| ItemId | string | Monitor Item ID |
| NodeId | integer | Node ID of the object |
| ItemName | string | Monitor Item Name |

| Parameter | | Type | Description |
|---|---|---|---|
| IsActive | | string | Performance monitoring<br>- Enabled: Enabled<br>- Disabled: Disabled |
| IsThresholdMonitoringActive | | string | State of threshold value monitoring<br>- Enabled: Enabled<br>- Disabled: Disabled |
| UpperCritical | | object | Information on Threshold (Abnormality in Upper error) |
| | Value | string | Threshold for abnormality at upper limit. |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | | object | Information on a Threshold (Abnormality in Upper limit) |
| | Value | string | Upper error threshold value |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | | object | Information on Threshold (Abnormality in lower limit) |
| | Value | string | Lower limit of threshold for abnormality |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | | object | Information on a Threshold (Abnormality in lower limit) |
| | Value | string | Lower limit of error threshold value |
| | Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |

## 4.7.5 Deletion of Monitoring Settings

### [Overview]

Deletes settings of monitoring specified.

### [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 assigning a duration to output.<br>Returns records after the specified time and date. Specify its format as RFC3339.<br>E.g.) 2016-04-01T12:34:45Z000<br>Cannot be used with "Count" parameter. |
| TimeTill | Used when assigning a duration to output.<br>Returns records until the specified time and date. Specify its format as RFC3339.<br>E.g.) 2016-04-02T12:34:45Z000<br>Cannot be used with "Count" parameter. |
| Count | Returns records from the ones of the latest to the nth.<br>Cannot be used with "TimeFrom" and "TimeTill" parameters. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Records | | array | List of Record Information |
| | Timestamp | string | Timestamp<br>The format becomes RFC3339.<br>E.g.) 2016-04-01T12:34:45Z000 |
| | Value | string | Value |

## 4.7.7 Updating of Monitoring Settings Shared by Multiple Nodes

### [Overview]

Updates information of settings concerning monitoring of specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Interval | integer | Assigns an interval of monitoring. Unit: second<br>Its lower limit is 60 [seconds]. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Interval | integer | Interval of Monitoring |

## 4.7.8 Retrieval of Monitoring Settings Shared by Multiple Nodes

### [Overview]

Retrieves settings concerning monitoring of 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 settings of network performance monitoring for specified nodes.

### [Format]

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

### [Query Parameter]

| Parameter | Description |
|---|---|
| NodeId | Assign when specifying a node to obtain NodeId can have various assignments, in which case retrieve the information of all relevant nodes. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| NetwrokMonitoringSettingsList | array | Network performance monitor information (List) |
| NodeId | string | Node ID |
| OperationStatus | string | Displays a state of network monitor. Default status is set to Disabled. For a node unsupported of its network performance monitoring, Unavailable is displayed. Off and Disabled both stop the fixed time of acquiring the network performance information but whereas Off contains a log history, Disabled does not.<br>- Enable: On<br>- Temporarily disabling: Off<br>- Disable: Disabled<br>- Unavailable: Unavailable |
| Items | array | Monitor Item Information (List) |
| ItemName | string | Monitor Item Name |
| ValueType | string | Type of value<br>- integer<br>- real (decimal)<br>- string |
| Unit | string | Unit |
| IsThresholdMonitoringActive | string | State of threshold value monitoring<br>- Enable: Enabled<br>- Disable: Disabled |
| UpperCritical | object | Information on Threshold (Abnormality in Upper error) |
| Value | string | Threshold for abnormality at upper limit. |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | object | Information on a Threshold (Abnormality in Upper limit) |
| Value | string | Upper error threshold value |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info |

| Parameter | Type | Description |
|---|---|---|
| | | - Normal |
| LowerCritical | object | Information on Threshold (Abnormality in lower limit) |
| Value | string | Lower limit of threshold for abnormality |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | object | Information on a Threshold (Abnormality in lower limit) |
| Value | string | Lower limit of error threshold value |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |

## 4.7.10 Updating of Network Monitoring Settings

### [Overview]

Updates (enable/disable) settings of network performance monitoring for specified nodes.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| NetwrokMonitoringSettingsList | array | Assigns a network performance monitor information. |
| NodeId | string | Assigns a node ID. |
| OperationStatus | string | Assigns a state of network monitor. To halt network performance monitoring, specify Off or Disabled. Further, while Off halts by preserving the history of monitoring, Disabled deletes the monitor history as well.<br>- Enable: On<br>- Temporarily disabling: Off<br>- Disable: Disabled |
| Items | array | Assigns the information of a monitor items. |
| ItemName | string | Assigns the name of a monitor items. |
| IsThresholdMonitoringActive | string | Specify a state of threshold value monitoring. |

| Parameter | Type | Description |
|---|---|---|
| | | - Enable: Enabled<br>- Disable: Disabled |
| UpperCritical | object | Designates a Threshold (Abnormality in Upper error) |
| Value | string | Specifies the threshold value of upper error limit by either integer or decimal. |
| Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Error) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | object | Designates information on a Threshold (Abnormality in upper limit) |
| Value | string | Specify the threshold value of upper error limit by either integer or decimal. |
| Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Warning) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | object | Designates a Threshold (Abnormality in lower limit) by either an integer or a decimal. |
| Value | string | Assigns value of the lower limit of threshold for abnormality by either integer or decimal. |
| Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Error) is applied.<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerWarning | object | Designates information on a Threshold (Abnormality in lower limit) |
| Value | string | Specify value of Lower limit of error threshold by either integer or decimal. |
| Severity | string | Specify severity of an event as it exceeds a threshold value.<br>In case of specifying null, default value (Warning) is applied.<br>- Error<br>- Warning<br>- Info |

| Parameter | Type | Description |
|---|---|---|
| | | - Normal |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| NetwrokMonitoringSettingsList | array | Network performance monitor information (List) |
| NodeId | string | Node ID |
| OperationStatus | string | Displays a state of network monitor.<br>- On (available)<br>- Off (Temporarily disabled)<br>- Disabled: (invalid) |
| Items | array | Monitor Item Information (List) |
| ItemName | string | Monitor Item Name |
| ValueType | string | Type of value<br>- integer<br>- real (decimal)<br>- string |
| Unit | string | Unit |
| IsThresholdMonitoringActive | string | State of threshold value monitoring<br>- Enable: Enabled<br>- Disable: Disabled |
| UpperCritical | object | Information on Threshold (Abnormality in Upper error) |
| Value | string | Threshold for abnormality at upper limit. |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| UpperWarning | object | Information on a Threshold (Abnormality in Upper limit) |
| Value | string | Upper error threshold value |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |
| LowerCritical | object | Information on Threshold (Abnormality in lower limit) |
| Value | string | Lower limit of threshold for abnormality |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error |

| Parameter | Type | Description |
|---|---|---|
| | | - Warning<br>- Info<br>- Normal |
| LowerWarning | object | Information on a Threshold (Abnormality in lower limit) |
| Value | string | Lower limit of error threshold value |
| Severity | string | Severity of an event as it exceeds a threshold value<br>- Error<br>- Warning<br>- Info<br>- Normal |

## 4.7.11 Retrieval of Network Monitoring History

### [Overview]

Retrieves settings of network performance monitoring for specified nodes.

### [Format]

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

### [Query Parameter]

| Parameter | Description |
|---|---|
| ItemName | Assigns the name of a monitor items. More than one name can be assigned for an monitor item. |
| PortName | Assigns the name of a port. Several choices for a port name can be assigned. |
| StartTime | Assigns when specifying output time.<br>Returns records after the specified time and date. Specify its format as RFC3339.<br>E.g.) 2016-04-02T12:34:45Z000 |
| EndTime | Assigns when specifying output time.<br>Returns records until the specified time and date. Specify its format as RFC3339.<br>E.g.) 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 monitor information (List) |
| NodeId | string | Node ID |
| PortName | string | Port Name |
| ItemName | string | Monitor Item Name |
| Records | array | List of Record Information |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | Timestamp | string | Time stamp<br>The format becomes RFC3339.<br>E.g.) 2016-04-01T12:34:45Z000 |
| | | Value | string | Value |

# 4.8 Event Function and Alarm Function

## 4.8.1 Registration of Action Settings

### [Overview]

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

### [Format]

```
POST /event/actions
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| ActionName | | string | Assigns an Action Name |
| ActionType | | string | Specify a type of action.<br>Select from the following.<br>- ExecuteCommand - Execute command<br>- SendMail - Sending Mail<br>- TrapForwarding - Forwarding of trap<br>- SyslogForwarding - Forwarding of system log |
| Command | | object | Assigns a Configuration of Command Execution<br>It is required to be filled in when selecting ExecuteCommand as a type of action. |
| | FileName | string | Assigns a file name subject for execution. |
| | ArgumentList | array(string) | Assigns arguments at execution.<br>Up to 25 arguments can be assigned and each argument can be assigned with 1024 character at maximum. |
| TrapForwarding | | object | Assigns the settings of trap transfer.<br>It is required to be filled in when selecting TrapForwarding as a type of action. |
| | SNMPServerId | string | Assigns SNMP Server ID at the destination of transfer |
| | ForwardingType | string | Assigns a Transfer Type.<br>Select from the following.<br>- PassThrough - Forwards a trap assuming ISM as transmission source. |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Transparent - Forward a received trap as it is. |
| Mail | | object | Assigns the information of a mail.<br>It is required to specify when selecting SendMail as a type of action. |
| | Destination | string | Assigns a destination address. |
| | Sender | string | Specifies a mail address at transmission source |
| | Subject | string | Specifies the name of a mail. |
| | Message | string | Specifies the text of a mail. |
| | EncryptionFlag | integer | Assigns if encryption is to be executed by S/MIME.<br>- To encrypt: 1<br>- Not to encrypt: 0 |
| SyslogForwarding | | object | Information of forwarding of system log<br>Assigns the information of system log transfer.<br>It is required to specify when selecting SyslogForwarding as a type of action. |
| | ServerNameType | string | Type of Server Name<br>Specifies the type of server name.<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| | ServerName | string | Server Name<br>Specifies the server name. |

**[Response Parameter]**

| Parameter | | Type | Description |
|---|---|---|---|
| ActionId | | string | Action ID |
| ActionName | | string | Action Name |
| ActionType | | string | Action Type<br>- ExecuteCommand<br>- SendMail<br>- TrapForwarding<br>- SyslogForwarding |
| Command | | object | Configuration of Command Execution |
| | FileName | string | File Name Subject for Execution |
| | ArgumentList | array(string) | Arguments at Execution |
| TrapForwarding | | object | Settings of Trap Transfer |
| | SNMPServerId | string | SNMP Server ID at the destination of transfer |
| | ForwardingType | string | Transfer Type<br>- PassThrough<br>- Transparent |

| Parameter | | Type | Description |
|---|---|---|---|
| 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 of system log |
| | ServerNameType | string | Type of Server Name<br>IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |

## 4.8.2 List Retrieval for Action Settings

### [Overview]

Retrieves all 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<br>Selected from the following.<br>- ExecuteCommand<br>- SendMail<br>- TrapForwarding<br>- SyslogForwarding |
| | Command | | object | Configuration of Command Execution |
| | | FileName | string | File Name Subject for Execution |
| | | ArgumentList | array(string) | Arguments at Execution |
| | TrapForwarding | | object | Settings of Trap Transfer |
| | | SNMPServerId | string | SNMP Server ID at the destination of transfer |
| | | ForwardingType | string | Transfer Type<br>Selected from the following.<br>- PassThrough |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - 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 of system log |
| | | ServerNameType | string | Type of Server Name<br>IPv4, IPv6, FQDN |
| | | ServerName | string | Server Name |

## 4.8.3 Updating of Action Settings

### [Overview]

Updates settings of the specified action.

### [Format]

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

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| ActionName | | string | Assigns an Action Name |
| Command | | object | Assigns a Configuration of Command Execution<br>It is required to be filled in when selecting ExecuteCommand as a type of action. |
| | FileName | string | Assigns a file name subject for execution. |
| | ArgumentList | array(string) | Assigns arguments at execution.<br>Up to 25 arguments can be assigned and each argument can be assigned with 1024 character at maximum. |
| TrapForwarding | | object | Assigns the settings of trap transfer.<br>It is required to be filled in when selecting TrapForwarding as a type of action. |
| | SNMPServerId | string | Assigns SNMP Server ID at the destination of transfer |
| | ForwardingType | string | Assigns a Transfer Type.<br>Select from the following.<br>- PassThrough - Forwards a trap assuming ISM as transmission source.<br>- Transparent - Forward a received trap as it is. |

| Parameter | | Type | Description |
|---|---|---|---|
| Mail | | object | Assigns the information of a mail.<br>It is required to specify when selecting SendMail as a type of action. |
| | Destination | string | Assigns a destination address. |
| | Sender | string | Specifies a mail address at transmission source |
| | Subject | string | Specifies the name of a mail. |
| | Message | string | Specifies the text of a mail. |
| | EncryptionFlag | integer | Assigns if encryption is to be executed by S/MIME.<br>Specify one of the following.<br>- When do encrypt: 1<br>- When do not encrypt: 0 |
| SyslogForwarding | | object | Information of forwarding of system log<br>Assigns the information of system log transfer.<br>It is required to specify when selecting SyslogForwarding as a type of action. |
| | ServerNameType | string | Type of Server Name<br>Specifies the type of server name.<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| | ServerName | string | Server Name<br>Specifies the server name. |

**[Response Parameter]**

| Parameter | | Type | Description |
|---|---|---|---|
| ActionId | | string | Action ID |
| ActionName | | string | Action Name |
| ActionType | | string | Action Type<br>- ExecuteCommand<br>- SendMail<br>- TrapForwarding<br>- SyslogForwarding |
| Command | | object | Configuration of Command Execution |
| | FileName | string | File Name Subject for Execution |
| | ArgumentList | array(string) | Arguments at Execution |
| TrapForwarding | | object | Settings of Trap Transfer |
| | SNMPServerId | string | SNMP Server ID at the destination of transfer |
| | ForwardingType | string | Transfer Type<br>- PassThrough<br>- Transparent |

| Parameter | | Type | Description |
|---|---|---|---|
| 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 of system log |
| | ServerNameType | string | Type of Server Name<br>IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |

## 4.8.4 Deletion of Action Settings

### [Overview]

Updates 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]

Register a definition of alarm settings (settings at destination of event notification).

### [Format]

```
POST /event/alarms
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| AlarmName | string | Assign an Action Name |
| Resources | object | Assigns the Resource Information. |

| Parameter | Type | Description |
|---|---|---|
| ResourceType | string | Assigns a type of resource.<br>Select from the following.<br>- Node<br>- System |
| ResourceId | array(integer) | Assigns the Resource ID.<br>If they are of the identical resource type, it is possible to assign several lDs.<br>When a resource type is "System", specify it with empty. |
| Events | object | Assign the Event Information.<br>Specify either trap information or the ISM event information: You cannot set two kinds of information for the same alarm settings. |
| SNMPTrap | object | Assigns the information of a trap. |
| Severity | array(string) | Assigns the severity of a trap.<br>It is possible to register several degrees of severity and the trap with selected severity can be subject of alarm settings at once.<br>Select severity from the following:<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |
| OID | array(string) | Assign the OID.<br>It is possible to register several symbol names and they can be subject of alarm settings by trap. |
| ISMEvent | object | Assigns the ISM event information. |
| Severity | array(string) | Assigns priority level of ISM event.<br>It is possible to register several degrees of severity and the ISM event with selected severity can be subject of alarm settings at once.<br>Select severity from the following:<br>- Error<br>- Warning<br>- Info |
| EventInfo | array | Assigns the ISM event information individually. |
| EventId | string | Assigns the ISM event ID.<br>It is possible to register several event IDs and they can be subject of alarm settings by event. |
| Actions | array | Assigns an Action Settings.<br>It is possible to assign settings of action. |
| ActionId | string | Assigns an Action ID |

| Parameter | Type | Description |
|---|---|---|
| | | Configurable actions can be determined by selecting either trap or the ISM event when choosing an event.<br>- Actions that can be configured in case of trap<br>All actions can be configurable<br>- Actions that can be configure in case of ISM event<br>Can be set only for the following.<br>- Script Execution<br>- Mail Transmission |
| IsActive | string | Assign a state of an Action Setting.<br>Select from the following.<br>- Enable: Enabled<br>- 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<br>Selected from the following.<br>- Node<br>- System |
| ResourceId | array(integer) | Resource ID |
| Events | object | Event Information |
| SNMPTrap | object | Trap Information |
| Severity | array(string) | Severity of trap<br>Selected from the following.<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |
| OID | array(string) | OID |
| ISMEvent | object | ISM Event Information |
| Severity | array(string) | Priority of ISM event<br>Selected from the following.<br>- Error<br>- Warning |

| Parameter | Type | Description |
|---|---|---|
| | | - Info |
| EventInfo | array | ISM Event Information |
| EventId | string | ISM Event ID |
| Actions | array | Action Settings |
| ActionId | string | Action ID |
| IsActive | string | State of Action Settings<br>Selected from the following.<br>- Enable: Enabled<br>- Disable: Disabled |

## 4.8.6 List Retrieval for Alarm Settings

### [Overview]

Retrieve all definitions of alarm settings (settings at 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<br>- Node<br>- System |
| ResourceId | array(integer) | Resource ID |
| Events | object | Event Information |
| SNMPTrap | object | Trap Information |
| Severity | array(string) | Severity of trap<br>Selected from the following.<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |

| Parameter | Type | Description |
|---|---|---|
| OID | array(string) | OID |
| ISMEvent | object | ISM Event Information |
| Severity | array(string) | Priority of ISM event<br>Selected from the following.<br>- Error<br>- Warning<br>- Info |
| EventInfo | array | ISM Event Information |
| EventId | string | ISM Event ID |
| Actions | array | Action Settings |
| ActionId | string | Action ID |
| IsActive | string | State of Action Settings<br>Selected from the following.<br>- Enable: Enabled<br>- Disable: Disabled |

## 4.8.7 Updating of Alarm Settings

### [Overview]

Update a definition of alarm settings (settings at destination of event notification).

### [Format]

```
PATCH /event/alarms/{alarmid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| AlarmName | string | Assign an Action Name |
| Resources | object | Assigns the Resource Information. |
| ResourceType | string | Assigns a type of resource<br>Select from the following.<br>- Node<br>- System |
| ResourceId | array(integer) | Assigns the Resource ID.<br>If they are of the identical resource type, it is possible to assign several lDs.<br>When a resource type is "System", specify it with empty. |
| Events | object | Assign the Event Information. |

| Parameter | Type | Description |
|---|---|---|
| | | Specify either trap information or the ISM event information: You cannot set two kinds of information for the same alarm settings. |
| SNMPTrap | object | Assigns the information of a trap. |
| Severity | array(string) | Assigns the severity of a trap.<br>It is possible to register several degrees of severity and the trap with selected severity can be subject of alarm settings at once.<br>Select severity from the following:<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |
| OID | array(string) | Assign the OID.<br>It is possible to register several symbol names and they can be subject of alarm settings by trap. |
| ISMEvent | object | Assigns the ISM event information. |
| Severity | array(string) | Assigns priority level of ISM event.<br>It is possible to register several degrees of severity and the ISM event with selected severity can be subject of alarm settings at once.<br>Select severity from the following:<br>- Error<br>- Warning<br>- Info |
| EventInfo | array | Assigns the ISM event information individually. |
| EventId | string | Assigns the ISM event ID.<br>It is possible to register several event IDs and they can be subject of alarm settings by event. |
| Actions | array | Assigns an Action Settings.<br>It is possible to assign settings of action. |
| ActionId | string | Assigns an Action ID<br>Configurable actions can be determined by selecting either trap or the ISM event when choosing an event.<br>- Actions that can be configured in case of trap<br>All actions can be configurable<br>- Actions that can be configure in case of ISM event<br>Can be set only for the following.<br>- Script Execution<br>- Mail Transmission |
| IsActive | string | Assign a state of an Action Setting. |

| Parameter | Type | Description |
|---|---|---|
| | | Select from the following.<br>- Enable: Enabled<br>- 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<br>Selected from the following.<br>- Node<br>- System |
| ResourceId | array(integer) | Resource ID |
| Events | object | Event Information |
| SNMPTrap | object | Trap Information |
| Severity | array(string) | Severity of trap<br>Selected from the following.<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |
| OID | array(string) | OID |
| ISMEvent | object | ISM Event Information |
| Severity | array(string) | Priority of ISM event<br>Selected from the following.<br>- Error<br>- Warning<br>- Info |
| EventInfo | array | ISM Event Information |
| EventId | string | ISM Event ID |
| Actions | array | Action Settings |
| ActionId | string | Action ID |
| IsActive | string | State of Action Settings<br>Selected from the following.<br>- Enable: Enabled<br>- Disable: Disabled |

## 4.8.8 Deletion of Alarm Settings

### [Overview]

Deletes a definition of alarm settings (settings at 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]

Register settings for SMTP server that transmits for action of mail notification.

### [Format]

```
PATCH /system/settings/smtpserver
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SMTPServer | | object | Assigns the information of SMTP server. |
| | ServerNameType | string | Assigns a type of server.<br>Selectable from the following.<br>IPv4, IPv6, FQDN |
| | ServerName | string | Assigns the name of a server. |
| | UserName | string | Assigns a user name for SMTP auth.<br>Specify null if not using SMTP auth. |
| | Password | string | Assigns a password for SMTP auth.<br>Specify null if not using SMTP auth. |
| | PortNumber | integer | Assigns the number of a port.<br>In case of specifying null, default value 25 is applied. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SMTPServer | | object | SMTP Server Information |
| | ServerNameType | string | Type of Server Name<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| | 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 settings information for SMTP server that transmits for action of mail notification.

### [Format]

```
GET /system/settings/smtpserver
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SMTPServer | | object | SMTP Server Information |
| | ServerNameType | string | Type of Server Name<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | UserName | string | User account at authentication<br>SMTP auth User Name |
| | PortNumber | integer | Port Number |

## 4.8.11 Registration of SNMP Server Settings Information

### [Overview]

Add settings of SNMP server that transmits for action of SNMP event notification.

### [Format]

```
POST /event/snmpmanagers
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| ServerNameType | string | Assigns a type of server.<br>Selectable from the following.<br>IPv4, IPv6, FQDN |
| ServerName | string | Assigns the name of a server. |
| PortNumber | integer | Assigns receive port number to be used in SNMP communication. In case of specifying null, 162 is automatically set. |
| SNMPVersion | string | Assigns the Version of SNMP.<br>Selectable from the following.<br>v1, v2, v3 |
| Community | string | Assigns a community name.<br>(Only when assigning v1 or v2 by SNMPVersion) |
| EngineId | string | Assigns an Engine ID<br>(Only when assigning v3 by SNMPVersion) |
| Context | string | Assigns a context name.<br>(Only when assigning v3 by SNMPVersion) |
| SecurityLevel | string | Assign a security level.<br>Selectable from the following.<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | Assigns the name of a user.<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Specifies authentication protocols.<br>Selectable from the following.<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| AuthPassword | string | Specifies a password for authentication.<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Assigns an encrypted protocol.<br>Selectable from the following.<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |
| PrivPassword | string | Assigns an encrypted password.<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |

| Parameter | Type | Description |
|---|---|---|
| | | Length of a string before encryption should be 8 characters in minimum. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| SNMPServerId | string | ID for Settings Management of SNMP |
| ServerNameType | string | Type of Server Name<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| ServerName | string | Server Name |
| PortNumber | integer | Receive port number to be used in SNMP communication |
| SNMPVersion | string | Version of SNMP<br>One of the following would be set.<br>v1, v2, v3 |
| Community | string | Community Name<br>(Only when assigning v1 or v2 by SNMPVersion) |
| EngineId | string | Engine ID<br>(Only when assigning v3 by SNMPVersion) |
| Context | string | Context Name<br>(Only when assigning v3 by SNMPVersion) |
| SecurityLevel | string | Security level<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | User Name<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Authentication protocol<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| PrivProtocol | string | Encrypted protocol<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |

## 4.8.12 List Retrieval for SNMP Server Settings Information

### [Overview]

Retrieves all information for SNMP server that transmits for action of SNMP event notification.

### [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<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | PortNumber | integer | Receive port number to be used in SNMP communication |
| | SNMPVersion | string | Version of SNMP<br>One of the following would be set.<br>v1, v2, v3 |
| | Community | string | Community Name<br>(Only when assigning v1 or v2 by SNMPVersion) |
| | EngineId | string | Engine ID<br>(Only when assigning v3 by SNMPVersion) |
| | Context | string | Context Name<br>(Only when assigning v3 by SNMPVersion) |
| | SecurityLevel | string | Security level<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| | UserName | string | User Name<br>(Only when assigning v3 by SNMPVersion) |
| | AuthProtocol | string | Authentication protocol<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| | PrivProtocol | string | Encrypted protocol<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |

## 4.8.13 Updating of SNMP Server Settings Information

### [Overview]

Updates settings of SNMP server that transmits for action of SNMP event notification.

### [Format]

```
PATCH /event/snmpmanagers/{snmpmanagerid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| ServerNameType | string | Assigns a type of server.<br>Selectable from the following.<br>IPv4, IPv6, FQDN |
| ServerName | string | Assigns the name of a server. |
| PortNumber | integer | Assigns receive port number to be used in SNMP communication. In case of specifying null, 162 is automatically set. |
| SNMPVersion | string | Assigns the Version of SNMP.<br>Selectable from the following.<br>v1, v2, v3 |
| Community | string | Assigns a community name.<br>(Only when assigning v1 or v2 by SNMPVersion) |
| EngineId | string | Assigns an Engine ID<br>(Only when assigning v3 by SNMPVersion) |
| Context | string | Assigns a context name.<br>(Only when assigning v3 by SNMPVersion) |
| SecurityLevel | string | Assign a security level.<br>Selectable from the following.<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | Assigns the name of a user.<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Specifies authentication protocols.<br>Selectable from the following.<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| AuthPassword | string | Specifies a password for authentication.<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Assigns an encrypted protocol.<br>Selectable from the following.<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |

| Parameter | Type | Description |
|---|---|---|
| PrivPassword | string | Assigns an encrypted password.<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| SNMPServerId | string | SNMP Settings Management ID |
| ServerNameType | string | Type of Server Name<br>One of the following would be set.<br>IPv4, IPv6, FQDN |
| ServerName | string | Server Name |
| PortNumber | integer | Receive port number to be used in SNMP communication |
| SNMPVersion | string | Version of SNMP<br>One of the following would be set.<br>v1, v2, v3 |
| Community | string | Community Name<br>(Only when assigning v1 or v2 by SNMPVersion) |
| EngineId | string | Engine ID<br>(Only when assigning v3 by SNMPVersion) |
| Context | string | Context Name<br>(Only when assigning v3 by SNMPVersion) |
| SecurityLevel | string | Security level<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | User Name<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Authentication protocol<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| PrivProtocol | string | Encrypted protocol<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |

## 4.8.14 Deletion of SNMP Server Settings Information

**[Overview]**

Delete settings of SNMP server that transmits for action of SNMP event notification.

### [Format]

```
DELETE /event/snmpmanagers/{snmpmanagerid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.8.15 List Retrieval for Available SNMP Traps

### [Overview]

Retrieves all of information of SNMP traps available

### [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<br>Selected from the following:<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |

## 4.8.16 List Retrieval for Available ISM Event IDs

### [Overview]

Retrieves all 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 | Priority of Event |
| | ResourceType | array(string) | Resource Type to be subject to event<br>Selected from the following.<br>- Node<br>- Facility<br>- NodeGroup<br>- System |

## 4.8.17 List Retrieval for Logs for Received SNMP Traps

### [Overview]

Retrieves all reception history of the SNMP trap.

### [Format]

```
GET /event/history/trap
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| StartTime | string | Retrieves data after the specified date. The format becomes RFC3339. |
| EndTime | string | Retrieves data before the specified date. The format becomes RFC3339. |
| ResourceType | string | Retrieves data of specified resource types.<br>Usable any of the following.<br>- Node: Specific node<br>- Unknown: ISM unregistered node |
| ResourceId | string | Can add and specify only when selecting Node at ResourceType. Retrieves all applicable when specifying more than one |

### [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 trap.<br>Selected from the following.<br>- Node<br>- Unknown |
| | ResourceId | integer | Resource ID of origin of transmission of trap |
| | Severity | string | Severity of trap<br>Selected from the following.<br>- Critical<br>- Major<br>- Minor<br>- Informational<br>- Unknown |

## 4.8.18 Registration of SNMP Traps To Be Excluded

### [Overview]

Registers traps excluded to a list.

### [Format]

```
POST /event/history/trap/ignore
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| ResourceType | string | Assigns a type of resource<br>Select from the following.<br>- Node |
| ResourceId | integer | Assigns the Resource ID. |
| OID | string | Assigns the OID of a trap. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| ResourceType | string | Type of resource<br>Selected from the following.<br>- Node |
| ResourceId | integer | Resource ID |
| OID | string | OID of Trap |

## 4.8.19 List Retrieval for Information on Excluded SNMP Traps

### [Overview]

Retrieves all of information of traps excluded.

### [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<br>Selected from the following.<br>- Node |
| | ResourceId | integer | Resource ID |
| | OID | string | Symbol Name of Trap |

## 4.8.20 Deletion of Excluded SNMP Traps

### [Overview]

Deletes traps excluded from the list.

### [Format]

```
POST /event/history/trap/ignore/delete
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| ResourceType | string | Assigns a type of resource<br>Select from the following.<br>- Node |

| Parameter | Type | Description |
|---|---|---|
| ResourceId | integer | Assigns the Resource ID. |
| OID | string | Assigns the OID of a trap. |

### [Response Parameter]

None

## 4.8.21 Registration of Shared Alarm Settings

### [Overview]

Register information of settings commonly used in settings of alarm.

### [Format]

```
PATCH /event/alarms/settings
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| InhibitionInterval | integer | Specifies a duration to inhibit trap reception.<br>Deters receipt of the sane 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]

Retrieve information of settings commonly used in settings of alarm.

### [Format]

```
GET /event/alarms/settings
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| InhibitionInterval | integer | Receiving Inhibition Duration of Trap |

## 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 | Assigns a type of resource<br>Select from the following.<br>- System<br>- Node<br>When unspecified, it automatically will be substituted by System. |
| | ResourceId | integer | Assigns the Resource ID.<br>When a resource type is specified as Node, a specification is required. |
| | EventType | string | Assign an Event Type.<br>Select from the following.<br>- ISMEvent<br>- SNMPTrap<br>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 settings of SNMP trap reception.

### [Format]

```
POST /system/settings/snmptrapsettings
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| SNMPVersion | string | Assigns the Version of SNMP.<br>Selectable from the following.<br>v1/v2, v3 |
| Community | string | Assigns a community name.<br>(Only when assigning v1/v2 by SNMPVersion) |
| SecurityLevel | string | Assigns a security level.<br>Selectable from the following.<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | Assigns the name of a user.<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Specifies authentication protocols.<br>Selectable from the following.<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| AuthPassword | string | Specifies a password for authentication.<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Assigns an encrypted protocol.<br>Selectable from the following.<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |
| PrivPassword | string | Assigns an encrypted password.<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |
| NodeList | array | Specifies node information that uses the SNMP trap reception settings.<br>When SNMPv3, a specification is required. |
| NodeId | integer | Assigns the Node ID. |
| EngineId | string | Assigns the Engine ID. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| SNMPTrapSettingsId | string | SNMP Trap Settings ID |
| SNMPVersion | string | SNMP Version<br>One of the following would be set.<br>v1/v2, v3 |
| Community | string | Community Name<br>(Only when assigning v1/v2 by SNMPVersion) |
| SecurityLevel | string | Security level<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | User Name<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Authentication protocol<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| PrivProtocol | string | Encrypted protocol<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |
| NodeList | array | Node information list<br>(Only when assigning v3 by SNMPVersion) |
| NodeId | integer | Node ID |
| EngineId | string | Engine ID |

## 4.8.25 Retrieval for Information on SNMP Trap Reception Settings

### [Overview]

Retrieves settings of SNMP trap reception.

### [Format]

```
GET /system/settings/snmptrapsettings
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| nodeid | integer | Assigns a node ID.<br>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<br>One of the following would be set.<br>v1/v2, v3 |
| Community | string | Community Name<br>(Only when assigning v1/v2 by SNMPVersion) |
| SecurityLevel | string | Security level<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | User Name<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Authentication protocol<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| PrivProtocol | string | Encrypted protocol<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by 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]

Update settings of SNMP trap reception.

### [Format]

```
PATCH /system/settings/snmptrapsettings/{snmptrapsettingsid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| SNMPVersion | string | Assigns the Version of SNMP.<br>Selectable from the following.<br>v1/v2, v3 |
| Community | string | Assigns a community name. |

| Parameter | Type | Description |
|---|---|---|
| | | (Only when assigning v1/v2 by SNMPVersion) |
| SecurityLevel | string | Assigns a security level.<br>Selectable from the following.<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | Assigns the name of a user.<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Specifies authentication protocols.<br>Selectable from the following.<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| AuthPassword | string | Specifies a password for authentication.<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Assigns an encrypted protocol.<br>Selectable from the following.<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |
| PrivPassword | string | Assigns an encrypted password.<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel)<br>Length of a string before encryption should be 8 characters in minimum. |
| NodeList | array | Specifies node information that uses the SNMP trap reception settings.<br>When SNMPv3, a specification is required. |
| NodeId | integer | Assigns the Node ID. |
| EngineId | string | Assigns the Engine ID. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| SNMPTrapSettingsId | string | SNMP Trap Settings ID |
| SNMPVersion | string | SNMP Version<br>One of the following would be set.<br>v1/v2, v3 |
| Community | string | Community Name<br>(Only when assigning v1/v2 by SNMPVersion) |

| Parameter | Type | Description |
|---|---|---|
| SecurityLevel | string | Security level<br>noAuthNoPriv, authNoPriv, authPriv<br>(Only when assigning v3 by SNMPVersion) |
| UserName | string | User Name<br>(Only when assigning v3 by SNMPVersion) |
| AuthProtocol | string | Authentication protocol<br>MD5, SHA<br>(Only when assigning v3 by SNMPVersion and assigning either authNoPriv or authPriv by SecurityLevel) |
| PrivProtocol | string | Encrypted protocol<br>DES, AES<br>(Only when of assigning v3 by SNMPVersion and assigning authPriv by SecurityLevel) |
| NodeList | array | Node information list<br>(Only when assigning v3 by SNMPVersion) |
| NodeId | integer | Node ID |
| EngineId | string | Engine ID |

## 4.8.27 Deletion of Information on SNMP Trap Reception Settings

### [Overview]

Delete settings of SNMP trap reception.

### [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 information on the type of logs usable.

### [Format]

```
GET /event/history
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| LogTypes | | array | Log Type Information |
| | Name | string | Log Type Name<br>- event: Operation log<br>- audit: Audit log |
| | Description | string | Description |

## 4.9.2 List Retrieval for Operation Logs

### [Overview]

Searches operation log according to assigned conditions.

It is possible refine operation logs to retrieve by query parameters.

### [Format]

```
GET /event/history/event/show?
loglevel={value}&logtype={value}&start={value}&end={value}&resourceidtype={value}&resourceid={value
}&resourceid={value}&messageid={value}&extendedmessage={value}&operator={value}&continuekey={value}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| loglevel | string | Refining by severity |
| logtype | string | Narrowing down by the type of operation log |
| start | string | Narrowing by the use of start time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| end | string | Narrowing by the use of end time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| resourceidtype | string | Narrowing down with the use of resource ID type<br>The use of it always calls for specifying resource ID |
| resourceid | integer | Narrowing by Resource ID<br>Can specify resource IDs. The use of it always calls for specifying a type of resource ID |
| messageid | string | Refining by message ID |
| extendedmessage | string | Narrowing by expansion message |

| Parameter | Type | Description |
|---|---|---|
| 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<br>Range: 1-999999 |
| OccurrenceDate | string | Time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| Level | string | Importance |
| 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 | inteter | Resource ID |
| Operator | string | Operator |
| RowCounter | inteter | Total Search Queries |
| ContinueKey | string | Continued Read Key |

### [Precautions]

- When the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to search all of log information.
- When the use who executed does not belong to the Administrator group or when the user does not have an Administrator role, it is possible to search only log information of the user group that is identical with the user who executed.
- When the same key has been assigned several times in query parameters, the one assigned lastly becomes valid.
- When omitting time/date of start and time/date of finish, all of log information is to become object of refining.
- When omitting time/date of start, log information before the time/date of the finish is to become object of refining. Also, when omitting time/date of termination, log information after the starting time/date can become subject of refining.
- When there is no task information as target output, it outputs 0 task information.
- When information of log 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 refining, the rest of log information can be output by assigning the values of "Continued read key" as configured values of query parameter of "Continued read key".
- In case of refining, assign values of corresponding output results of "4.9.2 List Retrieval for Operation Logs" and "4.9.4 Separate Retrieval for Operation Logs" as assigned values for query parameters.

## 4.9.3 List Retrieval for Audit Logs

## [Overview]

Searches audit log according to assigned conditions.

It is possible refine audit logs to retrieve by query parameters.

## [Format]

```
GET /event/history/audit/show?
loglevel={value}&logtype={value}&start={value}&end={value}&resourceidtype={value}&resourceid={value
}&resourceid={value}&messageid={value}&extendedmessage={value}&operator={value}&continuekey={value}
```

## [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| loglevel | string | Refining by severity |
| logtype | string | Narrowing down by the type of audit log |
| start | string | Narrowing by the use of start time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| end | string | Narrowing by the use of end time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| resourceidtype | string | Narrowing down with the use of resource ID type<br>The use of it always calls for specifying resource ID |
| resourceid | integer | Narrowing by Resource ID<br>Can specify resource IDs. The use of it always calls for specifying a type of resource ID |
| messageid | string | Refining by message ID |
| extendedmessage | string | Narrowing by expansion 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<br>Range: 1-999999 |
| OccurrenceDate | string | Time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| Level | string | Importance |
| MessageId | string | Message ID |
| Message | string | Message |
| Type | string | Types of Audit Logs |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | 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 |
| RowCounter | | | integer | Total Search Queries |
| ContinueKey | | | string | Continued Read Key |

### [Precautions]

- Only when the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to search log information.
- When the same key has been assigned several times in query parameters, the one assigned lastly becomes valid.
- When omitting time/date of start and time/date of finish, all of log information is to become object of refining.
- When omitting time/date of start, log information before the time/date of the finish is to become object of refining. Also, when omitting time/date of termination, log information after the starting time/date can become subject of refining.
- When there is no task information as target output, it outputs 0 task information.
- When information of log 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 refining, the rest of log information can be output by assigning the values of "Continued read key" as configured values of query parameter of "Continued read key".
- In case of refining, assign values of corresponding output results of "4.9.3 List Retrieval for Audit Logs" and "4.9.5 Separate Retrieval for Audit Logs" as assigned values for query parameters.

## 4.9.4 Separate Retrieval for Operation Logs

### [Overview]

Retrieves detail information of operation log number specified.

### [Format]

```
GET /event/history/event/logs/{logid}
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Logs | | object | Log Information |
| | Id | string | Log ID<br>Range: 1-999999 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | OccurrenceDate | | string | Time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | Level | | string | Importance |
| | 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 |

### [Precautions]

- Only when the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to output detailed information of all log information.
- When the use who executed does not belong to the Administrator group or when the user does not have an Administrator role, it is possible to search only log information of the user group that is identical with the user who executed.

## 4.9.5 Separate Retrieval for Audit Logs

### [Overview]

Retrieves detail information of audit log number specified.

### [Format]

```
GET /event/history/audit/logs/{logid}
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | | Type | Description |
|---|---|---|---|---|
| Logs | | | object | Log Information |
| | Id | | string | Log ID<br>Range: 1-999999 |
| | OccurrenceDate | | string | Time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | Level | | string | Importance |
| | 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<br>Presently it is not supported. |
| | | Operator | string | Operator |
| | | UserId | string | User ID |
| | | SessionId | string | Session ID |

### [Precautions]

- Only when the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to output detailed information of log information.

## 4.9.6 Export of Operation Logs

### [Overview]

Searches operation logs according to specified conditions and exports them in ZIP format.

### [Format]

```
POST /event/history/event/export
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| StartTime | string | Narrowing by the use of start time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| EndTime | string | Narrowing by the use of end time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| StoreInfo | object | Storing information |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | Url | | string | URL of Storage Destination |
| | Log | | object | Log File Information |
| | | Name | string | Stored Log File Name<br>Events_YYYYMMDD-hhmmss_xxx.zip (YYMMDD-hhmmss_xxx displays date of creation as yearmonthday-hourminutesecond_millisecond) |
| | | Size | integer | File Size<br>Unit: byte |

### [Precautions]

- Only when the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to export all of log information.
- When the use who executed does not belong to the Administrator group or when the user does not have an Administrator role, it is possible to search only log information of the user group that is identical with the user who executed.
- When omitting time/date of start and time/date of finish, all of log information is to become object of refining.
- When omitting time/date of start, log information before the time/date of the finish is to become object of refining. Also, when omitting time/date of termination, log information after the starting time/date can become subject of refining.

## 4.9.7 Export of Audit Logs

### [Overview]

Searches audit logs according to specified conditions and exports them in ZIP format.

### [Format]

```
POST /event/history/audit/export
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| StartTime | string | Narrowing by the use of start time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| EndTime | string | Narrowing by the use of end time and date of generation<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| StoreInfo | | object | Storing information |
| | Url | string | URL of Storage Destination |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | Log | | object | Log File Information |
| | | Name | string | Stored Log File Name<br>Events_YYYYMMDD-hhmmss_xxx.zip (YYMMDD-hhmmss_xxx displays date of creation as yearmonthday-hourminutesecond_millisecond) |
| | | Size | integer | File Size<br>Unit: byte |

### [Precautions]

- Only when the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to export log information.
- When omitting time/date of start and time/date of finish, all of log information is to become object of refining.
- When omitting time/date of start, log information before the time/date of the finish is to become object of refining. Also, when omitting time/date of termination, log information after the starting time/date can become subject of refining.

## 4.9.8 Display of Retention Periods

### [Overview]

Displays the number of days to retain the log files for the operation log or audit log retrieved by export.

### [Format]

```
GET /event/history/retentionperiod/settings
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| StoreTerm | integer | Log Retention Period<br>Setting range: 1-365 |

## 4.9.9 Renewal of Retention Periods

### [Overview]

Updates the number of days to retain the log files for the operation log or audit log retrieved by export.

### [Format]

```
PATCH /event/history/retentionperiod/settings
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| StoreTerm | integer | Log Retention Period<br>Setting range: 1-365 |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| StoreTerm | integer | Log Retention Period<br>Setting range: 1-365 |

### [Precautions]

- Only when the use who executed belongs to the Administrator group and when the user has an Administrator role, it is possible to update.

# 4.10 Profile Management

## 4.10.1 List Retrieval for Profile Categories

### [Overview]

Retrieve 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<br>- Server-BX: FUJITSU Server PRIMERGY BX series<br>- Server-RX: FUJITSU Server PRIMERGY RX series<br>- Server-CX: FUJITSU Server PRIMERGY CX series<br>- Server-PRIMEQUEST2000-Partition: FUJITSU Server PRIMEQUEST2000 series<br>- Server-PRIMEQUEST3000B: FUJITSU Server PRIMEQUEST3000B series<br>- Server-PRIMEQUEST3000E-Partition: FUJITSU Server PRIMEQUEST3000E series |
| Storage | | array | Classification: Storage |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category name |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Storage-DX: FUJITSU Storage ETERNUS DX series disc storage system |
| Switch | | array | Classification: Switch |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category name<br>- Switch-SRX: Server housing switch SR-X series<br>- Switch-CFX: Converged fabric switch CFX series<br>- Switch-VDX: Converged switch Brocade VDX series<br>- Switch-PSWITCH: Ethernet switch PSWITCH series |
| Other | | array | Classification: Other |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category name<br>- Other |

## 4.10.2 Conversion of Profile Categories

### [Overview]

Conversion from an assigned model name to an applicable profile category.

### [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<br>- Server-BX: FUJITSU Server PRIMERGY BX series<br>- Server-RX: FUJITSU Server PRIMERGY RX series<br>- Server-CX: FUJITSU Server PRIMERGY CX series<br>- Server-PRIMEQUEST2000-Partition: FUJITSU Server PRIMEQUEST2000 series<br>- Server-PRIMEQUEST3000B: FUJITSU Server PRIMEQUEST3000B series<br>- Server-PRIMEQUEST3000E-Partition: FUJITSU Server PRIMEQUEST3000E series |

| Parameter | Type | Description |
|---|---|---|
| | | - Storage-DX: FUJITSU Storage ETERNUS DX series disc storage system<br>- Switch-SRX: server housing switch SR-X series<br>- Switch-CFX: converged fabric switch CFX series<br>- Switch-VDX: converged switch Brocade VDX series<br>- Switch-PSWITCH: Ethernet switch PSWITCH series<br>- Other |

## 4.10.3 Adding Profiles

### [Overview]

It 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<br>The maximum value is 1000. |
| PolicyId | string | Policy ID used in the succession referenced |
| OneTimePasswordKey | string | One-time encryption key for password information<br>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 | FUJITSU Server PRIMERGY BX series |
| BIOS | object | BIOS Settings<br>For details, refer to "BIOS" in "C.1 Server-BX." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "iRMC" in "C.1 Server-BX." |
| IOVirtualization | object | Virtual IO Settings<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | OS installation settings |

| Parameter | Type | Description |
|---|---|---|
| | | For details, refer to "D.4 OSInstallation." |
| Server-RX | object | FUJITSU Server PRIMERGY BX series |
| BIOS | object | BIOS Settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| IOVirtualization | object | Virtual IO settings<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-CX | object | FUJITSU Server PRIMERGY CX series |
| BIOS | object | BIOS Settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| IOVirtualization | object | Virtual IO Settings<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-PRIMEQUEST2000-Partition | object | FUJITSU Server PRIMEQUEST2000 series |
| MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-PRIMEQUEST3000B | object | FUJITSU Server PRIMEQUEST3000B series |
| BIOS | object | BIOS Settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-PRIMEQUEST3000E-Partition | object | FUJITSU Server PRIMEQUEST3000E series |
| MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Storage-DX | object | FUJITSU Storage ETERNUS DX series disc storage system |
| StandRaid | object | Raid settings<br>For details, refer to "StandRaid" in "C.2 Storage-DX." |

| Parameter | Type | Description |
|---|---|---|
| GHotSpare | object | Setting of Hot Spares<br>For details, refer to "GHotSpare" in "C.2 Storage-DX." |
| HostAffinity | object | Setting of Host Affinity<br>For details, refer to "HostAffinity" in "C.2 Storage-DX." |
| DetailSettings | object | Detail Setting of Profile<br>For details, refer to "DetailSettings" in "C.2 Storage-DX." |
| Switch-SRX | object | Server housing switch SR-X series |
| Snmp | object | SNMP Function Information<br>For details, refer to "Snmp" in "C.3 Switch-SRX." |
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.3 Switch-SRX." |
| Account | object | Information on Password of the Administrator of the Device<br>For details, refer to "Account" in "C.3 Switch-SRX." |
| Stp | object | STP<br>For details, refer to "Stp" in "C.3 Switch-SRX." |
| Switch-CFX | object | Converged fabric switch CFX series |
| Interface | array | Interface information<br>Setting available for up to a maximum of 256.<br>For details, refer to "Interface" in "C.4 Switch-CFX." |
| Snmp | object | SNMP function information<br>For details, refer to "Snmp" in "C.4 Switch-CFX." |
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.4 Switch-CFX." |
| Account | object | Information on Password of the Administrator of the Device<br>For details, refer to "Account" in "C.4 Switch-CFX." |
| Aaa | object | AAA information<br>For details, refer to "Aaa" in "C.4 Switch-CFX." |
| Switch-VDX | object | Converged switch Brocade VDX series |
| Snmp | object | SNMP function information<br>For details, refer to "Snmp" in "C.5 Switch-VDX." |
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.5 Switch-VDX." |
| Account | object | Account Information<br>For details, refer to "Account" in "C.5 Switch-VDX." |
| Switch-PSWITCH | object | Ethernet switch PSWITCH series |
| Snmp | object | SNMP Function Information<br>For details, refer to "Snmp" in "C.6 Switch-PSWITCH." |
| AutoTime | object | Automatic time setting information |

| Parameter | Type | Description |
|---|---|---|
| | | For details, refer to "AutoTime" in "C.6 Switch-PSWITCH." |
| Account | object | Account Information<br>For details, refer to "Account" in "C.6 Switch-PSWITCH." |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| ProfileId | string | Profile ID |
| ProfileName | string | Profile name |

## 4.10.4 List Retrieval for Profiles

### [Overview]

Retrieve a profile list.

### [Format]

```
GET /profiles/profiles?status={unassigned|assigned|mismatch|processing|canceling|canceled|
error}&categoryid={categoryid}&profilegroupid={groupid}&referencepolicyid={policyid}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| status | string | Assigned State<br>- unassigned: Unassigned<br>- assigned: assignment complete (application complete)<br>- Mismatch: an assigned profile is edited and takes on unassigned status (there is a finite difference between the profile and the device)<br>- processing: assignment/non-assignment processing in progress<br>- canceling: cancellation of assignment/non-assignment is in progress<br>- canceled: cancellation of assignment/non-assignment is complete<br>- error: assignment/non-assignment has failed<br>When 'assigned' is specified, a list of profiles applied to nodes is output. |
| categoryid | string | Category ID<br>The profile list belonging to the specified category is output. |
| profilegroupid | string | Profile Group ID<br>The profile list belonging to the specified profile group is output. |
| referencepolicyid | string | Policy ID using the succession referenced |

| Parameter | Type | Description |
|---|---|---|
| | | The profile list using the specified policy in the referential succession is output. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| ProfileList | array | Profile list<br>The maximum value is 1000. |
| ProfileId | string | Profile ID |
| ProfileName | string | Profile name |
| Description | string | Description of Profile |
| CategoryId | string | Category ID |
| 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<br>The maximum value is 1000. |
| PolicyId | string | Policy ID used in the succession referenced |
| AssignedNodeId | integer | Node ID Assigned<br>Null when unassigned. |
| Status | string | Displays assigned status of OS profile.<br>- unassigned: Unassigned<br>- assigned: assignment complete (application complete)<br>- Mismatch: an assigned profile is edited and takes on unassigned status (there is a finite difference between the profile and the device)<br>- processing: assignment/non-assignment processing in progress<br>- canceling: cancellation of assignment/non-assignment is in progress<br>- canceled: cancellation of assignment/non-assignment is complete<br>- error: assignment/non-assignment has failed |
| InternalStatus | object | Internal status |
| BiosStatus | string | Displays the assignment status for BIOS profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process |
| IrmcStatus | string | Displays the assignment status for iRMC profiles.<br>- invalid: profile unregistered |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process<br>Output when the Category ID is 1(Server-BX), 2(Server-CX), 3(Server-RX), or 5(Server-PRIMEQUEST3000B). |
| | | MmbStatus | string | Displays the assignment status for MMB profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process<br>Output when the Category ID is 4(Server-CX), 3(Server-RX), 5(Server-PRIMEQUEST3000B). |
| | | IovStatus | string | Displays the assignment status for IOVirtualization profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process |
| | | OsStatus | string | Displays the assignment status for OS profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Applying in process |
| | HistoryList | | array | When editing is carried out during assignment, the profile as it was before editing is returned.<br>The maximum value is 1. |
| | | ProfileId | string | When editing is carried out during assignment, the profile as it was before editing is returned. |
| | TimeStampInfo | | object | Time stamp information |
| | | Register | string | Registration time |
| | | Update | string | Time of last update |
| | | Assigned | string | Time of last application |

## 4.10.5 Separate Retrieval for Profiles

### [Overview]

Retrieve the individual information of specified profiles.

### [Format]

```
GET /profiles/profiles/{profileid}?passwordkey={passwordkey}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| passwordkey | string | Encryption key for password information<br>For all password information in ProfileData, Assign 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 |
| ProfileGroupId | string | Profile group ID that it currently belongs to |
| PathName | string | Path name for this profile group<br>Absolute path. Everything up to the group name is displayed. |
| ReferencePolicyList | array | Policy list used in the succession referenced<br>The maximum value is 1000. |
| PolicyId | string | Policy ID used in the succession referenced |
| AssignedNodeId | integer | Assigned node ID<br>Null when unassigned. |
| Status | string | Displays the assignment status for OS profiles.<br>- unassigned: not assigned (not yet applied)<br>- assigned: assignment complete (application complete)<br>- Mismatch: an assigned profile is edited and takes on unassigned status (there is a finite difference between the profile and the device)<br>- processing: assignment/non-assignment processing in progress<br>- canceling: cancellation of assignment/non-assignment is in progress<br>- canceled: cancellation of assignment/non-assignment is complete<br>- error: assignment/non-assignment has failed |
| InternalStatus | object | Internal status |
| BiosStatus | string | Displays the assignment status for BIOS profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process |
| | IrmcStatus | string | Displays the assignment status for iRMC profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process<br>Output when the CategoryId is 2(Server-CX), 3(Server-RX), or 5(Server-PRIMEQUEST3000B). |
| | MmbStatus | string | Displays the assignment status for MMB profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process<br>Output when the Category ID is 4(Server-CX), 3(Server-RX), 5(Server-PRIMEQUEST3000B). |
| | IovStatus | string | Displays the assignment status for IOVirtualization profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process |
| | OsStatus | string | Displays the assignment status for OS profiles.<br>- invalid: profile unregistered<br>- unassigned: profile not yet applied<br>- assigned: profile application complete<br>- reassign: profile update available<br>- processing: Application in process |
| HistoryList | | array | When editing is carried out during assignment, the profile ID as it was before editing is returned.<br>The maximum value is 1. |
| | ProfileId | string | Profile ID before editing |
| TimeStampInfo | | object | Time stamp Information |
| | Register | string | Registration time |
| | Update | string | Time of last update |
| | Assigned | string | Time of last application |

| Parameter | Type | Description |
|---|---|---|
| ProfileData | object | Profile setting details |
| Server-BX | object | FUJITSU Server PRIMERGY BX series |
| BIOS | object | BIOS settings<br>For details, refer to "BIOS" in "C.1 Server-BX." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "iRMC" in "C.1 Server-BX." |
| IOVirtualization | object | Virtual IO settings<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-RX | object | FUJITSU Server PRIMERGY RX series |
| BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| IOVirtualization | object | Virtual IO settings<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-CX | object | FUJITSU Server PRIMERGY CX series |
| BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| IOVirtualization | object | Virtual IO settings<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-PRIMEQUEST2000-Partition | object | FUJITSU Server PRIMEQUEST2000 series |
| MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Server-PRIMEQUEST3000B | object | FUJITSU Server PRIMEQUEST3000B series |
| BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| OSInstallation | object | OS installation settings |

| Parameter | Type | Description |
|---|---|---|
| | | For details, refer to "D.4 OSInstallation." |
| Server-PRIMEQUEST3000E-Partition | object | FUJITSU Server PRIMEQUEST3000E series |
| MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |
| OSInstallation | object | OS installation settings<br>For details, refer to "D.4 OSInstallation." |
| Storage-DX | object | FUJITSU Storage ETERNUS DX series disc storage system |
| StandRaid | object | Raid settings<br>For details, refer to "StandRaid" in "C.2 Storage-DX." |
| GHotSpare | object | Hot spares settings<br>For details, refer to "GHotSpare" in "C.2 Storage-DX." |
| HostAffinity | object | Host affinity settings<br>For details, refer to "HostAffinity" in "C.2 Storage-DX." |
| DetailSettings | object | Profile advanced settings<br>For details, refer to "DetailSettings" in "C.2 Storage-DX." |
| Switch-SRX | object | Server housing switch SR-X series |
| Snmp | object | SNMP function information<br>For details, refer to "Snmp" in "C.3 Switch-SRX." |
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.3 Switch-SRX." |
| Account | object | Device administrator password information<br>For details, refer to "Account" in "C.3 Switch-SRX." |
| Stp | object | STP<br>For details, refer to "Stp" in "C.3 Switch-SRX." |
| Switch-CFX | object | Converged fabric switch CFX series |
| Interface | array | Interface information<br>Setting available for up to a maximum of 256.<br>For details, refer to "Interface" in "C.4 Switch-CFX." |
| Snmp | object | SNMP function information<br>For details, refer to "Snmp" in "C.4 Switch-CFX." |
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.4 Switch-CFX." |
| Account | object | Device administrator password information<br>For details, refer to "Account" in "C.4 Switch-CFX." |
| Aaa | object | AAA information<br>For details, refer to "Aaa" in "C.4 Switch-CFX." |
| Switch-VDX | object | Converged switch Brocade VDX series |
| Snmp | object | SNMP function information<br>For details, refer to "Snmp" in "C.5 Switch-VDX." |

| Parameter | Type | Description |
|---|---|---|
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.5 Switch-VDX." |
| Account | object | Account Information<br>For details, refer to "Account" in "C.5 Switch-VDX." |
| Switch-PSWITCH | object | Ethernet switch PSWITCH series |
| Snmp | object | SNMP function information<br>For details, refer to "Snmp" in "C.6 Switch-PSWITCH." |
| AutoTime | object | Automatic time setting information<br>For details, refer to "AutoTime" in "C.6 Switch-PSWITCH." |
| Account | object | Account information<br>For details, refer to "Account" in "C.6 Switch-PSWITCH." |

## 4.10.6 Updating Profiles

### [Overview]

Update 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]

Delete specified profiles.

### [Format]

```
DELETE /profiles/profiles/{profileid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.10.8 Assigning Profiles to Nodes

### [Overview]

Assign specified profiles to specified nodes.

### [Format]

```
POST /nodes/{nodeid}/profiles/assign
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| ProfileId | string | Profile ID to be assigned |
| AssignMode | string | Specifies mode of application.<br>- Normal: Normal application<br>- Advanced: Advanced application<br>When this setting is omitted or null, operations will be carried out as Normal. |
| AdvancedKind | string | Specifies type of advanced application.<br>To be specified when the AssignMode is 'Advanced'.<br>- ForcedAssign: Forced assignment<br>- WithoutHardwareAccess: The application intended to be applied<br>- OnlineAssign: Online application<br>ForcedAssign cannot be used in first-time application.<br>When IOVirtualization or OSInstallation is included in the AssignRange, OnlineAssign cannot be used. |
| AssignRange | array | Records types of Profile for assignment.<br>If the AssignMode is Advanced, "BIOS," "iRMC," "MMB," "IOVirtualization" and/or "OSInstallation" can be specified either individually or together.<br>E.g.) ["BIOS","iRMC"]<br>When this setting is omitted or null, all types of profile in ProfileData are assigned. |
| FirmwareUpdate | string | Updates the node subject to profile application to the latest firmware before carrying out application.<br>- Disable: Disabled |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |

## 4.10.9 Cancellation of Assigning Profile to Nodes

### [Overview]

Cancel the assigning of a profile to a node 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 Profiles to Nodes

### [Overview]

Release the assigned profile to a node 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 Profiles to Nodes

### [Overview]

Cancel the releasing a profile to a node 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]

Add 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]

Retrieve a list of profile groups.

### [Format]

```
GET /profiles/profiles/groups
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| ProfileGroupList | array | Profile group list<br>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 name |
| ProfileGroupList | array | Subordinate profile group ID list<br>There is no upper limit. |
| ProfileGroupId | string | Profile group ID |
| ProfileList | array | Subordinate profile ID list<br>The maximum value is 1000. |
| ProfileId | string | Profile ID |
| TimeStampInfo | object | Time stamp information |
| Register | string | Registration time |
| Update | string | Update hour |

## 4.10.14 Separate Retrieval for Profile Groups

### [Overview]

Retrieve individual information of 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 name |
| ProfileGroupList | array | Subordinate profile group ID list<br>There is no upper limit. |
| ProfileGroupId | string | Subordinate profile group ID |
| ProfileList | array | Subordinate profile ID list |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | The maximum value is 1000. |
| | ProfileId | string | Subordinate profile ID |
| TimeStampInfo | | object | Time stamp information |
| | Register | string | Registration time |
| | Update | string | Update hour |

## 4.10.15 Updating Profile Groups

### [Overview]

Update 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 specified profile groups.

### [Format]

```
DELETE /profiles/profiles/groups/{groupid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.10.17 Adding Policies

### [Overview]

Add 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 |
| OneTimePasswordKey | string | One-time encryption key for password information<br>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 | FUJITSU Server PRIMERGY BX series |
| BIOS | object | BIOS settings<br>For details, refer to "C.1 Server-BX." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "C.1 Server-BX." |
| Server-RX | object | FUJITSU Server PRIMERGY RX series |
| BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| Server-CX | object | FUJITSU Server PRIMERGY CX series |
| BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| Server-PRIMEQUEST2000-Partition | object | FUJITSU Server PRIMEQUEST2000 series |
| MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |
| Server-PRIMEQUEST3000B | object | FUJITSU Server PRIMEQUEST3000B series |
| BIOS | object | BIOS settings |

| Parameter | Type | Description |
|---|---|---|
| | | For details, refer to "D.1 BIOS." |
| iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| Server-PRIMEQUEST3000E-Partition | object | FUJITSU Server PRIMEQUEST3000E series |
| MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| PolicyId | string | Policy ID |
| PolicyName | string | Policy name |

## 4.10.18 List Retrieval for Policies

### [Overview]

Retrieve a list of policies.

### [Format]

```
GET /profiles/policies?categoryid={categoryid}&policygroupid={groupid}&policytype={BIOS|iRMC|MMB}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| categoryid | string | Category ID<br>A list of definitions for the policies belonging to the specified category is output. |
| policygroupid | string | Policy group ID<br>A list of definitions for the policies belonging to the specified policy group is output. |
| policytype | string | Policy type<br>Assign "BIOS", "iRMC" or "MMB". |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| PolicyList | array | Policy list<br>The maximum value is 1000. |
| PolicyId | string | Policy ID |
| PolicyName | string | Policy name |
| Description | string | Description of policy |
| CategoryId | string | Category ID |
| PolicyType | string | Policy type<br>Output "BIOS", "iRMC" or "MMB". |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | PolicyGroupId | | string | Policy group ID that it belongs to |
| | TimeStampInfo | | object | Time stamp information |
| | | Register | string | Registration time |
| | | Update | string | Time of update |

## 4.10.19 Separate Retrieval for Policies

### [Overview]

Retrieve the individual information of specified policies.

### [Format]

```
GET /profiles/policies/{policyid}
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| PolicyId | | string | Policy ID |
| PolicyName | | string | Policy name |
| Description | | string | Description of policy |
| CategoryId | | string | Category ID |
| PolicyType | | string | Policy type<br>Assign "BIOS", "iRMC" or "MMB". |
| PolicyGroupId | | string | Policy group ID that it belongs to |
| TimeStampInfo | | object | Time stamp information |
| | Register | string | Registration time |
| | Update | string | Time of update |
| ProfileData | | object | Policy setting details |
| Server-BX | | object | FUJITSU Server PRIMERGY BX series |
| | BIOS | object | BIOS settings<br>For details, refer to "C.1 Server-BX." |
| | iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "C.1 Server-BX." |
| Server-RX | | object | FUJITSU Server PRIMERGY RX series |
| | BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| | iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |

| Parameter | | Type | Description |
|---|---|---|---|
| Server-CX | | object | FUJITSU Server PRIMERGY CX series |
| | BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| | iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| Server-PRIMEQUEST2000-Partition | | object | FUJITSU Server PRIMEQUEST2000 series |
| | MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |
| Server-PRIMEQUEST3000B | | object | FUJITSU Server PRIMEQUEST3000B series |
| | BIOS | object | BIOS settings<br>For details, refer to "D.1 BIOS." |
| | iRMC | object | iRMC (Integrated Remote Management Controller) settings<br>For details, refer to "D.2 iRMC." |
| Server-PRIMEQUEST3000E-Partition | | object | FUJITSU Server PRIMEQUEST3000E series |
| | MMB | object | MMB (Management Board) partition settings<br>For details, refer to "D.5 MMB." |

## 4.10.20 Updating Policies

### [Overview]

Renew 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]

Delete 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]

Retrieve a list of policy groups.

### [Format]

```
GET /profiles/policies/groups
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| PolicyGroupList | array | Policy group list<br>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 profile group name |
| PolicyGroupList | array | Subordinate policy group ID list<br>There is no maximum value. |
| PolicyGroupId | string | Policy group ID |
| PolicyList | array | Subordinate policy ID list<br>The maximum number of lists is 1000. |
| PolicyId | string | Policy ID |
| TimeStampInfo | object | Time stamp information |
| Register | string | Registration time |
| Update | string | Time of update |

## 4.10.24 Separate Retrieval for Policy Groups

### [Overview]

Retrieve individual information of 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 profile group name |
| PolicyGroupList | array | Subordinate policy group ID list<br>There is no maximum value. |
| PolicyGroupId | string | Subordinate policy group ID |
| PolicyList | array | Subordinate policy ID list<br>The maximum value is 1000. |
| PolicyId | string | Subordinate policy ID |
| TimeStampInfo | object | Time stamp information |

| Parameter | | Type | Description |
|---|---|---|---|
| | Register | string | Registration time |
| | Update | string | Time of update |

## 4.10.25 Updating Policy Groups

### [Overview]

Update 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]

Delete specified policy groups.

### [Format]

```
DELETE /profiles/policies/groups/{groupid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.10.27 Importing Profiles

### [Overview]

Import specified profiles.

### [Format]

```
POST /profiles/import
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| FilePath | string | File name, including the FTP folder path that the profile houses |
| ProfileType | string | Profile type<br>Specify either Profile or Policy. |
| ProfileGroupId | string | Profile group ID |
| OneTimePasswordKey | string | Password encryption key<br>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]

Export specified profiles.

### [Format]

```
POST /profiles/export
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| ProfileId | string | Profile ID |
| PasswordKey | string | Password encryption key<br>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 FTP folder path that the profile houses |

## 4.10.29 DVD Import

### [Overview]

Import 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<br>Specifies the DVD media type.<br>- ServerView Suite DVD<br>- Windows Server 2016 Datacenter (Fujitsu Media)<br>- Windows Server 2016 Standard (Fujitsu Media)<br>- Windows Server 2016 (Microsoft Media)<br>- Windows Server 2016 (Microsoft VL Media)<br>- Windows Server 2012 R2 Datacenter (Fujitsu Media)<br>- Windows Server 2012 R2 Standard (Fujitsu Media)<br>- Windows Server 2012 R2 (Microsoft Media)<br>- Windows Server 2012 R2 (Microsoft VL Media)<br>- Windows Server 2012 Datacenter (Fujitsu Media)<br>- Windows Server 2012 Standard (Fujitsu Media)<br>- Windows Server 2012 (Microsoft Media)<br>- Windows Server 2012 (Microsoft VL Media)<br>- Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 Standard + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 + SP1 (Microsoft Media)<br>- Windows Server 2008 R2 + SP1 (Microsoft VL Media)<br>- Red Hat Enterprise Linux 7.4 (x86_64) |

| Parameter | Type | Description |
|---|---|---|
| | | - Red Hat Enterprise Linux 7.3 (x86_64)<br>- Red Hat Enterprise Linux 7.2 (x86_64)<br>- Red Hat Enterprise Linux 7.1 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86)<br>- Red Hat Enterprise Linux 6.8 (x86_64)<br>- Red Hat Enterprise Linux 6.8 (x86)<br>- Red Hat Enterprise Linux 6.7 (x86_64)<br>- Red Hat Enterprise Linux 6.7 (x86)<br>- Red Hat Enterprise Linux 6.6 (x86_64)<br>- Red Hat Enterprise Linux 6.6 (x86)<br>- CentOS 7.3 (x86_64)<br>- CentOS 7.2 (x86_64)<br>- CentOS 7.1 (x86_64)<br>- CentOS 6.9 (x86_64)<br>- CentOS 6.9 (x86)<br>- CentOS 6.8 (x86_64)<br>- CentOS 6.8 (x86)<br>- CentOS 6.7 (x86_64)<br>- CentOS 6.7 (x86)<br>- CentOS 6.6 (x86_64)<br>- CentOS 6.6 (x86)<br>- SUSE Linux Enterprise Server 12 SP3 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP2 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP1 (x86_64)<br>- SUSE Linux Enterprise Server 12 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86)<br>- VMware ESXi 6.5 Update 1 (Fujitsu Media)<br>- VMware ESXi 6.5 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 3 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 2 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 1 (Fujitsu Media)<br>- VMware ESXi 5.5 Update 3 (Fujitsu Media) |
| FilePath | string | File name including folder pass which stored the DVD media |
| DeleteFtpResource | boolean | For selecting ftp resource deletion<br>When 'true', it deletes the file specified in FilePath following normal termination of the DVD import. |

| Parameter | Type | Description |
|---|---|---|
| | | When 'false', when keys have been missed out, or when the DVD import terminates due to error, the file specified in FilePath is not deleted. |
| UnMountResource | boolean | When 'true', the shared directory used in the import is unmounted following normal termination of the DVD import.<br>When 'false' or when keys have been missed out, the shared directory used in the import is not unmounted. |
| MountId | string | Shared directory mounting ID<br>Assigned when a shared directory other than ISM is used in an import. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |

## 4.10.30 Canceling DVD Import

### [Overview]

Cancel 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]

Retrieve a list of registered repositories.

### [Format]

```
GET /system/settings/repositories/profiles
```

### [Query Parameter]

None

**[Response Parameter]**

| Parameter | | Type | Description |
|---|---|---|---|
| RepositoryList | | array | Repository list<br>There is no maximum value. (Up to the disc's maximum storage capacity) |
| | RepositoryId | string | Repository ID |
| | FileName | string | DVD media file name |
| | MediaType | string | DVD media type<br>Outputs the DVD media type.<br>- ServerView Suite DVD<br>- Windows Server 2016 Datacenter (Fujitsu Media)<br>- Windows Server 2016 Standard (Fujitsu Media)<br>- Windows Server 2016 (Microsoft Media)<br>- Windows Server 2016 (Microsoft VL Media)<br>- Windows Server 2012 R2 Datacenter (Fujitsu Media)<br>- Windows Server 2012 R2 Standard (Fujitsu Media)<br>- Windows Server 2012 R2 (Microsoft Media)<br>- Windows Server 2012 R2 (Microsoft VL Media)<br>- Windows Server 2012 Datacenter (Fujitsu Media)<br>- Windows Server 2012 Standard (Fujitsu Media)<br>- Windows Server 2012 (Microsoft Media)<br>- Windows Server 2012 (Microsoft VL Media)<br>- Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 Standard + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 + SP1 (Microsoft Media)<br>- Windows Server 2008 R2 + SP1 (Microsoft VL Media)<br>- Red Hat Enterprise Linux 7.4 (x86_64)<br>- Red Hat Enterprise Linux 7.3 (x86_64)<br>- Red Hat Enterprise Linux 7.2 (x86_64)<br>- Red Hat Enterprise Linux 7.1 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86)<br>- Red Hat Enterprise Linux 6.9 (x86_64)<br>- Red Hat Enterprise Linux 6.8 (x86_64)<br>- Red Hat Enterprise Linux 6.8 (x86)<br>- Red Hat Enterprise Linux 6.7 (x86_64)<br>- Red Hat Enterprise Linux 6.7 (x86) |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Red Hat Enterprise Linux 6.6 (x86_64)<br>- Red Hat Enterprise Linux 6.6 (x86)<br>- CentOS 7.3 (x86_64)<br>- CentOS 7.2 (x86_64)<br>- CentOS 7.1 (x86_64)<br>- CentOS 6.9 (x86_64)<br>- CentOS 6.9 (x86)<br>- CentOS 6.8 (x86_64)<br>- CentOS 6.8 (x86)<br>- CentOS 6.7 (x86_64)<br>- CentOS 6.7 (x86)<br>- CentOS 6.6 (x86_64)<br>- CentOS 6.6 (x86)<br>- SUSE Linux Enterprise Server 12 SP3 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP2 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP1 (x86_64)<br>- SUSE Linux Enterprise Server 12 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86)<br>- VMware ESXi 6.5 Update 1 (Fujitsu Media)<br>- VMware ESXi 6.5 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 3 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 2 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 1 (Fujitsu Media)<br>- VMware ESXi 5.5 Update 3 (Fujitsu Media) |
| | RegisterTime | string | Time/date of registration |
| | FileSize | integer | File size of DVD media |
| | Version | string | DVD media edition number<br>Output when the DVD media type is ServerView Suite DVD. |

## 4.10.32 Deleting Registered Repositories

### [Overview]

Delete 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]

Retrieve a list of packages and applications with the type and language of a specified Linux OS.

### [Format]

```
GET /profiles/packages?ostype={Red Hat Enterprise Linux 7.4 (x86_64)|...}&language={English|German|
Japanese}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| ostype | string | OS type<br>Outputs the type of the specified Linux OS.<br>- Red Hat Enterprise Linux 7.4 (x86_64)<br>- Red Hat Enterprise Linux 7.3 (x86_64)<br>- Red Hat Enterprise Linux 7.2 (x86_64)<br>- Red Hat Enterprise Linux 7.1 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86)<br>- Red Hat Enterprise Linux 6.8 (x86_64)<br>- Red Hat Enterprise Linux 6.8 (x86)<br>- Red Hat Enterprise Linux 6.7 (x86_64)<br>- Red Hat Enterprise Linux 6.7 (x86)<br>- Red Hat Enterprise Linux 6.6 (x86_64)<br>- Red Hat Enterprise Linux 6.6 (x86)<br>- CentOS 7.3 (x86_64)<br>- CentOS 7.2 (x86_64)<br>- CentOS 7.1 (x86_64)<br>- CentOS 6.9 (x86_64)<br>- CentOS 6.9 (x86)<br>- CentOS 6.8 (x86_64)<br>- CentOS 6.8 (x86)<br>- CentOS 6.7 (x86_64) |

| Parameter | Type | Description |
|---|---|---|
| | | - CentOS 6.7 (x86)<br>- CentOS 6.6 (x86_64)<br>- CentOS 6.6 (x86)<br>- SUSE Linux Enterprise Server 12 SP3 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP2 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP1 (x86_64)<br>- SUSE Linux Enterprise Server 12 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86) |
| language | string | OS language<br>Outputs the language of the specified OS.<br>- English<br>- German<br>- 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) | 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 |

## 4.10.34 Backing Up Hardware Settings

### [Overview]

Backup hardware settings from specified nodes.

### [Format]

```
POST /nodes/{nodeid}/profiles/backup
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| BackupType | array | Specifies the type of backup. |

| Parameter | Type | Description |
|---|---|---|
| | | Specify "BIOS" or "iRMC" individually or together.<br>E.g.) ["BIOS","iRMC"]<br>When this setting is omitted or null, all types that can be backed up are backed up. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |

## 4.10.35 Canceling Backups of Hardware Settings

### [Overview]

Cancel a hardware settings backup 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]

Retrieve a list of registered backups.

### [Format]

```
GET /profiles/backups?nodeid={nodeid}&backuptype={BIOS|iRMC}&backupstatus={Running|Complete|Cancel-Running|Cancel-Complete|Error}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| nodeid | integer | The node ID that has been backed-up<br>Outputs a list of backups for the specified node ID. |
| backuptype | string | Backup type<br>Outputs a list of backups for the specified backup type ("BIOS" or "iRMC"). |

| Parameter | Type | Description |
|---|---|---|
| backupstatus | string | Backup status<br>Outputs a list of backups for the specified backup status.<br>- Running: Backup in progress<br>- Complete: Finished<br>- Cancel-Running : Canceling<br>- Cancel-Complete: Cancellation completed<br>- Error: Error |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| BackupList | | array | Backup list<br>The maximum value is 10000. |
| | BackupId | string | Backup ID |
| | NodeId | integer | The node ID that has been backed-up |
| | BackupType | string | Backup type<br>Output either "BIOS" or "iRMC". |
| | RegisterTime | string | Time/date of registration<br>If BackupStatus is 'Complete', 'Cancel-Complete', or 'Error', the date and time is output.<br>Null is output if BackupStatus is 'Running' or 'Cancel-Running'. |
| | BackupStatus | string | Backup status<br>- Running: Backup in progress<br>- Complete: Finished<br>- Cancel-Running : Canceling<br>- Cancel-Complete: Cancellation completed<br>- Error: Error |
| | TaskId | string | Task ID<br>Task ID is output when BackupStatus is Running or Cancel-Running.<br>If BackupStatus is Complete, Cancel-Complete, or Error," " is output. |

## 4.10.37 Deleting Registered Backups

### [Overview]

Delete a specified registered backup.

### [Format]

```
DELETE /profiles/backups/{backupid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.10.38 Exporting Registered Backups

### [Overview]

Export specified registered backups.

### [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 folder path stored in the backup |

# 4.11 Firmware Management

## 4.11.1 Starting Firmware Updates

### [Overview]

Commences updating process of firmware.

### [Format]

```
POST /nodes/firmware/update
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UpdateRequest | array | Firmware Update Request List |
| NodeId | integer | Node ID |

| Parameter | | Type | Description |
|---|---|---|---|
| | FirmwareName | string | Firmware name |
| | RepositoryName | string | Repository name |
| | FirmwareVersion | string | Firmware version |
| | OperationMode | string | Supported modes<br>- Online: Online update<br>- Offline: Offline update |
| ExecutionDate | | string | Execution time (UTC time)<br>Setting example) 2017-09-23T11:10:00 AM.000Z<br>The update should be started immediately when omitting this setting. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |
| CancelUri | string | URI at the time of termination |
| JobId | integer | Job ID<br>Omitted if an execution date for the request parameter has not been set. |

## 4.11.2 Canceling Firmware Updates

**[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]**

- There are times when cancellation is not possible depending on the progress of the firmware update.
- If not a firmware update 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]

Retrieve a list of firmware documents.

### [Format]

```
POST /system/settings/firmware/documents
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Lang | | string | Language used<br>- Ja: Japanese<br>- En: English |
| UpdateRequest | | array | Firmware Update Request |
| | NodeId | integer | Node ID |
| | FirmwareName | string | Firmware name |
| | RepositoryName | string | Repository name |
| | FirmwareVersion | string | Firmware Version |
| | OperationMode | string | Supported modes<br>- Online: Online update<br>- Offline: Offline update |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Lang | | string | Language used<br>- Ja: Japanese<br>- 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]

Retrieve 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<br>- Update DVD: ServerView Suite Update DVD<br>- Update Supplement: Update Supplement<br>- Dedicated: Repository for individual import use |
| | ImportDate | string | Date of registration |
| | DiskUsage | string | Disk capacity under use by repositories (MB) |
| | ImportStatus | string | Import status<br>- Running: Execution in progress<br>- Complete: Finished<br>- Cancel-Running: Termination in progress |
| | TaskId | string | Task ID |

## 4.11.5 List Retrieval for Firmware

### [Overview]

Retrieve the summary of the firmware registered to the ISM-VA.

### [Format]

```
GET /system/settings/firmware/list
```

```
GET /system/settings/firmware/list?nodeid={value}
```

```
GET /system/settings/firmware/list?modelname={value}
```

```
GET /system/settings/firmware/list?firmwarename={value}
```

```
GET /system/settings/firmware/list?repositoryid={value}
```

### [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 |
| | OperationMode | string | Supported modes |
| | FirmwareType | string | Firmware type |
| | DiskUsage | string | Disk capacity used by firmware (MB) |
| | RegisterDate | string | Time/date of firmware registration |

### [Precautions]

- You can assign the keys "nodeid", "modelname", "firmwarename" and "repositoryid" can be assigned as queries. Assigning a key means creating an exclusive connection; only one type of key can be assigned each time.
  The same key can be assigned multiple times.
- When nodeid is assigned, a list of firmware available for application to devices with node IDs specified from among the firmware managed by the user is output.
- When modelname is assigned, a list of firmware available for application to devices corresponding to the model name specified from among the firmware managed by the user is output.
- When firmwarename is assigned, a list of firmware available for application to devices corresponding to the firmware name specified from among the firmware managed by the user is output.
- When repositoryid is assigned, a list of firmware stored in repositories with the repository ID 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 at the time of carrying out individual import firmware.

### [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 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | 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]

Importing the Update DVD and Update Supplement that are used in firmware updates.

### [Format]

```
POST /system/settings/firmware/dvd/import
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Path | string | Relative path from the FTP route 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<br>Type of Media<br>- Update DVD: ServerView Suite Update DVD<br>- Update Supplement: Update Supplement |
| DeleteFtpResource | boolean | For selecting ftp resource deletion<br>When 'true', it deletes the file specified in FilePath following normal termination of the DVD import.<br>When 'false', when keys have been missed out, or when the DVD import terminates due to error, the file specified in FilePath is not deleted. |
| UnMountResource | boolean | When 'true', the shared directory used in the import is unmounted following normal termination of the DVD import.<br>When 'false' or when keys have been missed out, the shared directory used in the import is not unmounted. |
| MountId | string | Shared directory mounting ID<br>Assigned when a shared directory other than ISM is used in an import. |

### [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.

## 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 firmware directory FTP route |
| FirmwareType | string | Firmware type |
| Model | string | Firmware model |

| Parameter | Type | Description |
|---|---|---|
| Version | string | Firmware 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 a Repositories

### [Overview]

Deletes a 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.

  Acquire the repository ID from "4.11.4 List Retrieval for Registered Repositories".

## 4.11.12 Deleting Individual Firmware

### [Overview]

Deletes firmware imported either by individual firmware import or ContentCollection 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.
  Acquire the firmware ID from "4.11.5 List Retrieval for Firmware".

## 4.11.13 List Output of Firmware Update Jobs

### [Overview]

Displays a list of scheduled firmware update 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. |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | JobName | | string | A notification containing the job name is given. |
| | TaskId | | string | A notification containing the task ID is given. |
| | ExecutionDate | | string | Scheduled update time(s) |
| | 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".

  E.g.) "FirmwareJobList":[]

## 4.11.14 Deleting Firmware Update Jobs

### [Overview]

Deletes scheduled firmware update 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 firmware update job to be deleted.
  Acquire the firmware update Job ID from "4.11.13 List Output of Firmware Update Jobs."

# 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 under management of a user group to which users belong become subject to acquisition.

### [Format]

```
GET /nodes/logs/collection/settings?nodeid={value}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| nodeid | integer | Subject refined 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)<br>- 0: Disable<br>- 1: Enable |
| ScheduleMethod | string | How to assign scheduling<br>- Days: Specifies date<br>- Weeks: Specifies day of the week |
| Days | array | List of date assignment information |
| Day | integer | Date<br>- 0: Every day<br>- 1-31: 1st to the 31st<br>- 32: End of the month |
| Time | string | Time (HHmm: hour and minutes)<br>Setting Range: 0000-2359 |
| Weeks | array | List of day-of-the-week assignment information |
| Week | string | Day of the week<br>- Mon: Monday<br>- Tue: Tuesday<br>- Wed: Wednesday<br>- Thu: Thursday<br>- Fri: Friday<br>- Sat: Saturday<br>- Sun: Sunday |
| WeekNum | integer | Numbers for days of the week<br>- 0: Every week<br>- 1-5: The first five days<br>- 6: Final |
| Time | string | Time (HHmm: hour and minutes)<br>Setting Range: 0000-2359 |
| NextExecutionDate | string | Next execution time and date |

| Parameter | Type | Description |
|---|---|---|
| | | YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| ArchivedLogGeneration | integer | The Number of generations saved Logs<br>Setting Range: 0-366 |
| SecurityLogGeneration | integer | Number of generations of Node log (security log) saved<br>Setting range: 0-1830 |
| OperationLogGeneration | integer | Number of generations of Node log (operational log) saved<br>Setting range: 0-1830 |
| EventLogGeneration | integer | Number of generations of node log (event log) saved<br>Setting range: 0-1830 |
| HWLogEnable | integer | Subject<br>Hardware log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| OSLogEnable | integer | Subject<br>Operating system log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| SVSLogEnable | integer | Subject<br>ServerView Suite log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| RAIDLogEnable | integer | Subject<br>RAID Log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| HWLogPossible | integer | Collection availability<br>Hardware log (possible/impossible)<br>- 0: Impossible<br>- 1: Possible |
| OSLogPossible | integer | Collection availability<br>Operating system log (possible/impossible)<br>- 0: Impossible<br>- 1: Possible |
| SVSLogPossible | integer | Collection availability<br>ServerView Suite log (possible/impossible)<br>- 0: Impossible<br>- 1: Possible |

| Parameter | Type | Description |
|---|---|---|
| RAIDLogPossible | integer | Collection availability<br>RAID Log (possible/impossible)<br>- 0: Impossible<br>- 1: Possible |

### [Precautions]

- Collection availability (HWLogPossible) becomes 1 (possible) for hardware that ISM supports for log collection.
- Collection availability (OSLogPossible) becomes 1 (possible) in cases where OS information is registered to the subject node and nodes detailed information is retrieved, and the OS is such that ISM supports log collection.
- Collection availability (SVSLogPossible) becomes 1 (possible) when ServerView Agents or ServerView Agentless Service is installed to the OS of the subject node.
- Collection availability (RAIDLogPossible) becomes 1 (possible) when ServerView RAID Manager is installed to the OS of the subject 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)<br>- 0: Disable<br>- 1: Enable |
| ScheduleMethod | string | How to assign scheduling<br>- Days: Specifies date<br>- Weeks: Specifies day of the week |
| Days | array | List of date assignment information |
| Day | integer | Date<br>- 0: Every day |

| Parameter | Type | Description |
|---|---|---|
| | | - 1-31: 1st to the 31st<br>- 32: End of the month |
| Time | string | Time (HHmm: hour and minutes)<br>Setting range: 0000-2359 |
| Weeks | array | List of day-of-the-week assignment information |
| Week | string | Day of the week<br>- Mon: Monday<br>- Tue: Tuesday<br>- Wed: Wednesday<br>- Thu: Thursday<br>- Fri: Friday<br>- Sat: Saturday<br>- Sun: Sunday |
| WeekNum | integer | Numbers for days of the week<br>- 0: Every week<br>- 1-5: The first five days<br>- 6: Final |
| Time | string | Time (HHmm: hour and minutes)<br>Setting range: 0000-2359 |
| ArchivedLogGeneration | integer | Number of generations of archived logs<br>- Setting range: 0-366<br>- 0: Archived log not saved |
| SecurityLogGeneration | integer | The number of generation of node logs (security log) saved<br>- Setting range: 0-1830<br>- 0: Node logs (security log) not saved |
| OperationLogGeneration | integer | Number of generations of node logs (operation log) saved<br>- Setting range: 0-1830<br>- 0: Node log (operation log) not saved |
| EventLogGeneration | integer | Number of generations of Node logs (event log) saved<br>- Setting range: 0-1830<br>- 0: Node log (event log) not saved |
| HWLogEnable | integer | Subject<br>Hardware log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| OSLogEnable | integer | Subject<br>Operating system log (enable/disable)<br>- 0: Disable |

| Parameter | Type | Description |
|---|---|---|
| | | - 1: Enable |
| SVSLogEnable | integer | Subject<br>ServerView Suite log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| RAIDLogEnable | integer | Subject<br>RAID Log (available/unavailable)<br>- 0: Disable<br>- 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)<br>- 0: Disable<br>- 1: Enable |
| ScheduleMethod | string | How to assign scheduling<br>- Days: Specifies date<br>- Weeks: Specifies day of the week |
| Days | array | List of date assignment information |
| Day | integer | Date<br>- 0: Every day<br>- 1-31: 1st to the 31st<br>- 32: End of the month |
| Time | string | Time (HHmm: hour and minutes)<br>Setting range: 0000-2359 |
| Weeks | array | List of day-of-the-week assignment information |
| Week | string | Day of the week<br>- Mon: Monday<br>- Tue: Tuesday<br>- Wed: Wednesday<br>- Thu: Thursday<br>- Fri: Friday<br>- Sat: Saturday<br>- Sun: Sunday |

| Parameter | Type | Description |
|---|---|---|
| WeekNum | integer | Numbers for days of the week<br>- 0: Every week<br>- 1-5: The first five days<br>- 6: Final |
| Time | string | Time (HHmm: hour and minutes)<br>Setting range: 0000-2359 |
| NextExecutionDate | string | Next execution time and date<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| ArchivedLogGeneration | integer | Number of generations of archived logs<br>Setting range: 0-366 |
| SecurityLogGeneration | integer | The number of generation of node logs (security log) saved<br>Setting range: 0-1830 |
| OperationLogGeneration | integer | Number of generations of node logs (operation log) saved<br>Setting range: 0-1830 |
| EventLogGeneration | integer | Number of generations of node logs (event log) saved<br>Setting range: 0-1830 |
| HWLogEnable | integer | Subject<br>Hardware log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| OSLogEnable | integer | Subject<br>Operating system log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| SVSLogEnable | integer | Subject<br>ServerView Suite log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| RAIDLogEnable | integer | Subject<br>RAID Log (enable/disable)<br>- 0: Disable<br>- 1: Enable |
| HWLogPossible | integer | Collection Availability<br>Hardware log (possible/impossible)<br>- 0: Impossible<br>- 1: Possible |
| OSLogPossible | integer | Collection availability<br>Operating system log (possible/impossible) |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - 0: Impossible<br>- 1: Possible |
| | | SVSLogPossible | integer | Collection availability<br>ServerView Suite log (possible/impossible)<br>- 0: Impossible<br>- 1: Possible |
| | | RAIDLogPossible | integer | Collection availability<br>RAID Log (possible/impossible)<br>- 0: Impossible<br>- 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 display.
- All settings (both Days (array) and Weeks (array)) should always be carried out for requisite 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) then the subject willautomatically be set as 0 (disabled).
- Collection availability (HWLogPossible) becomes 1 (possible) for hardware that ISM supports for log collection.
- Collection availability (OSLogPossible) becomes 1 (possible) in cases where OS information is registered to the subject node and nodes detailed information is retrieved, and the OS is such that ISM supports log collection.
- Collection availability (SVSLogPossible) becomes 1 (possible) when ServerView Agents or ServerView Agentless Service is installed to the OS of the subject node.
- Collection availability (RAIDLogPossible) becomes 1 (possible) when ServerView RAID Manager is installed to the OS of the subject 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 under management of a user group to which users belong become subject to acquisition.

When no log type is specified, all log types become subject to acquisition.

### [Format]

```
GET /nodes/logs/files?nodeid={value}&logtype={value}&excludekey={value}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| nodeid | integer | Subject refined by node ID |
| logtype | string | Subject refined by type of audit log<br>- ArchivedLog: Archived log<br>- Event: Node log (event log)<br>- Security Node Log (security log)<br>- Operation: Node Log (operation log) |
| excludekey | string | Displays all information except for items related to specified keys<br>- Files:Omits file information<br>- 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<br>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<br>Unit: MB |
| Operation | object | Node log (operational 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<br>Unit: MB |
| 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) |

| Parameter | | | | Type | Description |
|---|---|---|---|---|---|
| | | | Size | integer | Total size<br>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 under management of a user group to which users belong become subject to acquisition.

### [Format]

```
GET /nodes/logs?nodeid={value}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| nodeid | integer | Subject refined 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<br>- Idle: Idle (log collection enabled)<br>- LogCollect: Log collection in progress<br>- LogDelete: Log deletion in progress<br>- Prepare: Under Preparation<br>- Exempt: Not subject to (log collection not possible) |

## 4.12.5 Collecting Logs

### [Overview]

Compile log of assigned 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<br>Hardware log (enable/disable)<br>- 0: Disable<br>- 1: Enable<br>This item can be omitted.<br>When omitted, operations will simply carry out as the log collection settings dictate. |
| | OSLogEnable | integer | Subject<br>Operating system log (enable/disable)<br>- 0: Disable<br>- 1: Enable<br>This item can be omitted.<br>When omitted, operations will simply carry out as the log collection settings dictate. |
| | SVSLogEnable | integer | Subject<br>ServerView Suite log (enable/disable)<br>- 0: Disable<br>- 1: Enable<br>This item can be omitted.<br>When omitted, operations will simply carry out as the log collection settings dictate. |
| | RAIDLogEnable | integer | Subject<br>RAID Log (enable/disable)<br>- 0: Disable<br>- 1: Enable<br>This item can be omitted.<br>When omitted, operations will simply carry out as the log collection settings dictate. |

### [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]

- There are times when cancellation is not possible depending on the state of progress of the log collection.
- If not a log collection task, or if executed by a user without cancellation permissions, 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<br>- HW: Hardware log<br>- OS: Operating system log |
| LogType | array(string) | Log type<br>- Event: Node log (event log)<br>- Security: Node log (security log)<br>- Operation: Node log (operation log) |
| PasswordEnable | integer | Password setting to download file |

| Parameter | Type | Description |
|---|---|---|
| | | - 0: Do not set password<br>- 1: Set password |
| Password | string | This is to be set when designating<br>PasswordEnable as 1. |

### [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 for the "4.12.3 Retrieving Log File Information" response parameter.

## 4.12.8 Canceling Creation of Node Log Download Files

### [Overview]

Cancels creation processing of 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]

- There are times when cancellation is not possible depending on the state of progress of the node log download file creation process.
- If not a node log download file creation task, or if executed by a user without cancellation permissions, it will result in an error.

## 4.12.9 Creating Archived Log Download Files

### [Overview]

Creates archived log download files for the node 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<br>Setting range: 1-366<br>E.g.) 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<br>- 0: Do not set password<br>- 1: Set password |
| Password | string | This is to be set when designating<br>PasswordEnable as 1. |

### [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 instance, with specifying 1, one latest storing log will be downloaded.
- When PasswordEnable is 1 (Set password), if the password is not specified or null then it will result in an error.

## 4.12.10 Canceling Creation of Archived Log Download Files

### [Overview]

Cancels creation processing of 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]

- There are times when cancellation is not possible depending on the state of progress of the archived log download file creation process.
- If not an archived log download file creation task, or if executed by a user without cancellation permissions, 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<br>- Created: Creation complete<br>- Creating: Currently being created<br>- Uncreated: Not created yet<br>- Error: Creation error<br>- Canceled: Creation canceled |
| | TaskId | string | Task ID during and after creation |
| | FileUrl | string | URL of download file |
| | FileCreated | string | Time stamp of download file<br>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 download file |
| | FileSizeUnit | string | Unit of Download File Size<br>MiB |

### [Precautions]

- Task ID is not output when FileCreateStatus is Uncreated (not yet created). In all other cases it is output.
- FileUrl/FileCreated/FileSize/FileSizeUnit is only output if FileCreateStatus is Created (creation complete).

## 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<br>- Created: Creation complete<br>- Creating: Currently being created<br>- Uncreated: Not created yet<br>- Error: Creation error<br>- Canceled: Creation canceled |
| | TaskId | string | Task ID during and after creation |
| | FileUrl | string | URL of download file |
| | FileCreated | string | Time stamp of download file<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | FileSize | string | Size of download file |
| | FileSizeUnit | string | Unit of download file size<br>MiB |

### [Precautions]

- Task ID is not output when FileCreateStatus is Uncreated (not yet created). In all other cases it is output.
- FileUrl/FileCreated/FileSize/FileSizeUnit is only outputted if FileCreateStatus is Created.

## 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 assigned 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 of the node log subject to deletion |
| Nodes | array | List of node IDs |
| NodeId | integer | Node ID |
| Period | string | Date (YYYY-MM-DD; Year-Month-Date)<br>Deletes node logs from before the specified time and date. |
| LogType | array(string) | Log type<br>- Security: Node log (security log)<br>- Operation: Node log (operation log)<br>- Event: Node log (event log) |
| ArchivedLog | object | Information of the archived log subject to deletion |
| 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<br>Deletes all generations following that specified.<br>Setting range: 0-366<br>For 0 and 1, all archived logs for the specified node IDs are deleted. |
| File | array | List of file information subject to deletion |
| 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 for the "4.12.3 Retrieving Log File Information" response parameter.
- In the FileName, set the FileName of "4.12.3 Retrieving Log File Information" response parameter.

## 4.12.14 Canceling Deletion of Log Files

### [Overview]

Cancels deletion processing of 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]

- There are times when cancellation is not possible depending on the state of progress of the log file deletion process.
- If not a log file deletion task, or if executed by a user without cancellation permissions, it will result in an error.

## 4.12.15 Searching Node Logs

### [Overview]

Searches for node logs according to specified conditions.

### [Format]

```
POST /nodes/logs/nodelog/search
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Nodes | array | List of node IDs |
| NodeId | integer | Node ID |
| SearchRequest | object | Input data for searching logs<br>As for input data, it should be specified with a request body of search API in Elasticsearch.<br>Refer to the following URL for information regarding the search API of Elasticsearch.<br>https://www.elastic.co/guide/en/elasticsearch/reference/current/search.html |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| SearchResponse | object | Output Data of result of log location<br>Output data is the output results of Elasticsearch search API.<br>Refer to the following URL for information regarding the search API of Elasticsearch.<br>https://www.elastic.co/guide/en/elasticsearch/reference/current/search.html |

### [Precautions]

- As for specifications of search API request body in Elasticsearch to be specified as input data and specifications of response body of output data, refer to the following URL.

  https://www.elastic.co/guide/en/elasticsearch/reference/2.3/search.html

  https://www.elastic.co/guide/en/elasticsearch/reference/2.3/_the_search_api.html

### [Item Name List]

Support for the item name displayed on the ISM GUI (message detail screen) and item name registered to Elasticsearch is as follows below.

For searching, use an Elasticsearch subject name. Detailed screen of a message can be displayed by clicking the message at display of [Build] -[Log Collect]-[Node Log Search].

| ISM GUI Item Name | Elasticsearch title name | Type | Description |
|---|---|---|---|
| Severity | level | string | Importance of Message<br>- Critical<br>- Major<br>- Minor<br>- Information<br>- Unknown |
| Time/Date | @timestamp | date | Time/Date of Message<br>YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent UTC in ISO8601 format.) |
| Category | class | string | Category of Message<br>- hardware: Hardware log<br>- OS: Operating system log |
| Category | type | string | Type of Message<br>- event: Event<br>- Security: Security<br>- operation:Operation |
| Host Name | hostname | string | Host Name of Message |
| Origin of Transmission | source | string | Sender of Message |

| ISM GUI Item Name | Elasticsearch title name | Type | Description |
|---|---|---|---|
| Event ID | eventid | string | Event ID of Message |
| Log Name | logname | string | Log Name of Message |
| Log Level | loglevel | string | Log Level of Message |
| Message | message | string | Text of Message |
| - | nodeid | string | Node ID |

# 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 acquirement 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 |
| PortInformation | array | Port Information |
| PortName | string | Port Name |
| PortNumber | string | Port Number |
| Category | string | Port Category<br>Output: LAN, FC, FCoE, iSCSI, IB, CNA, Unknown |
| SubCategory | string | Port Subcategory<br>Output: Ether, FC, IB, LAN, SAS, LinkAggregation, Mirror, Backup, Backup LA, Peerlink |
| LinkStatus | string | Port Link Status<br>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 |
| Speed | object | Information of Port Communication Speed |

| Parameter | Type | Description |
|---|---|---|
| Value | string | Unit 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 |
| VirtualSwitchId | integer | Virtual Switch 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 |

## 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 |
| 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 |
| RemoteVirtualSwitchId | integer | Virtual Switch 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 of definitions of manual connection. Definition of manual connection is information of 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 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | 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<br>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<br>Node ID can be acquired by node control function. Always needs to set a node ID at the connection source. |
| | | PortName | string | Port Name at the source of connection<br>A port name can be acquired by API for retrieval for nodes detailed information of nodes detailed information management function. 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<br>Node ID can be acquired by node control function. Always needs to set a node ID at the destination of connection. |
| | | RemotePortName | string | Port Name at the destination of connection<br>A port name can be acquired by API for retrieval for nodes detailed information of nodes detailed information management function. 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 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | 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 network connection information. As for types of change, there are "add" and "delete" where "add" refers to added connection between ports while "delete" means 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 monitor information of changing of network connection<br>Outputs by UTC hours.<br>Example of Output) 2016-06-22T09:09:41.741Z |
| DifferenceInformation | | | array | Monitor information of changing of network connection |
| | Kind | | string | Classification of Changes<br>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 network control information<br>Outputs by UTC hours.<br>Example of Output) 2016-06-22T09:09:41.741Z |
| | RefreshEndTime | string | Completion time of updating of network management information<br>Outputs by UTC hours.<br>Example of Output) 2016-06-22T09:09:41.741Z |
| | UpdatedTime | string | Final updating time of updating of network management information<br>Outputs by UTC hours.<br>Example of Output) 2016-06-22T09:09:41.741Z |
| | Status | string | Results of updating of network management information<br>Output: success, failure |

## 4.13.9 Updating Network Management Information

### [Overview]

Instructs to update network management information. Termination of updating of network control information can be confirmed by acquiring of operation log of the event list management function. In order to re-evolve network control information, execute instruction to

obtain nodes information of nodes detailed information management function before updating. Cannot execute respective API for network management function 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 specified nodes. Specify a node ID in {nodeid}. Node ID can be acquired by node control function. A node to deal with whole acquirement of 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 VLAN settings of specified ports of specified nodes. Specify NodeId, the key name of request parameters: as the node ID and PortName with the name of the port. A port name can be acquired by API for retrieval for nodes detailed information of nodes detailed information management function.

A node to deal with batch change of VLAN settings is network switch. In case specifying both for a machine that is unable to configure tag VLAN and port VLAN into the same port, the settings of Tag VLAN is prioritized.

Unassigned nodes and ports cannot be changed.

Settings of VLAN to an equipment 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<br>Can change settings of multiple tag VLAN IDs. Several VLAN IDs can be specified with "," (comma) or "-" (hyphen) . |
| UntaggedVlanId | string | Port VLAN Information<br>Only single VLAN ID can be assigned as 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 turn out to be error reply.

## 4.13.13 Retrieving of Settings for Link Aggregation

### [Overview]

Retrieves settings of link aggregation of specified nodes. Specify a node ID in {nodeid}. Node ID can be acquired by node control function.

A node to deal with acquirement of settings for link aggregation is 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<br>Output: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent |
| LagType | string | Type of link aggregation<br>Output: ISL, peerlink, MLAG |
| MlagId | string | MLAG ID(vPC ID) |
| CfabricPortType | string | Port type of C-Fabric<br>Output: endpoint, cir |
| PortInformation | array | Port information of link aggregation |
| PortName | string | Port Name |

## 4.13.14 Changing Settings for Link Aggregation

### [Overview]

Changes settings for link aggregation of specified nodes. Specify a node ID in {nodeid}. Node ID can be acquired by node control function.

A node to deal with acquirement of settings for link aggregation is 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 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | Be careful as names of link aggregation assignable are different by node. |
| | LagMode | | string | Operating mode of link aggregation<br>It is possible to assign Static, LACP algorithm (Active and Passive) or PAgP algorithm (Auto, Desirable, Auto non-silent and Desirable non-silent). Some algorithms cannot be configured by node.<br>Alternatives: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent |
| | LagType | | string | Type of link aggregation<br>For typical link aggregation, specify null or empty character ("").<br>For MLAG(vPC), specify MLAG, and set MALG ID(vPC ID) for "MlagId" for next parameter if necessary.<br>Settings cannot be changed for the ISL as well as the Peer-link.<br>Alternatives: ISL, peerlink, MLAG |
| | MlagId | | string | MLAG ID<br>Set when LagType is MLAG. Set null when MLAG ID(vPC ID) does not exist. |
| | CfabricPortType | | string | Port type of C-Fabric<br>Assigns if assigned node is C-Fabric. For all cases other than that, set null.<br>Alternatives: endpoint, cir |
| | PortInformation | | array | Port information of link aggregation |
| | | PortName | string | Port Name<br>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<br>Output: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent |
| | LagType | | string | Type of link aggregation<br>Output: ISL, peerlink, MLAG |
| | MlagId | | string | MLAG ID |
| | CfabricPortType | | string | Port type of C-Fabric<br>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 specified nodes. Specify a node ID in {nodeid}. Node ID can be acquired by node control function.

### [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<br>Output: on, off |
| VfabMode | string | VFAB Mode<br>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<br>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<br>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 interface group of specified nodes. Specify a node ID in {nodeid}. Node ID can be acquired by node control function.

### [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<br>It is set to the format of "domain ID/group ID." |

# 4.14 Power Capping

## 4.14.1 Adding Definitions to Settings for Power Capping Function

### [Overview]

Adds a definition of settings for power capping function

### [Format]

```
POST /nodes/powercapping
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Defines | array | Information of Definitions<br>Only one element can be assigned. |
| Name | string | Name of Definition Body |
| ResourceIdType | string | Category of targets for definition (Rack)<br>To assign a Rack |
| ResourceId | integer | ID by category of targets for Definition |
| Catalog | array | Catalog Information |
| NodeId | integer | Node ID to configure<br>When specifying a node ID that doesn't belong to the target definition, its catalog information will be neglected. |
| MaxWat | integer | Maximum power consumption<br>Specifies the maximum power consumption in watts. |

| Parameter | Type | Description |
|---|---|---|
| | | Tolerance: 0-999,999<br>Can specify 0 only when fixed power value specification is on. Specify 1 or higher when fixed power value specification is off. |
| FixedValue | string | Specify fixed power value<br>"On", "Off"<br>By turning it "On", a value specified by the maximum power consumption is set as power consumption value. |
| Priority | string | Priority<br>- Critical: Assign if the task is high priority or to ensure adequate performance.<br>- High: Designate for situations other than critical when decline in performance is permitted.<br>- Middle: Assign when a lower performance than High but not as active as low is necessary.<br>- Low: Designate if trying to target actively conducting power conservation control, while looking at entire rack status. |
| Policies | array | Policy<br>Always specify the following four:Custom1, Custom2, Schedule and Minimum. |
| Policy | object | Policy Information |
| Name | string | Policy Name<br>- Custom1: "Custom1"<br>- Custom2: "Custom2"<br>- For Scheduling: "Schedule"<br>- Lock to minimum: "Minimum" |
| MaxWat | integer | Upper limit value for power consumption of the devices mounted in racks under power saving controlling<br>Specify the total power consumption of the target devices by subtracting the fixed power value (total power consumption of devices other than the target devices) from the uppper limit value to be set for power saving controlling (total power consumption of the devices in racks)<br>Tolerance: 1-999,999<br>When a policy name is Minimum (fixed as minimum), it should specify null. |
| Activate | string | Enable or Disable the Settings<br>- Enable: "True"<br>- Disable: "False" |
| Schedule | object | Information on Scheduling<br>When a port name is either Custom1, Custom2 or Minimum, it permits null. |
| StartTime | string | Start time of power saving controlling |

| Parameter | Type | Description |
|---|---|---|
| | | Assigns in the form of HH:MM. Do not set values to the same as EndTime. If done in a whole day, specify null (That is, specify EndTime and null). Can omit key when Schedule is null |
| EndTime | string | End time of power saving controlling<br>Assigns in the form of HH:MM. Do not assign the same values as StartTime. If done in a whole day, specify null (That is, specify StartTime and null). Can omit key when Schedule is null |
| DayOfTheWeek | array(integer) | Validated days of week<br>Assign more than one day of week to perform power saving control (Values "0" to "6")<br>- Sunday: "0"<br>- Monday: "1"<br>- Tuesday: "2"<br>- Wednesday: "3"<br>- Thursday: "4"<br>- Friday: "5"<br>- Saturday: "6"<br>Can omit key when Schedule is null |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |
| CancelUri | string | URI at the time of termination |

## 4.14.2 List Retrieval for Definitions in Settings for Power Capping Function

### [Overview]

Retrieves a list of definitions of settings for power capping function

### [Format]

```
GET /nodes/powercapping
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Defines | array | Information of Definitions |
| CappingId | integer | Definition ID for setting of power capping function |
| Name | string | Name of Definition Body |
| ResourceIdType | string | Category of targets for definition (Rack) |

| Parameter | | Type | Description |
|---|---|---|---|
| | ResourceId | integer | ID by category of targets for Definition |
| | Status | string | State of processing for the target definition<br>- Initializing: Adding definitions<br>- Processing: Definition being changed or deleted<br>- Complete: Processing completed (other REST handling is possible) |

## 4.14.3 Separate Retrieval for Definitions in Settings for Power Capping Function

### [Overview]

Retrieves detail information of settings for power capping function.

### [Format]

```
GET /nodes/powercapping/{cappingid}
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | | Type | Description |
|---|---|---|---|---|
| CappingId | | | integer | Definition ID for setting of power capping function |
| Name | | | string | Name of Definition Body |
| ResourceIdType | | | string | Category of targets for definition (Rack) |
| ResourceId | | | integer | ID by category of targets for Definition |
| Catalog | | | array | Catalog Information |
| | NodeId | | integer | Node ID to configure |
| | MaxWat | | integer | Maximum power consumption |
| | FixedValue | | string | Specify fixed power value |
| | CurrentWat | | integer | Current power consumption<br>A latest value for a node that can be measured for power consumption. For a case other than that, it returns null.<br>In case of "Designation of fixed power value" is set On, it returns null. |
| | Priority | | string | Priority |
| Policies | | | array | Policy |
| | Policy | | object | Policy Information |
| | | Name | string | Policy Name<br>- Custom1: "Custom1"<br>- Custom2: "Custom2"<br>- For Scheduling: "Schedule" |

| Parameter | Type | Description |
|---|---|---|
| | | - Lock to minimum: "Minimum" |
| MaxWat | integer | Upper limit value for power consumption of the devices mounted in racks under power saving controlling<br>In a case of being minimum, it returns null. |
| Activate | string | Enable or Disable the Settings<br>- Enable: "True"<br>- Disable: "False" |
| Schedule | object | Information on Scheduling |
| StartTime | string | Start time of power saving controlling<br>Returns in the form of HH:MM. In a whole day, return null. |
| EndTime | string | End time of power saving controlling<br>Returns in the form of HH:MM. In a whole day, return null. |
| DayOfTheWeek | array(integer) | Validated days of week<br>Days of week to perform power saving control (Values "0" to "6")<br>- Sunday: "0"<br>- Monday: "1"<br>- Tuesday: "2"<br>- Wednesday: "3"<br>- Thursday: "4"<br>- Friday: "5"<br>- Saturday: "6" |

## 4.14.4 Changing Definitions in Settings for Power Capping Function

### [Overview]

Changes a definition of settings for power capping function.

### [Format]

```
PATCH /nodes/powercapping/{cappingid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Name | string | Name of Definition Body |
| ResourceIdType | string | Category of targets for definition (Rack)<br>Assigns a Rack. |
| ResourceId | integer | ID by category of targets for Definition |
| Catalog | array | Catalog Information |

| Parameter | Type | Description |
|---|---|---|
| NodeId | integer | Node ID to configure<br>When specifying a node ID that doesn't belong to the target definition, its catalog information will be neglected. |
| MaxWat | integer | Maximum power consumption<br>Specifies the maximum power consumption in watts.<br>Tolerance: 0-999,999<br>Can specify 0 only when fixed power value specification is on.<br>Specify 1 or higher when fixed power value specification is off. |
| FixedValue | string | Specify fixed power value<br>"On", "Off"<br>By turning it "On", a value specified by the maximum power consumption is set as power consumption value. |
| Priority | string | Priority<br>- Critical: Assign if the task is high priority or to ensure adequate performance.<br>- High: Designate for situations other than critical when decline in performance is permitted.<br>- Middle: Assign when a lower performance than High but not as active as low is necessary.<br>- Low: Designate if trying to target actively conducting power conservation control, while looking at entire rack status. |
| Policies | array | Policy<br>Always specify the following four:Custom1, Custom2, Schedule and Minimum. |
| Policy | object | Policy Information |
| Name | string | Policy Name<br>- Custom1: "Custom1"<br>- Custom2: "Custom2"<br>- For Scheduling: "Schedule"<br>- Lock to minimum: "Minimum" |
| MaxWat | integer | Upper limit value for power consumption of the devices mounted in racks under power saving controlling<br>Specify the total power consumption of the target devices by subtracting the fixed power value (total power consumption of devices other than the target devices) from the uppper limit value to be set for power saving controlling (total power consumption of the devices in racks)<br>Tolerance: 1-999,999<br>When a policy name is Minimum (fixed as minimum), it should specify null. |
| Activate | string | Enable or Disable the Settings<br>- Enable: "True" |

| Parameter | Type | Description |
|---|---|---|
| | | - Disable: "False" |
| Schedule | object | Information on Scheduling<br>When a port name is either Custom1, Custom2 or Minimum, it permits null. |
| StartTime | string | Start time of power saving controlling<br>Assigns in the form of HH:MM. Do not set values to the same as EndTime. If done in a whole day, specify null (That is, specify EndTime and null). Can omit key when Schedule is null |
| EndTime | string | End time of power saving controlling<br>Assigns in the form of HH:MM. Do not assign the same values as StartTime. If done in a whole day, specify null (That is, specify StartTime and null). Can omit key when Schedule is null |
| DayOfTheWeek | array(integer) | Validated days of week<br>Assign more than one day of week to perform power saving control (Values "0" to "6")<br>- Sunday: "0"<br>- Monday: "1"<br>- Tuesday: "2"<br>- Wednesday: "3"<br>- Thursday: "4"<br>- Friday: "5"<br>- Saturday: "6"<br>Can omit key when Schedule is null |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |
| CancelUri | string | URI at the time of termination |

## 4.14.5 Deleting Definitions from Settings for Power Capping Function

### [Overview]

Deletes a definition of settings for power capping function.

### [Format]

```
DELETE /nodes/powercapping/{cappingid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.14.6 Enabling and Disabling Policies in Settings for Power Capping Function

### [Overview]

Switches enabling/disabling policy in settings for power capping function.

### [Format]

```
PATCH /nodes/powercapping/{cappingid}/policy
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Policy | | object | Policy Information |
| | Name | string | Policy Name<br>- Custom1: "Custom1"<br>- Custom2: "Custom2"<br>- For Scheduling: "Schedule"<br>- Lock to minimum: "Minimum" |
| | Activate | string | Enable or Disable the Settings<br>- Enable: "True"<br>- Disable: "False" |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| CappingId | | integer | Definition ID for setting of power capping function |
| Name | | string | Definition Name |
| ResourceIdType | | string | Category of targets for definition (Rack) |
| ResourceId | | integer | ID by category of targets for Definition |
| Policy | | object | Policy Information |
| | Name | string | Policy Name<br>- Custom1: "Custom1"<br>- Custom2: "Custom2"<br>- For Scheduling: "Schedule"<br>- Lock to minimum: "Minimum" |
| | Activate | string | Enable or Disable the Settings<br>- Enable: "True" |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Disable: "False" |

## 4.14.7 Deactivation of Settings for Power Capping Function

### [Overview]

Processes to deactivate settings for power capping function.

### [Format]

```
POST /nodes/powercapping/cancel
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | string | Task ID |

### [Response Parameter]

None

### [Precautions]

- Settings for power capping function cannot be aborted in the current edition.

# 4.15 Virtual Resource Management

## 4.15.1 List Retrieval for Storage Pools

### [Overview]

Retrieves list of storage pool 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: Cloud Management Software) that the cluster belongs to<br>Output in case of vSAN, Storage Spaces Direct. |
| | NodeId | long | Node ID |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Output in case of ETERNUS RAID group. |
| | PoolStatus | string | Status of Storage Pool<br>- RED: abnormality<br>- YELLOW: Caution<br>- GRAY: Unknown<br>- GREEN: Normal |
| | PoolName | string | Name of storage pool |
| | PoolType | string | Type of Storage Pool<br>- VSAN: "VMware Virtual SAN"<br>- S2D: "Microsoft Storage Spaces Direct"<br>- ETERNUS DX: "ETERNUS DX" |
| | TotalCapacity | long | Total Capacity of Storage Pool |
| | FreeCapacity | long | Available Capacity of Storage Pool |
| | NotAllocatedCapacity | long | Unassigned capacity of Storage Pool<br>Only displays Storage Spaces Direct |
| | UsedCapacity | long | Used Capacity of Storage Pool |
| | UsedRate | short | Use Rate of Storage Pool |
| | LatestUpdate | string | Time/Date of Latest Acquisition of Information |

## 4.15.2 Separate Retrieval for Storage Pool

### [Overview]

Retrieves detail information of storage pool {storagepoolid} as specified.

### [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 cloud management software (CMS: Cloud Management Software) that the cluster belongs to<br>Output in case of vSAN, Storage Spaces Direct. |
| | NodeId | long | Node ID<br>Output in case of ETERNUS RAID group. |
| | PoolStatus | string | Status of Storage Pool<br>- RED: abnormality |

| Parameter | Type | Description |
|---|---|---|
| | | - YELLOW: Caution<br>- GRAY: Unknown<br>- GREEN: Normal |
| PoolName | string | Name of storage pool |
| PoolType | string | Type of Storage Pool<br>- VSAN: "VMware Virtual SAN"<br>- S2D: "Microsoft Storage Spaces Direct"<br>- ETERNUS DX: "ETERNUS DX" |
| TotalCapacity | long | Total Capacity of Storage Pool |
| FreeCapacity | long | Available Capacity of Storage Pool |
| NotAllocatedCapacity | long | Unassigned capacity of Storage Pool<br>Output in case of Storage Spaces Direct. |
| UsedCapacity | long | Used Capacity of Storage Pool |
| UsedRate | short | Use Rate of Storage Pool |
| LatestUpdate | string | Time/Date of Latest Acquisition of Information |
| VariableData | object | Specific information by type of storage pools |
| VSAN | object | Specific Information of vSAN |
| Url | string | URL of Data Store |
| ManagedObjectId | string | A control number assigned by cloud management software (VMware Managed Object ID) |
| Version | string | Version o vSAN |
| ClusterId | long | ID of cluster that the storage pool belongs to |
| S2D | object | Storage Spaces Direct spec information |
| UniqueId | string | ID to Show Unique Storage Pool |
| Version | string | Version |
| Availability | string | Availability |
| Iops | integer | IOPS<br>Presently it is not supported. |
| Throughput | integer | Throughput<br>Presently it is not supported. |
| Response | integer | Response<br>Presently it is not supported. |
| Deduplication | boolean | Deduplication |
| ClusterId | long | ID to show unique cluster that the storage pool belongs to |
| ETERNUS | object | ETERNUS RAID group --- information |
| Availability | string | Availability |
| EquipmentInfo | array | Information of node that constitutes the storage pool |
| NodeId | long | Node ID |
| NodeGroupId | long | Node Group ID |

| Parameter | | Type | Description |
|---|---|---|---|
| | NodeStatus | string | Node Status |
| | AlarmStatus | string | Alarm status |
| | NodeName | string | Node name |
| | 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<br>- 0: Disable<br>- 1: Manual maintenance mode<br>- 2: Automatic maintenance mode<br>- 3: Manual and automatic maintenance mode |
| | HDD | integer | Number of HDDs<br>Presently it is not supported. |
| | SSD | integer | The number of SSD<br>Presently it is not supported. |
| | 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 BusSlot Number |
| | Segment | string | PCI BusSegment Number |
| | Bus | string | PCI BusBus Number |
| | Device | string | PCI BusDevice Number |
| | Function | string | PCI BusFunction Number |
| | Version | string | Version of iRMC |
| | ParentName | string | Name of Parent Device |
| | Unified | string | Unified Model |
| VirtualDiskInfo | | array | Information of Virtual Disk |
| | UniqueId | string | Virtual Disk ID |
| | HealthStatus | string | State of Virtual Disk<br>- Healthy: Healthy<br>- Warning: Caution<br>- Unhealthy: Abnormality |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Unknown: Not known |
| | FriendlyName | string | Virtual Disk Name |
| | TotalCapacity | long | Total Capacity of Virtual Disk |
| | FreeCapacity | long | Available 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 a 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 list of cluster information managed with ISM.

### [Format]

```
GET /resources/clusters
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| BasicClusterInfo | | array | Basic information of clusters |
| | ClusterId | long | Cluster ID |
| | CmsId | long | IDs of cloud management software (CMS: Cloud Management Software) that the cluster belongs to<br><br>Output in case of vSAN, Storage Spaces Direct. |

| Parameter | | Type | Description |
|---|---|---|---|
| | ClusterType | string | Type of hypervisor where the cluster runs<br>- VMware: Case of VMware vSAN Cluster<br>- Hyper-V: When Microsoft Failover Cluster |
| | ClusterName | string | Name of Cluster |
| | LatestUpdate | string | Time/Date of Last Update of Information |
| | Status | string | Status of the cluster<br>- RED: abnormality<br>- YELLOW: Caution<br>- GRAY: Unknown<br>- GREEN: Normal |
| | PoolId | array | List of storage pool IDs that belong to the cluster |
| | Id | long | ID of storage pool it belongs to |
| | NodeId | array | List of node IDs that belong to the cluster |
| | Id | long | IDs of nodes that belong to the cluster |

## 4.15.5 Separate Retrieval for Cluster

### [Overview]

Retrieves cluster information of {clusterid} as specified.

### [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 cloud management software (CMS: Cloud Management Software) that the cluster belongs to<br>Output in case of vSAN, Storage Spaces Direct. |
| | ClusterType | string | Type of hypervisor where the cluster runs<br>- VMware: VMware vSAN Cluster<br>- Hyper-V: Microsoft Failover Cluster |
| | ClusterName | string | Name of Cluster |
| | LatestUpdate | string | Time/Date of Last Update of Information |
| | Status | string | Status of the cluster<br>- RED: abnormality<br>- YELLOW: Caution |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - GRAY: Unknown<br>- GREEN: Normal |
| | PoolId | | lsit | List of storage pool IDs that belong to the cluster |
| | | Id | long | IDs of storage pool that belong to the cluster |
| | NodeId | | array | List of node IDs that belong to the cluster |
| | | Id | long | IDs of nodes that belong to the cluster |
| VariableData | | | object | Information by type of clusters |
| | vCenter | | object | Cluster management information by VMware vCenter.<br>(vCenter: Cloud Management Software for controlling vSAN) |
| | | ManagedObjectId | string | Cluster management ID of cloud management software (VMware Managed Object ID) |
| | | Drs | boolean | VMware DRS Function<br>- true: enabled<br>- false: disabled |
| | | ClusterMode | boolean | Operation mode of vSAN cluster<br>- true: enabled<br>- false: disabled |
| | | Deduplication | boolean | State of Deduplication<br>- true: enabled<br>- false: disabled |
| | | Compression | boolean | State of Compression<br>- true: enabled<br>- false: disabled |
| | | TotalDiskGroupNumber | long | Total number of disc groups in vSAN cluster |
| | Windows | | object | Cluster management information for Microsoft Windows OS |
| | | Id | string | Windows Cluster Management ID |
| | | Compression | boolean | State of Compression<br>- true: enabled<br>- false: disabled |
| | | CmsType | string | - CMS type that the cluster belongs to cluster principal IP: MicrosoftFailoverCluster<br>- System Center: SystemCenter |
| | | OwnerNode | string | Name of the owner (primary) node of the cluster |
| | | GroupStatus | string | Status of a cluster group<br>- Online: Group is operative<br>- Offline: Group is not operative<br>- Pending: Group in action<br>During switching a primary node, it turns to Pending.<br>Returns Offline when unable to communicate. |

| Parameter | Type | Description |
|---|---|---|
| EquipmentInfo | array | Node information that constitutes a 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 computer set on OS) |
| Model | string | Model Name of a Node |
| IpAddress | string | Node IP Address |
| IpVersion | string | IP address version of a node<br>"V4" or "V6" |
| OS | string | Type of OS for nodes |
| MaintenanceMode | integer | Maintenance Mode<br>- 0: Disable<br>- 1: Manual maintenance mode<br>- 2: Automatic maintenance mode<br>- 3: Manual and automatic maintenance mode |
| HDD | integer | Number of HDDs<br>Presently it is not supported. |
| SSD | integer | The number of SSD<br>Presently it is not supported. |
| Condition | string | State of nodes<br>[In case of cluster's type is VMware vSAN]<br>- State of Connection: "CONNECTED"<br>- Not connected: "DISCONNECTED"<br>- No Response: "NOTRESPONDING"<br>[In case of cluster's type is MS Failover Cluster]<br>- Unknown: "Unknown"<br>- Non-operating/Abnormality: "Down"<br>- Normal: "Up"<br>- Part of functions disabled: "Paused"<br>- Embedding to a cluster in progress: "Joining" |
| 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) |

| Parameter | Type | Description |
|---|---|---|
| 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 | Data Center Name that has been installed |
| DatacenterId | string | Data Center ID that has been installed |
| FloorName | string | Floor Name that has been installed |
| FloorId | string | Floor ID that has been installed |
| RackName | string | Rack Name that has been installed |
| RackId | string | Rack ID that has been installed |
| RackPosition | string | Position inside a rack |
| DiskGroup | string | Disk Group Information |
| 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 task and it is possible to check completed results by status of "4.16.1 Separate Retrieval for Task" as well as a completion report.

### [Format]

```
POST /resources/virtualmachines/{virtualmachineid}/move
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| To | integer | Node ID of host at a transport destination of a virtual machine |
| Mode | integer | Specifies operation mode of a virtual machine when it was moved (Applicable for only a case of Microsoft Storage Spaces Direct)<br>- 1: Live<br>- 2: Quick<br>- 3: Shutdown |

| Parameter | Type | Description |
|---|---|---|
| | | - 4: ShutdownForce<br>- 5: TurnOff<br>When the key is omitted, it is executed by specifying "1: Live". |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | long | Task Management ID |

### [Precautions]

- Transport of a VMware virtual machine calls for the following conditions.
  - CPUs of node at shipment source and node at shipment destination must be identical.
  - It should be a VM move between the same data centers.

## 4.15.7 Turning On Power of Virtual Machines

### [Overview]

Power connected in virtual machine as specified.

The process results are managed by task and it is possible to check completed results by status of "4.16.1 Separate Retrieval for Task" as well as a 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]

Power disconnected in virtual machine as specified.

The process results are managed by task and it is possible to check completed results by status of "4.16.1 Separate Retrieval for Task" as well as a completion report.

### [Format]

```
POST /resources/virtualmachines/{virtualmachineid}/power/off
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| OperationType | integer | Assigns how to shut off power of a virtual machine.<br>- Shutdown: Shutdown<br>- PowerOff: Power is shut off<br>When the key is omitted, it is executed by specifying "Shutdown". |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | long | Task Management ID |

## 4.15.9 Restarting Nodes

### [Overview]

By specifying a node that constitutes a storage pool, it is restarted.

The process results are confirmed according to the completed results of the status of "4.16.1 Separate Retrieval for Task."

### [Format]

```
POST /resources/nodes/{nodeid}/cmsmaintenancemode/set
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | long | Task Management ID |

### [Precautions]

- Maintenance mode status is necessary for assigning a node.

## 4.15.10 Activating Maintenance Mode on Nodes

### [Overview]

By specifying a node that constitutes a storage pool, the maintenance mode is activated.

The process results are managed by task and it is possible to check completed results by status of "4.16.1 Separate Retrieval for Task" as well as a completion report.

### [Format]

```
POST /resources/nodes/{nodeid}/cmsmaintenancemode/set
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Mode | integer | Configuration of Maintenance Mode operation<br>[Case of VMware vSAN]<br>- 1: Accessibility security<br>- 2: Transfer of all data<br>- 3: No data transfer<br>[Case of Microsoft Storage Spaces Direct]<br>- 1: Move all virtual machines to a different host within the cluster.<br>- 2: Ensure all running virtual machines are in a saved state.<br>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 Deactivating Maintenance Mode on Nodes

### [Overview]

By specifying a node that constitutes a storage pool, the maintenance mode is deactivated.

The process results are confirmed according to the completed results of the status of "4.16.1 Separate Retrieval for Task."

### [Format]

```
POST /resources/nodes/{nodeid}/cmsmaintenancemode/unset
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskId | long | Task Management ID |

# 4.16 Task Management

## 4.16.1 Separate Retrieval for 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 | Update Time/Date of Sub-task |
| ProgressNumerator | integer | Numerator of the progress of a task |
| ProgressDenominator | integer | Denominator of the progress of a task |
| Status | string | Status of Task<br>- Wait: Already received<br>- Running: Execution in progress<br>- Complete: Finished<br>- Cancel-Running : Cancel in Process<br>- Cancel-Complete: Cancel completed |
| Result | string | Completion Result of Task<br>- Undecided: Running<br>- Success : Success<br>- 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 |
| Register | string | Registration Time/Date of Sub-task |
| Update | string | Update Time/Date of Sub-task |
| ProgressNumerator | integer | Numerator of the progress of a subtask |

| Parameter | | Type | Description |
|---|---|---|---|
| | ProgressDenominator | integer | Denominator of the progress of a subtask |
| | Status | string | Status of Sub-task<br>- Running: Execution in progress<br>- Complete: Finished<br>- Cancel-Running : Cancel in Process<br>- Cancel-Complete: Cancel completed |
| | Result | string | Completion Result of Sub-task<br>- Undecided: Running<br>- Success : Success<br>- Error: Failed |
| | TargetNode | string | String subject to Sub-task |
| | 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?
servicename={value}&tasktype={value}&start={value}&end={value}&taskstatus={value}&taskresult={value
}&continuekey={value}&resourceidtype={value}&resourceid={value}
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| servicename | string | Narrowing by the use of service name at issuer |
| tasktype | string | Narrowing with Task Type |
| start | string | Refining by start time/date of task registration |
| end | string | Refining by end time/date of task registration |
| taskstatus | string | Narrowing with Task Table |
| taskresult | string | Narrowing with Completion Result of Task |
| continuekey | string | Continued Read Key |
| resourceidtype | string | Narrowing down with the use of resource ID type |
| resourceid | integer | Narrowing by Resource ID |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TaskInfoList | array | List of Sub-task Information |

| 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 | Update Time/Date of Sub-task |
| | ProgressNumerator | | integer | Numerator of the progress of a task |
| | ProgressDenominator | | integer | Denominator of the progress of a task |
| | Status | | string | Status of Task<br>- Wait: Already received<br>- Running: Execution in progress<br>- Complete: Finished<br>- Cancel-Running : Cancel in Process<br>- Cancel-Complete: Cancel completed |
| | Result | | string | Completion Result of Task<br>- Undecided: Running<br>- Success : Success<br>- 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 assigned several times in query parameters, the one assigned lastly becomes valid.
  In case of refining, assign values of corresponding output results of "4.16.2 List Retrieval for Tasks" and "4.16.1 Separate Retrieval for Task" as assigned values for query parameters.
- When there is no task information as 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 refining, the rest of task information can be output by assigning the values of "Continued read key" as configured values of query parameter of "Continued read key".

# 4.17 ISM-VA Management Functions

The ISM-VA management function includes the following functions:

- The function execute ismadm command from API

## 4.17.1 Obtaining and Releasing Permission for VA Operation

### [Overview]

Obtains and releases permission for VA operation.

### [Format]

```
POST /ismva/privilege
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Mode | string | VA Operation Permission Mode<br>Specifies acquire/release of VA operation permission.<br>- Get: Obtains VA operating permission.<br>- Release: Releases VA Operation Permission. |
| Password | string | Password<br>Assign an encrypted password. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 32 characters or less. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Result | string | Process results<br>- OK:<br>- NG: |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- The following API should retrieve of VA operation permission by this API in advance. Unless retrieving VA operation permission, it becomes an privilege error.
  - 4.2.1 Setting Licenses
  - 4.2.3 Deleting Licenses
  - 4.2.4 Replacing Licenses
  - 4.17.5 Setting of 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 Server Certificates
- 4.17.31 Setting for DHCP Server Inside ISM-VA
- 4.17.33 Initializing Domain Settings
- 4.17.34 Adding Domain Settings
- 4.17.35 Reverting Domain Settings to Immediately Preceding Status
- 4.17.37 Restarting ISM-VA
- 4.17.38 Stopping ISM-VA

- The password assigned in VA operation permission is identical with log in password for each user.

## 4.17.2 Changing Password for Permission for VA Operation

### [Overview]

Changes a password of VA operation permission.

### [Format]

```
PATCH /ismva/privilege/settings
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| User | | object | User Information |
| | UserName | string | User Name<br>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 Permission Mode<br>Assigns if VA operation permission is given to a user at all times.<br>- Disable: Permanently allow VA operation permission.<br>- Enable: Release permanently set operating permissions. |
| | Password | string | Password<br>Assign an encrypted password. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 32 characters or less. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| User | object | User Information |

| Parameter | | Type | Description |
|---|---|---|---|
| | UserName | string | User Name |
| | PasswordPolicy | string | VA Operation Permission Mode |
| | Password | string | Password |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- Precautions of request parameters are as follows:
  - Omitting a parameter means there is no change in the contents of that parameter.
  - By specifying a parameter as null, it means to delete all contents of that parameter.
- Output data will output everything, including the content relevant to the omitted request parameter

## 4.17.3 Display of Information on Permission for VA Operation

### [Overview]

Displays the information of VA operation permission.

### [Format]

```
GET /ismva/privilege/settings
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserName | string | User Name<br>If no assignment, all information of 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 last access<br>Outputs time and date of final access. |
| | Modified | string | Update Time/Date<br>Outputs time and date of update. |
| | Status | string | Situations<br>Outputs the settings of VA operation permission information.<br>- EnternalValid; VA operating permissions are always allowed.<br>- PasswordValid: A password for VA operation permission is set.<br>- PasswordInValid: A password for VA operation permission is not set. |

### [Precautions]

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

## 4.17.4 Display of ISM-VA Information

### [Overview]

Display 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<br>- small<br>- medium<br>- large |
| PluginList | object | Plugin Information |
| Name | string | Plugin Name |
| VL | string | VL |
| DebugMode | string | Debugging Mode<br>- Enable: Set Debug mode<br>- Disable: Cancels debug mode (initial value) |
| DebugServiceList | array(string) | Debugging services<br>Outputs names of services that turn to debugging mode by string.<br>This key will be omitted unless it is a debugging mode. |

### [Precautions]

- This API execute below ismadm command.
  - System information display: ismadm system show

## 4.17.5 Setting of 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<br>- small<br>- medium<br>- large |
| PluginList | object | Plugin Information |
| Name | string | Plugin Name |
| VL | string | VL |
| DebugMode | string | Debugging Mode<br>- Enable: Set Debug mode<br>- Disable: Cancels debug mode |
| DebugServiceList | array(string) | Debugging services<br>Assigns names of services that turn to debugging mode by string. |

### [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<br>- small<br>- medium<br>- large |
| PluginList | object | Plugin Information |
| Name | string | Plugin Name |
| VL | string | VL |
| DebugMode | string | Debugging Mode<br>- Enable: Set Debug mode |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Disable: Deselect debug mode |
| | DebugServiceList | array(string) | Debugging services<br>Outputs names of services that turn to debugging mode by string.<br>This key will be omitted unless it is a debugging mode. |
| Restart | | string | Restart<br>It will output if a restart is required as the result of this API.<br>- ISM-VA: Restart is required for the ISM-VA<br>- ISM-Service: Restart is required for the ISM service<br>- null: No need for restarting<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Change in ISM release service port: ismadm service modify
  - Change in host name: ismadm system modify
  - Switch in failure investigation log: ismadm system set-debug-flag
  - Switch in failure investigation log level: ismadm system change-log-level
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.6 Collecting of 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 | Assign a Destination Directory<br>Assign a destination of output from the ftp of the "Administrator" directory.<br>When the key is omitted, "" and null, /Administrator/ftp becomes a destination of output. |
| | Mode | string | Mode |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Specify one of the following.<br>- "Part": (initial value)<br>- "Full": Output detail information<br>In case of null and "", it assumes default value was specified. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| MaintenanceData | | object | Maintenance Data |
| | Path | string | Output File Path<br>Password will be outputted for the files saved on the assigned directory.<br>/assigned directory/ismsnap-YYYYMMDDHHMMSS.tar.gz |
| | Mode | string | Mode<br>Will output from outputted mode. |
| Restart | | string | Restart<br>It will output if a restart is required as the result of this API.<br>null: No need for restarting |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Collection of archived logs: ismadm system snap

## 4.17.7 Applying Plug-Ins

### [Overview]

Apply a plug-in.

### [Format]

```
POST /ismva/settings/plugin/add
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Plugin | | object | Addition of plug-in |
| | File | string | Specify a file of plug-in to apply<br>Assign a file path from the ftp of "Administrator" directory. |
| | ExecFile | string | Executes an optional program within a plug-in file.<br>When omitting null, "" and keys, 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<br>Outputs the name of path for the result of execution by applied plug-in.<br>/varesult/varesultXXXX<br>XXXX: Time/Date<br>Omits the key when there are no output results. |
| Restart | | string | Restart<br>It will output if a restart is required as the result of this API.<br>Auto: Will automatically restart after the main API is executed. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Application of Plug-in: ismadm system plugin-add
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.8 Applying Patches

### [Overview]

Apply patches to ISM-VA.

### [Format]

```
POST /ismva/settings/patch/add
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Patch | | object | Information of Modification |
| | File | string | Assigning a file to be modified for execution<br>Assign a file path from the ftp of "Administrator" directory. |
| | ExecFile | string | Executes an optional program within a file<br>When omitting null, "" and keys, no program is executed. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Patch | object | Information of Modification |

| Parameter | | Type | Description |
|---|---|---|---|
| | Result | string | Process results |
| | Output | string | Output of the result of an executed file<br>Outputs the path name as the result of execution of the modification.<br>/varesult/varesultXXXX<br>XXXX: Time/Date<br>Omits the key when there are no output results. |
| Restart | | string | Restart<br>Outputs a necessity of restart.<br>Auto: Will automatically restart after the main API is executed. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Application of Patches: ismadm system patch-add
- To execute this API, it is necessary to retrieve of VA operation permission 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 show |
| PluginList | | object | Plugin Information |
| | Name | string | Plugin Name |
| | VL | string | VL |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Displayed 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 | Name of a plug-in<br>Specifies the name of plug-in to delete. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Output | string | Output results to show |
| Restart | string | Restart<br>Outputs a necessity of restart.<br>- ISM-VA: Restart is required for the ISM-VA<br>- ISM-Service: Restart is required for the ISM service<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Deletion of plug-in: ismadm system plugin-del
- To execute this API, it is necessary to retrieve of VA operation permission 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 Administrator role and belonging to Administrator group.

## 4.17.12 Displaying Results of Operation Before Rebooting

### [Overview]

Displays a result of operation before the restart.

### [Format]

```
GET /ismva/settings/result
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| Time | string | Time<br>Processing time of results to show<br>Displays the latest result of processing unless specified.<br>Time can be specified for one with a form of yyyy-mm-dd hh:mm:ss.<br>It shows newer result than this configuration value. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Output | string | Process results<br>Contents of the results of the following execution are to be output as follows:<br>/varesult/varesultXXXX<br>XXXX: Time/Date |

### [Precautions]

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

## 4.17.13 Output of Web Server logs

### [Overview]

Output https communication log of Web server log.

### [Format]

```
POST /ismva/webserverlog/export
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Directory | string | Destination Directory<br>Assign a path from the ftp of "Administrator" directory. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| LogData | object | Log Information |
| Path | string | Output File Path<br>Password will be outputted for the files saved on the assigned directory.<br>/assigned directory/weblogYYYYMMDDHHMMSS.tar.gz |
| Restart | string | Restart<br>It will output if a restart is required as the result of this API.<br>null: No need for restarting |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- Log outputs contents of the last five weeks.

## 4.17.14 Displaying Locales and Keymaps

### [Overview]

Displays a locate/keymaps that are set.

### [Format]

```
GET /ismva/settings/locale
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| LocaleSetting | object | Locale Information |

| Parameter | | Type | Description |
|---|---|---|---|
| | Locale | string | Locale |
| | Keymap | string | Keymap |

### [Precautions]

- This API execute below ismadm command.
  - Show of locale and keymap: 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 | Assigns a locale<br>Assigns a locale for setting.<br>Specify output results of locale list. |
| | Keymap | string | Assign Keymap<br>Assigns a Keymap for setting.<br>Specifies output result of a list of keymap. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| LocaleSetting | | object | Locale Information |
| | Locale | string | Locale |
| | Keymap | string | Keymap |
| Restart | | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

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

- It is required that either Locale parameter or Keymap parameter be assigned.
- This API execute below ismadm command.
  - Locale Setting: ismadm locale set-locale
  - Keymap Setting: ismadm locale set-keymap
- To execute this API, it is necessary to retrieve of VA operation permission 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 by array of locales. |

### [Precautions]

- This API execute below ismadm command.
  - Displays available setting locales: ismadm locale list-locales

## 4.17.17 Displaying Available Keymap Settings

### [Overview]

Displays a list of keymap that are available for setting.

### [Format]

```
GET /ismva/settings/locale/keymap/list
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| KeymapList | array(string) | Outputs a keymap by array. |

### [Precautions]

- This API execute below ismadm command.
  - Show of available keymaps: ismadm locale list-keymaps

## 4.17.18 Displaying Time Information

### [Overview]

Display the ISM time information.

### [Format]

```
GET /ismva/settings/time
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| OutputMode | string | Output Mode<br>Assigns an output mode.<br>- ALL: output all<br>- VA: Output only the current time in a format which includes the day of the week<br>- API (Initial value): Output only the current timetable in a format which excludes the day of the week |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Time | | object | Hour Information |
| | LocalTime | string | Local Time<br>Output takes in the following forms.<br>- When OutputMode=All or VA<br>Week Year-Month-Day Hours:Minutes:Seconds Time Zone<br>E.g.) Wed 2017-02-01 15:19:50 JST<br>- When OutputMode=API<br>Year-Month-DayTHours:Minutes:Seconds.nnn Time difference with UTC<br>E.g.) 2017-02-01T15:19:50.000+09:00 |
| | UniversalTime | string | Time in UTC<br>Outputs time in UTC.<br>- When OutputMode=All or VA<br>Week Year-Month-Day Hours:Minutes:Seconds UTC<br>E.g.) Wed 2017-02-01 06:19:50 UTC<br>- When OutputMode=API<br>Year-Month-DayTHours:Minutes:Seconds.nnnZ<br>E.g.) 2017-02-01T06:19:50.000Z |
| | Timezone | string | Time Zone<br>E.g.)<br>Asia/Tokyo (JST, +0900) |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | UTC (UTC, +0000) |
| NTP | | object | NTP Information<br>Outputs only when OutputMode is All. |
| | NTPenabled | string | To enable or disable NTP Server<br>Outputs to enable or disable NTP server.<br>- Disabled: Disable NTP server<br>- Enabled: Enable NTP server |
| | NTPsynchronized | string | Availability or Unavailability of synchronization with NTP Server<br>Outputs availability or disavailability of synchronization with NTP server.<br>- no: No synchronization<br>- yes: Synchronization enabled |
| | RTCinlocalTZ | string | Time zone settings of real time clock |
| | DSTactive | string | Setting of Daylight Saving Time<br>- yes: Period of daylight saving time<br>- no: Outside the period of daylight saving time<br>- n/a: Time zones without settings of daylight saving time |
| | LastDSTChange | string | Latest information of daylight saving time change<br>- DST active:In case of yes, it is time information of when the latest daylight saving time started<br>E.g.)<br>DST began at<br>Sun 2017-03-12 01:59:59 CST<br>Sun 2017-03-12 03:00:00 CDT<br>- DST active:In case of no, it is time information of when the last daylight saving time ended<br>E.g.)<br>DST ended at<br>Sun 2016-11-06 01:59:59 EDT<br>Sun 2016-11-06 01:00:00 EST |
| | NextDSTChange | string | Update Information of the Next Daylight Saving Time<br>- DST active:In case of yes, it is time information of when the next daylight saving time will end<br>E.g.)<br>DST ends (the clock jumps one hour backwards) at<br>Sun 2017-11-05 01:59:59 CDT<br>Sun 2017-11-05 01:00:00 CST<br>- DST active:In case of no, it is time information of when the next daylight saving time starts<br>E.g.) |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | DST begins (the clock jumps one hour forward) at<br>Sun 2017-03-12 01:59:59 EST<br>Sun 2017-03-12 03:00:00 EDT |
| | NTPStatus | | string | Status of NTP Server<br>Outputs the following.<br>- When unspecified<br>506 Cannot talk to daemon<br>- Preset Hours<br>210 Number of sources = n (number of registered servers) |
| | NTPServerList | | array | NTP Server |
| | | Type | string | Category<br>The following are output as NTP types.<br>- Server: Server |
| | | Status | string | Situations<br>Announces current situations.<br>- *: Synchronization target<br>- +: Synchronization target choice<br>- -: Besides synchronization targets<br>- ?: Verifying target |
| | | Name | string | Host Name<br>Host Name is as same as IP address |
| | | Stratum | string | Hierarchy<br>Hierarchy of NTP Server |
| | | Poll | string | Interval of Inquiry<br>Interval of Inquiry (seconds)<br>Original data (Logarithm of interval between inquiries with 2 as the base) 2 Poll value accessed value is inquiry interval) exchanged value |
| | | Reach | string | Result of Inquiry<br>Shown if the last 8 queries were successful in octal. |
| | | LastRx | string | Previous inquiry<br>How long ago did the last inquiry take place? |
| | | LastSample | string | Gap<br>Gap of time from the last measurement. Inside [] indicates result after subtracting slew adjustment. After +/- is the measurement error margin |

## [Precautions]

- This API execute below ismadm command.
  - Show of time settings: ismadm time show

## 4.17.19 Setting of Time Information

### [Overview]

Set the ISM time information.

### [Format]

```
PATCH /ismva/settings/time
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | | Type | Description |
|---|---|---|---|---|
| Time | | | object | Hour Information |
| | Timezone | | string | Name of Preset Time Zone<br>Assigns a time zone for setting. Assigns from a list of Time Zone<br>In case of null, it sets default value.<br>If the key is omitted, it does not set a value. |
| | Time | | string | Preset Time<br>Assigns time for setting.<br>If the key is omitted, it does not set a value. |
| NTP | | | object | NTP Information |
| | NTPenabled | | string | To enable or disable NTP Server<br>Set to disable or enable NTP server settings.<br>- Disabled: Disable NTP server<br>- Enabled: Enable NTP server |
| | NTPServerList | | array | NTP Server |
| | | Name | string | Host Name<br>Host Name is as same as IP address |
| | | Mode | string | Mode<br>Assign server processing mode which was assigned in Name.<br>- Add: Add a server<br>- Delete: Delete server. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Time | | object | Hour Information |
| | LocalTime | string | Local Time<br>Output takes in the following forms.<br>- When OutputMode=All or VA |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Week Year-Month-Day Hours:Minutes:Seconds Time Zone<br>E.g.) Wed 2017-02-01 15:19:50 JST<br>- When OutputMode=API<br>Year-Month-DayTHours:Minutes:Seconds.nnn Time difference with UTC<br>E.g.) 2017-02-01T15:19:50.000+09:00 |
| | UniversalTime | string | Time in UTC<br>Outputs time in UTC.<br>- When OutputMode=All or VA<br>Week Year-Month-Day Hours:Minutes:Seconds UTC<br>E.g.) Wed 2017-02-01 06:19:50 UTC<br>- When OutputMode=API<br>Year-Month-DayTHours:Minutes:Seconds.nnnZ<br>E.g.) 2017-02-01T06:19:50.000Z |
| | Timezone | string | Time Zone<br>E.g.)<br>Asia/Tokyo (JST, +0900)<br>UTC (UTC, +0000) |
| NTP | | object | NTP Information<br>Outputs only when OutputMode is All. |
| | NTPenabled | string | To enable or disable NTP Server<br>Outputs to enable or disable NTP server.<br>- Disabled: Disable NTP server<br>- Enabled: Enable NTP server |
| | NTPsynchronized | string | Availability or Unavailability of synchronization with NTP Server<br>Outputs availability or disavailability of synchronization with NTP server.<br>- no: No synchronization<br>- yes: Synchronization enabled |
| | RTCinlocalTZ | string | Time zone settings of real time clock |
| | DSTactive | string | Setting of Daylight Saving Time<br>- yes: Period of daylight saving time<br>- no: Outside the period of daylight saving time<br>- n/a: Time zones without settings of daylight saving time |
| | LastDSTChange | string | Latest information of daylight saving time change<br>- DST active:In case of yes, it is time information of when the latest daylight saving time started<br>E.g.) |

| Parameter | Type | Description |
|---|---|---|
| | | DST began at<br>Sun 2017-03-12 01:59:59 CST<br>Sun 2017-03-12 03:00:00 CDT<br>- DST active:In case of no, it is time information of when the last daylight saving time ended<br>E.g.)<br>DST ended at<br>Sun 2016-11-06 01:59:59 EDT<br>Sun 2016-11-06 01:00:00 EST |
| NextDSTChange | string | Update Information of the Next Daylight Saving Time<br>- DST active:In case of yes, it is time information of when the next daylight saving time will end<br>E.g.)<br>DST ends (the clock jumps one hour backwards) at<br>Sun 2017-11-05 01:59:59 CDT<br>Sun 2017-11-05 01:00:00 CST<br>- DST active:In case of no, it is time information of when the next daylight saving time starts<br>E.g.)<br>DST begins (the clock jumps one hour forward) at<br>Sun 2017-03-12 01:59:59 EST<br>Sun 2017-03-12 03:00:00 EDT |
| NTPStatus | string | Status of NTP Server<br>Outputs the following.<br>- When unspecified<br>506 Cannot talk to daemon<br>- Preset Hours<br>210 Number of sources = n (number of registered servers) |
| NTPServerList | array | NTP Server |
| Type | string | Category<br>The following are output as NTP types.<br>- Server: Server |
| Status | string | Situations<br>Announces current situations.<br>- *: Synchronization target<br>- +: Synchronization target choice<br>- -: Besides synchronization targets<br>- ?: Verifying target |
| Name | string | Host Name<br>Host Name is as same as IP address |
| Stratum | string | Hierarchy<br>Hierarchy of NTP Server |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | Poll | string | Interval of Inquiry<br>Interval of Inquiry (seconds)<br>Original data (Logarithm of interval between inquiries with 2 as the base) 2 Poll value accessed value is inquiry interval) exchanged value |
| | | Reach | string | Result of Inquiry<br>Shown if the last 8 queries were successful in octal. |
| | | LastRx | string | Previous inquiry<br>How long ago did the last inquiry take place? |
| | | LastSample | string | Gap<br>Gap of time from the last measurement. Inside [] indicates result after subtracting slew adjustment. After +/- is the measurement error margin |
| Restart | | | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become valid after the restart. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Date/Time setting: 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 necessary to retrieve of VA operation permission in advance.
- If the time settings and the NTP server settings are done at the same time, it turns to error.

## 4.17.20 Displaying Available Time Zone Settings

### [Overview]

Displays List of Time Zone that are setting available.

### [Format]

```
GET /ismva/settings/timezone
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| TimezoneList | array(string) | List of Time Zone<br>Announces timezones by array. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Displays Setting Available Time Zone: 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<br>Outputs a result of a command directly. |
| FilesystemList | | object | List of File System Information |
| | Size | string | Whole Size<br>Unit: Automatically set for such units as G, M and others.<br>Sets null for empty disk. |
| | Used | string | Size used<br>Unit: Automatically set for such units as G, M and others.<br>Sets null for empty disk. |
| | Avail | string | Empty Size<br>Unit: Automatically set for such units as G, M and others.<br>Sets null for empty disk. |
| | UseRate | string | Use Rate, %<br>Sets null for empty disk. |
| | MountedOn | string | Mount directory<br>Sets null for empty disk. |
| | UserGroupName | string | User Group Name<br>When it is allocated to a user group, it is output.<br>When it is not allocated to a user group, it outputs null. |
| VolumeList | | object | List of Volume Information |

| Parameter | | Type | Description |
|---|---|---|---|
| | 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 | Announces a type of directory.<br>- Log: Whole log<br>- IsmLog: Entire ISM RAS log<br>- Repository: Repository<br>- UserGroup |
| | DirectoryName | string | Informs a directory name.<br>Informs a directory as follows.<br>- Log: 'ISM-VA Log'<br>- IsmLog: 'ISM RasLog'<br>- Repository: 'Repository'<br>- User Group Name |
| | DirectorySize | string | Size of Directory Name above<br>In case of user group, it is a coinciding value with the size under use that is output as detail of the user group. It differs from the size shown by Used. |

### [Precautions]

- This API execute below ismadm command.
  - Show of volume settings: ismadm volume show

## 4.17.22 Creating LVM Volumes

### [Overview]

Creates a LVM volume.

### [Format]

```
POST /ismva/settings/volume
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Volume | | object | Information of Volume |
| | VolumeName | string | Volume Name |

| Parameter | | Type | Description |
|---|---|---|---|
| | 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 | It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Adding of LVM volume: ismadm volume add
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.23 Allocating LVM Volumes to User Groups

### [Overview]

The LVM volume will be allocated in 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 a necessity of restart. |

| Parameter | Type | Description |
|---|---|---|
| | | - ISM-VA: Restart is required for the ISM-VA<br>- ISM-Service: Restart is required for the ISM service<br>- null: No need for restarting<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Allocation of LVM volume to user group: ismadm volume mount
- To execute this API, it is necessary to retrieve of VA operation permission 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 assigned |
| VolumeName | string | Volume Name |
| UserGroupName | string | User Group Name |
| Restart | string | Restart<br>Outputs a necessity of restart.<br>- ISM-VA: Restart is required for the ISM-VA<br>- ISM-Service: Restart is required for the ISM service<br>- null: No need for restarting<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

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

- This API execute below ismadm command.
  - Deallocation of LVM volume to user group: ismadm volume umount
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.25 Deleting LVM Volumes

### [Overview]

Deletes a 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 |
| Restart | | string | It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Delete LVM volume: ismadm volume delete
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.26 Expanding LVM Volumes

### [Overview]

Expands a 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<br>In case that 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 | It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Extend LVM volume size: ismadm volume extend
  - Extend system of LVM volume size: ismadm volume sysvol-extend
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.27 Displaying SSL Server Certificates

### [Overview]

Displays the SSL server certificate.

### [Format]

```
GET /ismva/settings/sslcert
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SSLCert | | object | Certificate Information |
| | Issuer | string | Issuer |

| Parameter | | Type | Description |
|---|---|---|---|
| | 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 execute below ismadm command.
  - Displays SSL server certificate: ismadm sslcert show

## 4.17.28 Deploying SSL Server Certificates

### [Overview]

Deploy the SSL server certificate.

### [Format]

```
PATCH /ismva/settings/sslcert
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SSLCert | | object | Certificate Information |
| | KeyFile | string | Assigns a key file for setting. |
| | CrtFile | string | Assigns a crt file for setting. |
| | CaFile | string | Assigns 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<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Deployment of SSL server certificates: ismadm sslcert set

- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.29 Output of SSL Server Certificates

### [Overview]

Output the SSL server certificate.

### [Format]

```
POST /ismva/settings/sslcert/export
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Directory | string | Assigns a destination directory. |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Path | string | Output File<br>Outputs a path of output file. |
| Restart | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become available after restarting. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Export of SSL server certificates: ismadm sslcert export

## 4.17.30 Displaying Information on DHCP server Inside ISM-VA

### [Overview]

Displays the DHCP server information inside ISM-VA.

### [Format]

```
GET /ismva/settings/dhcp
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| OutputMode | string | Output Mode<br>Assigns an output mode. |

| Parameter | Type | Description |
|---|---|---|
| | | - Conf: To output a Conf file.<br>- Log: Output operation log.<br>In this case, Line parameters can be specified at the same time.<br>- DHCPMode: Assign DHCP server operation mode.<br>- ALL: output all. |
| Line | integer | Assigns the number of lines of output.<br>When unspecified, it will output 20 lines. |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| DHCP | | object | DHCP Information |
| | DHCPMode | string | Operation Mode<br>It displays operation mode of DHCP.<br>- local: Use DHCP Server inside ISM<br>- remote: Uses DHCP Server outside |
| | DHCPConf | string | Content of Conf File |
| | DHCPLog | string | Contents of operation mode |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Displays discription of current setting in DHCP server: ismadm dhcpsrv show-conf
  - Displays DHCP server message: ismadm dhcpsrv show-msg [-line]

## 4.17.31 Setting for DHCP Server Inside ISM-VA

### [Overview]

It sets a DHCP server inside ISM-VA.

### [Format]

```
PATCH /ismva/settings/dhcp
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| DHCP | | object | DHCP Information |
| | DHCPMode | string | Operation Mode<br>It assigns operation modes of DHCP. |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - local: Use DHCP Server inside ISM<br>- remote: Uses DHCP Server outside |
| | DHCPConf | | string | File Path of Conf File<br>Setting up is necessary when operation mode is set as remote. |
| | DHCPLog | | string | Contents of operation mode |
| | Setting | | object | Content of DHCP Simple Setting<br>Setting up is necessary when operation mode is set as local. |
| | | Subnet | string | Assigns an address of sub-net address |
| | | Netmask | string | Assigning Subnet Mask |
| | | Start | string | Assigns a lease starting address |
| | | End | string | Assigns a lease ending address |
| | | Broadcast | string | Assigns a broadcast address |
| | | Dns | string | Assign IP Address of DNS Server |
| | | GateWay | string | Assign an address of a gateway |

### [Response Parameter]

| Parameter | | | Type | Description |
|---|---|---|---|---|
| DHCP | | | object | DHCP Information |
| | DHCPMode | | string | Operation Mode<br>It displays operation mode of DHCP.<br>- Use DHCP Server within local ISM<br>- remote :Uses DHCP Server outside |
| | DHCPConf | | string | Content of Conf File |
| | DHCPLog | | string | Contents of operation mode |
| | 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<br>It will output if a restart is required as the result of this API.<br>null: No restarting required |

### [Precautions]

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

- This API execute below ismadm command.
  - Setting of DHCP Server inside ISM-VA: ismadm dhcpsrv set-simple, ismadm dhcpsrv set-file
  - Switching DHCP server: ismadm dhcpsrv show-mode
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.32 Exporting Setting Files for DHCP Inside ISM-VA

### [Overview]

Exports a DHCP setting file under use.

### [Format]

```
POST /ismva/settings/dhcp/export
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| Directory | string | Assigns a destination directory. |
| ExportMode | string | Shipment mode<br>Assigns mode of shipment.<br>- Conf: DHCP Setting File in use<br>- Sample: DHCP setup file of a sample |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Path | string | Output File Path<br>Outputs a path of output file.<br>- When the ExportMode is Conf<br>/Directory of Request Parameters/dhcpd.conf<br>- When the ExportMode is Sample<br>/Directory of Request Parameters/dhcpd.conf.sample |
| Restart | string | Restart<br>It will output if a restart is required as the result of this API.<br>null: No restarting required |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Export current setting discription (conf file) to ftp accessible place: ismadm dhcpsrv export-conf -dir
  - Export setting discription (conf file) to ftp accessible place: 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<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become valid after the restart. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Initialize setting information: ismadm kerberos init
- To execute this API, it is necessary to retrieve of VA operation permission 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 | Assigns the name of a domain. |
| Realm | string | Assigns a realm name. |

| Parameter | | Type | Description |
|---|---|---|---|
| | ControllerName | string | Assigns 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<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become valid after the restart. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Add setting information: ismadm kerberos add
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.35 Reverting Domain Settings to Immediately Preceding Status

### [Overview]

Returns settings of domain to the previous state.

### [Format]

```
POST /ismva/settings/kerberos/restore
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| Restart | string | Restart<br>It will output if a restart is required as the result of this API.<br>ISM-VA: Restart is required for the ISM-VA<br>It shows the process result of this API would become valid after the restart. |

### [Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Restore back one domain setting information: ismadm kerberos restore
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.36 Displaying Domain Settings

### [Overview]

Displays 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 |
| 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 Administrator role and belonging to Administrator group.
- This API execute below ismadm command.
  - Display domain setting information: ismadm kerberos show

## 4.17.37 Restarting ISM-VA

### [Overview]

ISM-VA will restart.

### [Format]

```
POST /ismva/power/restart
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

### [Precautions]

- The following safety precautions during ISM-VA restart will display below.
- After internal logging out a session that has been logged in, its restarts ISM-VA.
- In order to return this API, it will restart ISM-VA a few seconds after the response.
- Login cannot be performed after a restart.
- This API execute below ismadm command.
  - Restart of ISM-VA: ismadm power restart
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.38 Stopping ISM-VA

### [Overview]

ISM-VA will stop.

### [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 halts ISM-VA.
- In odder to return this API, it will halt ISM-VA a few seconds after the response.
- This API execute below ismadm command.
  - Stopping of ISM-VA: ismadm power stop
- To execute this API, it is necessary to retrieve of VA operation permission in advance.

## 4.17.39 Displaying Service Status

### [Overview]

Displays status of a ISM service inside ISM-VA.

### [Format]

```
GET /ismva/settings/service
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| ServiceList | | string | Service list |
| | UnitFile | string | Service name<br>Outputs the following.<br>ism.service |
| | Active | string | Execution status<br>During running of the service, outputs the following.<br>active (running) since Time and Date of start<br>Time and Date of start is output the following.<br>Day of the week YYYY-MM-DD hh:mm:ss Timezone; elapsed time<br>E.g.) Thu 2017-10-26 19:06:14 JST; 24h ago |

## 4.17.40 Retrieval of 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 |

# 4.18 Shared Information

## 4.18.1 List Retrieval for FTP Files

### [Overview]

Retrieves all files that stored in FTP site of ISM under management of a user group to which users belong.

### [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<br>- File: File.<br>- Folder: Directory |
| | Size | integer | Size |
| | Timestamp | string | Update time and date |
| | UserId | integer | Owner user ID<br>User ID of ISM-VA. |
| | GroupId | integer | Owner group ID<br>User ID of ISM-VA. |
| | Permission | string | Access privilege<br>E.g.) "rwxr--r--" |

## 4.18.2 Registration of Cloud Management Software

### [Overview]

Register cloud management software.

### [Format]

```
POST /system/settings/cms
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| CmsInfo | object | Information of cloud management software |
| UserGroupId | string | User group ID for controlling of cloud management software |
| CmsName | string | Name of cloud management software for controlling<br>Designate a unique name in the ISM. |
| CmsType | string | Type of cloud management software<br>- vCenter : VMware vCenter Server<br>- MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| CmsVersion | string | Version Number of cloud management software<br>- vCenter : 5.5/ 6.0/ 6.5<br>- MicrosoftFailoverCluster : 2012/ 2012R2/ 2016<br>- SystemCenter : 2012/ 2012R2/ 2016<br>- KVM RedHat : 6.0/ 6.1/ 6.2/ 6.3/ 6.4/ 6.5/ 6.6/ 6.7/ 6.8/ 6.9/ 7.0/ 7.1/ 7.2/ 7.3/ 7.4<br>- KVM SUSELinuxEnterprise : 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3 |
| IpAddress | string | IP address of cloud management software |
| IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| PortNum | integer | Port number used<br>In case of null, it sets a port number described in the ISM settings file.<br>Connecting protocols for respective cloud management software are as follows:<br>- vCenter : CIM<br>- MicrosoftFailoverCluster, SystemCenter : WinRM<br>- KVM RedHat, KVM SUSELinuxEnteprise : SSH |
| DomainName | string | Domain Name |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Specify a name of FQDN for a realm.<br>E.g.) ISMDOMAIN.LOCAL |
| | AccountName | string | Account Name<br>Specify a account name excluding a realm.<br>E.g.) ismadmin |
| | Password | string | Password<br>Encrypt the password with a method described in "2.4 Encryption." |
| | Url | string | WebURL<br>Can register access URL to WebUI and others. |
| | VCenter | object | Additional information for vCenter<br>Presently it is not supported. |
| | Scvmm | object | Additional Information for SCVMM<br>Presently it is not supported. |
| | Openstack | object | Additional Information for OpenStack<br>Presently it is not supported. |

**[Response Parameter]**

| Parameter | | Type | Description |
|---|---|---|---|
| CmsInfo | | object | Information of cloud management software |
| | CmsId | integer | ID of Cloud management software |
| | UserGroupId | string | User group ID for controlling of cloud management software |
| | CmsName | string | Name of cloud management software for controlling |
| | CmsType | string | Type of cloud management software<br>- vCenter : VMware vCenter Server<br>- MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| | CmsVersion | string | Version Number of cloud management software |
| | IpAddress | string | IP address of cloud management software |
| | IpVersion | string | IP Version of IP Address<br>- V4 : IPv4<br>- V6 : IPv6 |
| | PortNum | integer | Port number used |
| | DomainName | string | Domain Name |
| | AccountName | string | Account Name |

| Parameter | | Type | Description |
|---|---|---|---|
| | Url | string | WebURL |
| | VCenter | object | Additional information for vCenter<br>Presently it is not supported. |
| | Scvmm | object | Additional Information for SCVMM<br>Presently it is not supported. |
| | MicrosoftFailoverCluster | object | Addition information for use with Microsoft Failover Cluster |
| | SystemCenterId | integer | ID of cloud management software for SystemCenter<br>If Microsoft Failover Cluster is managed by the SystemCenter, cloud management software ID of the SystemCenter is set up.<br>Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter.<br>Acquire information from SystemCenter. |
| | Openstack | object | Additional Information for OpenStack<br>Presently it is not supported. |
| | Timestamp | string | Last Update Time |
| | RefreshDate | string | Time of getting final data of information of cloud management software |

### [Precautions]

- Name of virtualization control software starting with under bar "_" cannot be used as it has been used by ISM. After registration of cloud management software, execute an instruction of acquiring virtual information.

## 4.18.3 List Retrieval for Cloud Management Softwares

### [Overview]

Retrieves information of all cloud management software under management of a user group to which users belong.

### [Format]

```
GET /system/settings/cms
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| usergroupid | string | Refining by user group ID |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| CmsInfoList | | array | Information of cloud management software |
| | CmsId | integer | ID of cloud management software |
| | UserGroupId | string | User group ID for controlling of cloud management software |
| | CmsName | string | Name of cloud management software for controlling |
| | CmsType | string | Type of cloud management software<br>- vCenter : VMware vCenter Server |

| Parameter | Type | Description |
|---|---|---|
| | | - MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| CmsVersion | string | Version Number of cloud management software |
| IpAddress | string | IP address of cloud management software |
| IpVersion | string | IP version of IP address<br>- V4 : IPv4<br>- V6 : IPv6 |
| PortNum | integer | Port number used |
| DomainName | string | Domain Name |
| AccountName | string | Account Name |
| Url | string | WebURL |
| VCenter | object | Additional information for vCenter<br>Presently it is not supported. |
| Scvmm | object | Additional Information for SCVMM<br>Presently it is not supported. |
| MicrosoftFailoverCluster | object | Addition information for use with Microsoft Failover Cluster |
| SystemCenterId | integer | ID of cloud management software for SystemCenter<br>If Microsoft Failover Cluster is managed by the SystemCenter, cloud management software ID of the SystemCenter is set up.<br>Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter.<br>Acquire information from SystemCenter. |
| Openstack | object | Additional Information for OpenStack<br>Presently it is not supported. |
| Timestamp | string | Last Update Time |
| RefreshDate | string | Time of getting final data of information of cloud management software |

## 4.18.4 Separate Retrieval for Cloud Management Software

### [Overview]

Retrieves cloud management software specified.

### [Format]

```
GET /system/settings/cms/{cmsid}
```

### [Query Parameter]

None

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| CmsInfo | object | Information of cloud management software |
| CmsId | integer | ID of cloud management software |
| UserGroupId | string | User group ID for controlling of cloud management software |
| CmsName | string | Name of cloud management software for controlling |
| CmsType | string | Type of cloud management software<br>- vCenter : VMware vCenter Server<br>- MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| CmsVersion | string | Version number of cloud management software |
| IpAddress | string | IP address of cloud management software |
| IpVersion | string | IP version of IP address<br>- V4 : IPv4<br>- V6 : IPv6 |
| PortNum | integer | Port number used |
| DomainName | string | Domain Name |
| AccountName | string | Account Name |
| Url | string | WebURL |
| VCenter | object | Additional information for vCenter<br>Presently it is not supported. |
| Scvmm | object | Additional Information for SCVMM<br>Presently it is not supported. |
| MicrosoftFailoverCluster | object | Addition information for use with Microsoft Failover Cluster |
| SystemCenterId | integer | ID of cloud management software for SystemCenter<br>If Microsoft Failover Cluster is managed by the SystemCenter, cloud management software ID of the SystemCenter is set up.<br>Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter.<br>Acquire information from SystemCenter. |
| Openstack | object | Additional Information for OpenStack<br>Presently it is not supported. |
| Timestamp | string | Last Update Time |

| Parameter | | Type | Description |
|---|---|---|---|
| | RefreshDate | string | Time of getting final data of information of cloud management software |

## 4.18.5 Updating of Cloud Management Software

### [Overview]

Deletes information of cloud management software specified.

### [Format]

```
PATCH /system/settings/cms/{cmsid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| CmsInfo | | object | Information of cloud management software |
| | UserGroupId | string | User group ID for controlling of cloud management software |
| | CmsName | string | Name of cloud management software for controlling<br>Designate a unique name in the ISM. |
| | IpAddress | string | IP address of cloud management software |
| | IpVersion | string | IP version of IP address<br>- V4 : IPv4<br>- V6 : IPv6 |
| | PortNum | integer | Port number used<br>In case of null, it sets a port number described in the ISM settings file.<br>Connecting protocols for respective cloud management software are as follows:<br>- vCenter : CIM<br>- MicrosoftFailoverCluster, SystemCenter : WinRM<br>- KVM RedHat, KVM SUSELinuxEnteprise : SSH |
| | DomainName | string | Domain Name<br>Specify a name of FQDN for a realm.<br>E.g.) ISMDOMAIN.LOCAL |
| | AccountName | string | Account Name<br>Specify a account name excluding a realm.<br>E.g.) ismadmin |
| | Password | string | Password<br>Encrypt the password with a method described in "2.4 Encryption." |
| | Url | string | WebURL |

| Parameter | Type | Description |
|---|---|---|
| | | Can register access URL to WebUI and others. |
| VCenter | object | Additional information for vCenter<br>Presently it is not supported. |
| Scvmm | object | Additional Information for SCVMM<br>Presently it is not supported. |
| Openstack | object | Additional Information for OpenStack<br>Presently it is not supported. |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| CmsInfo | object | Information of cloud management software |
| CmsId | integer | ID of cloud management software |
| UserGroupId | string | User group ID for controlling of cloud management software |
| CmsName | string | Name of cloud management software for controlling |
| CmsType | string | Type of cloud management software<br>- vCenter : VMware vCenter Server<br>- MicrosoftFailoverCluster : Microsoft Failover Cluster<br>- SystemCenter : Microsoft System Center Virtual Machine Manager<br>- KVM RedHat: KVM running on top of Red Hat Enterprise Linux<br>- KVM SUSELinuxEnterprise: KVM running on top of SUSE Linux Enterprise Server |
| CmsVersion | string | Version number of cloud management software |
| IpAddress | string | IP address of cloud management software |
| IpVersion | string | IP version of IP address<br>- V4 : IPv4<br>- V6 : IPv6 |
| PortNum | integer | Port number used |
| DomainName | string | Domain Name |
| AccountName | string | Account Name |
| Url | string | WebURL |
| VCenter | object | Additional information for vCenter<br>Presently it is not supported. |
| Scvmm | object | Additional Information for SCVMM<br>Presently it is not supported. |
| MicrosoftFailoverCluster | object | Addition information for use with Microsoft Failover Cluster |
| SystemCenterId | integer | ID of cloud management software for SystemCenter<br>If Microsoft Failover Cluster is managed by the SystemCenter, cloud management software ID of the SystemCenter is set up. |

| Parameter | Type | Description |
|---|---|---|
| | | Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter.<br>Acquire information from SystemCenter. |
| Openstack | object | Additional Information for OpenStack<br>Presently it is not supported. |
| Timestamp | string | Last Update Time |
| RefreshDate | string | Time of getting final data of information of cloud management software |

### [Precautions]

- Name of cloud management software starting with under bar "_" cannot be used as it has been used by ISM. After updating of cloud management software, execute an instruction of acquiring virtual information.

## 4.18.6 Deletion of Cloud Management Software

### [Overview]

Deletes information of cloud management software specified.

### [Format]

```
DELETE /system/settings/cms/{cmsid}
```

### [Query Parameter]

None

### [Request Parameter]

None

### [Response Parameter]

None

## 4.18.7 Pool Settings

### [Overview]

Set 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 |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| | ValueRangeList | | array | Range of values to pool<br>Specify all information of range of specified pool type. Overwrites information of pool type with specified values.<br>Cannot assign to duplicate ranges. When there are values already dispensed and the dispensed values are beyond a range of pool |
| | | BeginValue | string | Start Value of Range<br>Assign in correct format for the respective types of pools<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, - symbol or : symbol)<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, - symbol or : symbol) |
| | | EndValue | string | Exit Value of Range<br>Assign in correct format for the respective types of pools<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, - symbol or : symbol)<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, - symbol or : symbol) |
| | | UserGroupId | string | User group ID available for the pool range<br>It turns to a range usable for all users unless specified. |

**[Response Parameter]**

| Parameter | | | Type | Description |
|---|---|---|---|---|
| Pool | | | object | Pool Information |
| | PoolType | | string | Pool Type<br>- MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| | ValueRangeList | | array | Range of values to pool |
| | | BeginValue | string | Start Value of Range<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol )<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, : symbol) |
| | | EndValue | string | Exit Value of Range<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol )<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, : symbol) |
| | | UserGroupId | string | User group ID available for the pool range<br>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 under management of a user group to which users belong.

### [Format]

```
GET /pools
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| pooltype | string | Narrowing down by pool type<br>- MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| assigned | string | Enable/disable list output of assigned values<br>It is recommended to use it by combining with pooltype as assigned pool may get larger content of information.<br>- No assignment: Do not display<br>- Output: displays |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| PoolList | array | Pool Information |
| PoolType | string | Type of pool<br>- MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| ValueRangeList | array | Range of values to pool |
| BeginValue | string | Start Value of Range<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol )<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, : symbol) |
| EndValue | string | Exit Value of Range<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol )<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, : symbol) |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | UserGroupId | string | User group ID available for the pool range<br>It turns to a range usable for all users unless specified. |
| | | ValueLeftNumber | integer | The number of pool values available<br>Displays the number of pool values that are not discharged yet |
| | | AssignedList | array(string) | Assigned value<br>Displays only when "Output" is specified for a query of assigned . |

## 4.18.9 Allocating Values from a Pools

### [Overview]

Allocates values from pool information under management of a user group to which users belong.

### [Format]

```
POST /pools/assign
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Pool | | object | Pool Information |
| | PoolType | string | Type of pool<br>- MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| | UserGroupId | string | User Group that demand assignment<br>Dispense values in the range available for user groups as specified.<br>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 under management of 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<br>Unless specified, it operates by Automatic.<br>- Automatic: Automatically allocated an empty value.<br>- 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<br>Assign when AssignMode is Manual.<br>Assign in correct format for the respective types of pools<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, - symbol or : symbol) |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | - Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, - symbol or : symbol) |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Pool | | object | Pool Information |
| | PoolType | string | Type of pool<br>- MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| | Value | string | Assigned value<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol )<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, : symbol) |

## 4.18.10 Release of Assigned Values

### [Overview]

Releases assigned values under management of a user group to which users belong.

### [Format]

```
POST /pools/unassign
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| Pool | | object | Pool Information |
| | PoolType | string | Type of pool<br>- MacAddress: Virtual MAC Address<br>- Wwn: Virtual WWN |
| | Value | string | Value to release<br>- MacAddress : xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol )<br>- Wwn : XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, : symbol) |

### [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<br>Assigns a shared directory information. The maximum value is 5 pieces. |
| SharedDirectoryHostName | string | Host Name<br>Assigns IP address (or Host Name). |
| SharedDirectoryDomainName | string | Domain Name |
| SharedDirectoryAccountSetting | object | Account Information |
| Account | string | Account Name<br>Assigns the Account Name (User Name). |
| Password | string | Password<br>Assigns a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 256 characters or less. |
| SharedDirectoryPath | string | Shared Directory Path<br>Assigns a shared directory path. |
| SharedDirectoryType | string | Shared Directory Type<br>Assigns a type of shared directories.<br>- NFS: Mount NFS<br>- SMB: Mount SMB/CIFS |

### [Response Parameter]

| Parameter | Type | Description |
|---|---|---|
| SharedDirectoryList | array | Shared Directory Information List<br>Notifies a shared directory information. The maximum value is 5. |
| MountId | string | Mount ID<br>Announces a mount ID.<br>Notifies null when the result is failed. |
| SharedDirectoryHostName | string | Host Name<br>IP address (or Host Name) is notified. |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | SharedDirectoryDomainName | | string | Domain Name |
| | SharedDirectoryAccountSetting | | object | Account Information |
| | | Account | string | Account Name<br>Notifies the Account Name (User Name). |
| | | Password | string | Password<br>Notifies a password of an account name. |
| | SharedDirectoryPath | | string | Shared Directory Path<br>Informs a shared directory path. |
| | SharedDirectoryType | | string | Shared Directory Type<br>Notifies types of shared directories.<br>- NFS: Mount NFS<br>- SMB: Mount SMB/CIFS |
| | Modified | | string | Update time and date<br>Announces a time stamp of the update time and date. |
| | Result | | string | Results<br>Announces results added. Announces the following.<br>- OK: Success<br>- NG: Failed<br>- -: Not yet processed |
| | Message | | object | Message<br>Notifies error message when the result is failed. |
| | | MessageId | string | Message ID |
| | | Message | string | Text of Message |

## [Precautions]

- Can only be executed by a user holding Administrator role.
- Errors of this API are twofold as shown below:
  - When API itself becomes an error

    An API Response is an error.

    - is set in the Result parameter.
  - When an element specified results 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 a user group)

    Due to above mentioned reason, by repeating deletion, it may result the same number.

- The number of registrations is as shown below:
  - Maximum of five can be registered for each user group.
  - An error will occur when registering the 6th.
- Detail of domain assignment is as shown below:

  Assign when Samba server had jointed in Kerberos domain.

## 4.18.12 List Retrieval for Shared Directories

### [Overview]

Retrieve a list of shared directories.

### [Format]

```
GET /system/settings/shareddirectory
```

### [Query Parameter]

| Parameter | Type | Description |
|---|---|---|
| UserGroupId | string | User Group ID<br>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<br>Notifies a shared directory information. The maximum value is 5. |
| MountId | string | Mount ID<br>Announces a mount ID.<br>Notifies null when the result is failed. |
| SharedDirectoryHostName | string | Host Name<br>IP address (or Host Name) is notified. |
| SharedDirectoryDomainName | string | Domain Name |
| SharedDirectoryPath | string | Shared Directory Path<br>Informs a shared directory path. |
| SharedDirectoryType | string | Shared Directory Type<br>Notifies types of shared directories.<br>- NFS: Mount NFS<br>- SMB: Mount SMB/CIFS |
| SharedDirectoryStatus | string | Mount State<br>Announces state of a node.<br>- Mount: Being mounted |

| Parameter | Type | Description |
|---|---|---|
| | | - Unmount: Not mounted. |
| SharedDirectoryMountOn | string | Mount position.<br>When being mounted, it announces its mount position as follows:<br>/User Group/-<br>When not being mounted, it announces null. |

### [Precautions]

- Execute with a user holding administrator or operator privilege.

## 4.18.13 Separate Retrieval for 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<br>Notifies a shared directory information. The maximum value is 5. |
| MountId | string | Mount ID<br>Announces a mount ID.<br>Notifies null when the result is failed. |
| SharedDirectoryHostName | string | Host Name<br>IP address (or Host Name) is notified. |
| SharedDirectoryDomainName | string | Domain Name |
| SharedDirectoryAccountSetting | object | Account Information |
| Account | string | Account Name<br>Notifies the Account Name (User Name). |
| Password | string | Password<br>Notifies a password of an account name. |
| SharedDirectoryPath | string | Shared Directory Path<br>Informs a shared directory path. |
| SharedDirectoryType | string | Shared Directory Type |

| Parameter | Type | Description |
|---|---|---|
| | | Notifies types of shared directories.<br>- NFS: Mount NFS<br>- SMB: Mount SMB/CIFS |
| Modified | string | Update time and date<br>Announces a time stamp of the update time and date. |
| SharedDirectoryStatus | string | Mount State<br>Announces state of a node.<br>- Mount: Being mounted<br>- Unmount: Not mounted. |
| SharedDirectoryMountOn | string | Mount position.<br>When being mounted, it announces its mount position as follows:<br>/User Group/-<br>When not being mounted, it announces null. |
| SharedDirectoryMountCounter | integer | Mount Frequency<br>When being mounted, it announces the number of mounting.<br>When not being mounted, it announces null. |
| Mounted | string | Time/Date of Mount<br>Announces a time stamp of the mounting.<br>When not being mounted, it announces null. |

### [Precautions]

- Execute with a user holding administrator or operator privilege.

## 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 | SharedDirectory Information<br>Assigns a shared directory information. The maximum value is 5 pieces. |
| SharedDirectoryHostName | string | Host Name |

| Parameter | Type | Description |
|---|---|---|
| | | Assigns IP address (or Host Name). |
| SharedDirectoryDomainName | string | Domain Name |
| SharedDirectoryAccountSetting | object | Account Information |
| Account | string | Account Name<br>Assigns the Account Name (User Name). |
| Password | string | Password<br>Assigns a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method.<br>In addition, assign an encrypted character string whose decrypted result is 256 characters or less. |
| SharedDirectoryPath | string | Shared Directory Path<br>Assigns a shared directory path. |
| SharedDirectoryType | string | Shared Directory Type<br>Assigns a type of shared directories.<br>- NFS: Mount NFS<br>- SMB: Mount SMB/CIFS |

**[Response Parameter]**

| Parameter | Type | Description |
|---|---|---|
| UserGroup | object | User Group Information |
| UserGroupId | string | User Group ID |
| SharedDirectory | object | Shared Directory Information<br>Notifies a shared directory information. The maximum value is 5. |
| MountId | string | Mount ID<br>Announces a mount ID.<br>Notifies null when the result is failed. |
| SharedDirectoryHostName | string | Host Name<br>IP address (or Host Name) is notified. |
| SharedDirectoryDomainName | string | Domain Name |
| SharedDirectoryAccountSetting | object | Account Information |
| Account | string | Account Name<br>Notifies the Account Name (User Name). |
| Password | string | Password<br>Notifies a password of an account name. |
| SharedDirectoryPath | string | Shared Directory Path<br>Informs a shared directory path. |
| SharedDirectoryType | string | Shared Directory Type<br>Notifies types of shared directories.<br>- NFS: Mount NFS |

| Parameter | | | Type | Description |
|---|---|---|---|---|
| | | | | - SMB: Mount SMB/CIFS |
| | | Modified | string | Update time and date<br>Announces a time stamp of the update time and date. |

### [Precautions]

- Can only be executed by a user holding Administrator role.
- Updates only keys as specified. Do not change the value of the omitted key.
- It becomes error when assigning null to the key. (As any key element has no default value and cannot be deleted)
- The directory information during mounting 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 Administrator role.
- The directory information during mounting cannot be changed

## 4.18.16 Mounting Shared Directories

### [Overview]

Mounts a shared directory.

### [Format]

```
POST /system/settings/shareddirectory/mount/{mountid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SharedDirectory | | object | Shared Directory Information<br>Notifies a shared directory information. The maximum value is 5. |
| | MountOn | string | Mount position.<br>Specifies a mount position.<br>It will be notified appropriately at mounting unless specified.<br>When assigning, assign as follows.<br>/User Group/- |

### [Response Parameter]

| Parameter | | Type | Description |
|---|---|---|---|
| SharedDirectory | | object | Shared Directory Information<br>Notifies a shared directory information. The maximum value is 5. |
| | MountId | string | Mount ID<br>Announces a mount ID.<br>Notifies null when the result is failed. |
| | MountOn | string | Mount position.<br>Will be notified of mount positions as follows<br>- When a mount position is not specified<br>/User Group/mount/n (n: 1-5)<br>- When a mount position is specified<br>Will be notified of the assigned mount position. |
| | Mounted | string | Time/Date of Mount<br>Announces a time stamp of the mounting. |

### [Precautions]

- Can be executed with a user holding administrator or operator privilege.
- Privilege of mounted directory are as shown below:
  - They will be mounted as read-only.
  - Case of SMB: As same as directory at mounting destination
  - Case of NFS: root
- The same and shared directory information can be mounted to different mounts.
- The same and shared directory information can be mounted several times on the same mounting destinations.

## 4.18.17 Unmounting Shared Directories

### [Overview]

Unmounts a shared directory.

### [Format]

```
POST /system/settings/shareddirectory/umount/{mountid}
```

### [Query Parameter]

None

### [Request Parameter]

| Parameter | Type | Description |
|---|---|---|
| UmountMode | string | Mount Clearance Mode<br>Assigns deselect mode of a mount.<br>- Normal: Execute mount deselect according to the number of mounts.<br>- Forced: Unmount forcibly.<br>When the key is omitted, it assumes Name is assigned |

### [Response Parameter]

None

### [Precautions]

- Execute with a user holding administrator or operator privilege.
- When the same and shared directory information is mounted on the same mounting destinations for several times, it will de-mount when the frequency of mounting is 0.

# 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 explains 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 | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /datacenters | GET | Y | Y | Y | Y | Y | Y | Y | |
| /datacenters | POST | I | - | - | - | - | - | Y | |
| /datacenters/{datacenterid} | DELETE | I | - | - | - | - | - | Y | |
| /datacenters/{datacenterid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /datacenters/{datacenterid} | PATCH | I | - | - | - | - | - | Y | |
| /event/actions | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/actions | POST | Y | Y | - | Y | Y | - | Y | |
| /event/actions/{actionid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /event/actions/{actionid} | PATCH | Y | Y | - | Y | Y | - | Y | |
| /event/actions/{actionid}/test | POST | Y | Y | - | Y | Y | - | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /event/alarms | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/alarms | POST | Y | Y | - | Y | Y | - | Y | |
| /event/alarms/{alarmid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /event/alarms/{alarmid} | PATCH | Y | Y | - | Y | Y | - | Y | |
| /event/common | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/common | PATCH | Y | Y | - | Y | Y | - | Y | |
| /event/history | GET | Y | Y | Y | Y | Y | Y | - | |
| /event/history/audit/export | POST | I | - | - | - | - | - | Y | If not an ISM administrator, will be notified of lack of privileges. |
| /event/history/audit/logs/{logid} | GET | I | Y | 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 | Y | For users other than ISM administrators, searches yield 0 results. |
| /event/history/event/export | POST | Y | Y | Y | Y | Y | Y | Y | |
| /event/history/event/logs/{logid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/history/event/show | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/history/retentionperiod/settings | GET | Y | Y | Y | Y | Y | Y | - | |
| /event/history/retentionperiod/settings | PATCH | I | - | - | - | - | - | - | |
| /event/ismevent | GET | - | - | - | - | - | - | - | |
| /event/smtp | GET | Y | Y | Y | Y | Y | Y | - | |
| /event/smtp | PATCH | I | - | - | - | - | - | - | |
| /event/snmp | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/snmp | POST | Y | Y | - | Y | Y | - | Y | |
| /event/snmp/{snmpserverid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /event/snmp/{snmpserverid} | PATCH | Y | Y | - | Y | Y | - | Y | |
| /event/snmptrap | GET | - | - | - | - | - | - | - | |
| /event/snmptrap/ignore | DELETE | Y | Y | - | Y | Y | - | Y | |
| /event/snmptrap/ignore | GET | Y | Y | Y | Y | Y | Y | Y | |
| /event/snmptrap/ignore | POST | Y | Y | - | Y | Y | - | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /event/snmptrap/log | GET | Y | Y | Y | Y | Y | Y | Y | |
| /floors | GET | Y | Y | Y | Y | Y | Y | Y | |
| /floors | POST | I | - | - | - | - | - | Y | |
| /floors/{floorid} | DELETE | I | - | - | - | - | - | Y | |
| /floors/{floorid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /floors/{floorid} | PATCH | I | - | - | - | - | - | Y | |
| /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/result | GET | I | - | - | - | - | - | | |
| /ismva/settings | GET | Y | Y | Y | Y | Y | Y | | |
| /ismva/settings | 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/patch/delete | POST | I | - | - | - | - | - | | |
| /ismva/settings/plugin | GET | I | - | - | - | - | - | | |
| /ismva/settings/plugin/add | POST | I | - | - | - | - | - | | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /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 | Y | |
| /networks/nodes/{nodeid}/lags | GET | Y | Y | Y | Y | Y | Y | Y | |
| /networks/nodes/{nodeid}/lags | PATCH | Y | Y | - | Y | Y | - | Y | |
| /networks/nodes/{nodeid}/vfabs | GET | Y | Y | Y | Y | Y | Y | Y | |
| /networks/nodes/{nodeid}/vlans | GET | Y | Y | Y | Y | Y | Y | Y | |
| /networks/ports | GET | Y | Y | Y | Y | Y | Y | Y | |
| /networks/refresh | GET | Y | Y | Y | Y | Y | Y | | |
| /networks/refresh | POST | Y | Y | Y | Y | Y | Y | | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /networks/virtualmachines | GET | Y | Y | Y | Y | Y | Y | Y | |
| /networks/virtualswitches | GET | Y | Y | Y | Y | Y | Y | Y | |
| /networks/vlans | POST | Y | Y | Y | Y | Y | Y | Y | |
| /networks/vlans/cancel | POST | Y | Y | Y | Y | Y | Y | Y | |
| /nodegroups | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodegroups | POST | I | - | - | - | - | - | Y | |
| /nodegroups/{nodegroupid} | DELETE | I | - | - | - | - | - | Y | |
| /nodegroups/{nodegroupid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodegroups/{nodegroupid} | PATCH | I | - | - | - | - | - | Y | |
| /nodes | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes | POST | I | - | - | - | - | - | Y | |
| /nodes/{nodeid} | DELETE | I | - | - | - | - | - | Y | |
| /nodes/{nodeid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid} | PATCH | Y | 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 | Y | |
| /nodes/{nodeid}/accounts | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/accounts/{accountid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/accounts/{accountid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/accounts/{accountid} | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/alarmstatus/deactivate | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/inventory | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/inventory/refresh | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/led | GET | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/led | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/maintenancemode | PATCH | Y | Y | - | Y | Y | - | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /nodes/{nodeid}/monitor/itemlist | GET | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/monitor/network | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/monitor/network/history | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/monitor/settings | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/monitor/settings | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/os | DELETE | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/os | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/os | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/os | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/power | GET | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/power | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/{nodeid}/profiles/assign | POST | Y | - | - | Y | Y | - | Y | |
| /nodes/{nodeid}/profiles/backup | POST | Y | - | - | Y | Y | - | Y | |
| /nodes/{nodeid}/profiles/unassign | POST | Y | - | - | Y | Y | - | Y | |
| /nodes/discovery/auto | GET | I | - | - | - | - | - | | |
| /nodes/discovery/auto/{discoverednodeid} | POST | I | - | - | - | - | - | | |
| /nodes/discovery/manual | GET | I | - | - | - | - | - | | |
| /nodes/discovery/manual | POST | I | - | - | - | - | - | | |
| /nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid} | POST | I | - | - | - | - | - | | |
| /nodes/firmware/update | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/firmware/update/cancel | POST | Y | Y | - | Y | Y | - | Y | Must be executed by same user (user ID). |
| /nodes/inventory | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/logs | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/logs/archivedlog/downloadfiles | GET | Y | Y | - | Y | Y | - | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /nodes/logs/archivedlog/downloadfiles/create | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/archivedlog/downloadfiles/create/cancel | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/collection/collect | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/collection/collect/cancel | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/collection/settings | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/logs/collection/settings | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/files | GET | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/files/delete | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/files/delete/cancel | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/nodelog/downloadfiles | GET | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/nodelog/downloadfiles/create | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/nodelog/downloadfiles/create/cancel | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/logs/nodelog/search | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/monitor/items | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/monitor/items | POST | Y | Y | - | Y | Y | - | Y | |
| /nodes/monitor/items/{itemid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /nodes/monitor/items/{itemid} | PATCH | Y | Y | - | Y | Y | - | Y | |
| /nodes/monitor/items/{itemid}/history | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/monitor/network | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/nodegroups/assign | POST | I | - | - | - | - | - | Y | |
| /nodes/nodetags | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/os | GET | Y | Y | Y | Y | Y | Y | Y | |
| /nodes/powercapping | GET | I | - | - | - | - | - | - | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /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 | - | Y | |
| /nodes/profiles/backup/cancel | POST | Y | - | - | Y | Y | - | Y | |
| /nodes/profiles/unassign/cancel | POST | Y | - | - | Y | Y | - | Y | |
| /pools | GET | Y | Y | Y | Y | Y | Y | Y | |
| /pools | PATCH | I | - | - | - | - | - | Y | |
| /pools/assign | POST | Y | Y | - | Y | Y | - | Y | |
| /pools/unassign | POST | Y | Y | - | Y | Y | - | Y | |
| /profiles/backups | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/backups/{backupid} | DELETE | Y | - | - | Y | Y | - | Y | |
| /profiles/backups/export | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/categories | GET | Y | - | - | Y | Y | Y | - | |
| /profiles/categories | POST | Y | - | - | Y | Y | Y | - | |
| /profiles/export | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/import | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/packages | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/policies | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/policies | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/policies/{policyid} | DELETE | Y | - | - | Y | Y | - | Y | |
| /profiles/policies/{policyid} | GET | Y | - | - | Y | Y | Y | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /profiles/policies/{policyid} | PATCH | Y | - | - | Y | Y | - | Y | |
| /profiles/policies/groups | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/policies/groups | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/policies/groups/{groupid} | DELETE | Y | - | - | Y | Y | - | Y | |
| /profiles/policies/groups/{groupid} | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/policies/groups/{groupid} | PATCH | Y | - | - | Y | Y | - | Y | |
| /profiles/profiles | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/profiles | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/profiles/{profileid} | DELETE | Y | - | - | Y | Y | - | Y | |
| /profiles/profiles/{profileid} | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/profiles/{profileid} | PATCH | Y | - | - | Y | Y | - | Y | |
| /profiles/profiles/groups | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/profiles/groups | POST | Y | - | - | Y | Y | - | Y | |
| /profiles/profiles/groups/{groupid} | DELETE | Y | - | - | Y | Y | - | Y | |
| /profiles/profiles/groups/{groupid} | GET | Y | - | - | Y | Y | Y | Y | |
| /profiles/profiles/groups/{groupid} | PATCH | Y | - | - | Y | Y | - | Y | |
| /racks | GET | Y | Y | Y | Y | Y | Y | Y | |
| /racks | POST | I | - | - | - | - | - | Y | |
| /racks/{rackid} | DELETE | I | - | - | - | - | - | Y | |
| /racks/{rackid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /racks/{rackid} | PATCH | I | - | - | - | - | - | Y | |
| /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 | - | Y | |
| /resources/nodes/{nodeid}/cmsmaintenancemode/set | POST | Y | Y | - | Y | Y | - | - | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /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 | Y | |
| /resources/virtualmachines/{virtualmachineid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /resources/virtualmachines/{virtualmachineid}/move | POST | Y | Y | - | Y | Y | - | - | |
| /resources/virtualmachines/{virtualmachineid}/power/off | POST | Y | Y | - | Y | Y | - | - | |
| /resources/virtualmachines/{virtualmachineid}/power/on | POST | Y | Y | - | Y | Y | - | - | |
| /resources/virtualswitches | GET | Y | Y | Y | Y | Y | Y | Y | |
| /resources/virtualswitches/{virtualswitchid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /system/ismva/version | GET | Y | Y | Y | Y | Y | Y | Y | |
| /system/licenses | GET | I | - | - | - | - | - | - | |
| /system/licenses | PATCH | I | - | - | - | - | - | | |
| /system/licenses | POST | I | - | - | - | - | - | | |
| /system/licenses/delete | POST | I | - | - | - | - | - | | |
| /system/settings/cms | GET | Y | Y | Y | Y | Y | Y | Y | |
| /system/settings/cms | POST | Y | Y | - | Y | Y | - | Y | |
| /system/settings/cms/{cmsid} | DELETE | Y | Y | - | Y | Y | - | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /system/settings/cms/{cmsid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /system/settings/cms/{cmsid} | PATCH | Y | Y | - | Y | Y | - | Y | |
| /system/settings/firmware/{firmwareid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /system/settings/firmware/documents | POST | Y | Y | Y | Y | Y | Y | Y | |
| /system/settings/firmware/dvd/{repositoryid} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /system/settings/firmware/dvd/import | POST | Y | Y | - | Y | Y | - | Y | |
| /system/settings/firmware/dvd/import/cancel | POST | Y | Y | - | Y | Y | - | Y | Must be executed by same user (user ID). |
| /system/settings/firmware/import | POST | Y | Y | - | Y | Y | - | Y | |
| /system/settings/firmware/import/cancel | POST | Y | Y | - | Y | Y | - | Y | Must be executed by same user (user ID). |
| /system/settings/firmware/repositories | GET | Y | 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 | Y | |
| /system/settings/ftp/filelist | GET | Y | Y | - | Y | Y | - | Y | |
| /system/settings/job/firmwareupdate | GET | Y | Y | Y | Y | Y | Y | Y | |
| /system/settings/job/firmwareupdate/{JobId} | DELETE | Y | Y | - | Y | Y | - | Y | |
| /system/settings/ldaps | GET | Y | - | - | - | - | - | - | |
| /system/settings/ldaps | PATCH | Y | - | - | - | - | - | - | |
| /system/settings/ldaps/switch | POST | Y | - | - | - | - | - | - | |
| /system/settings/repositories/profiles | GET | Y | - | - | Y | Y | Y | Y | |
| /system/settings/repositories/profiles/{repositoryid} | DELETE | Y | - | - | Y | Y | - | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /system/settings/repositories/profiles/dvd/import | POST | Y | - | - | Y | Y | - | Y | |
| /system/settings/repositories/profiles/dvd/import/cancel | POST | Y | - | - | 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/snap | POST | I | - | - | - | - | - | | |
| /system/settings/snmptrapsettings | POST | I | - | - | - | - | - | | |
| /system/settings/snmptrapsettings | GET | I | - | - | - | - | - | | |
| /system/settings/snmptrapsettings/{snmptrapsettingsid} | PATCH | I | - | - | - | - | - | | |
| /system/settings/snmptrapsettings/{snmptrapsettingsid} | DELETE | I | - | - | - | - | - | | |
| /tasks | GET | Y | Y | Y | Y | Y | Y | Y | |
| /tasks/{taskid} | GET | Y | Y | Y | Y | Y | Y | Y | |
| /usergroups | GET | Y | Y | Y | Y | Y | Y | Y | |
| /usergroups | POST | Y | - | - | - | - | - | Y | |
| /usergroups/{usergroupid} | DELETE | Y | - | - | - | - | - | Y | |
| /usergroups/{usergroupid} | GET | Y | Y | Y | Y | Y | Y | Y | |

| API | | Execution abilities of each authorized user | | | | | | Availability of tenant control | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | | |
| /usergroups/{usergroupid} | PATCH | Y | - | - | - | - | - | Y | |
| /users | GET | Y | 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 | - | - | Y | |
| /users/{userid} | DELETE | Y | - | - | Y | - | - | Y | |
| /users/{userid} | GET | Y | 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 | Y | If run with a user not holding Administrator role, only the user's own general information can be acquired. |
| /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 | Y | - | - | - | - | - | - | |

# 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 detection 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.

- Applying profiles

  This section provides sample procedures for applying profile to nodes, using the REST APIs for Profile Management.

- Firmware updates

  This section provides sample procedures for updating firmware on nodes, using the REST APIs for Firmware Management.

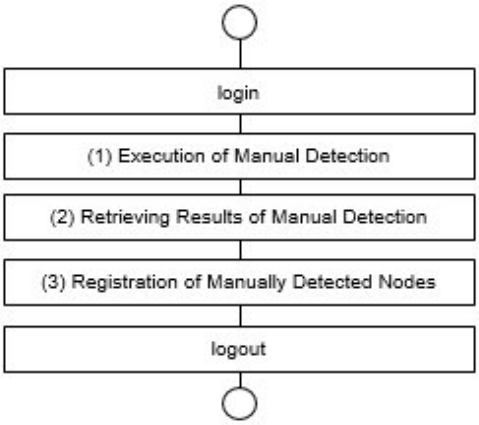
- Extracting logs

  This section provides sample procedures for extracting logs from nodes, using the REST APIs for Node Management.

## B.1 Node Registration (from Detection to Registration)

This section provides examples of REST API usage for detecting servers and registering them as nodes.

The following is an overview of processing for 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 Detection.

Moreover, these examples of REST API usage use the curl command.

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 obtained from ISM are assumed to be stored in "/tmp/certificate.crt".
- The session ID obtained 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 Detection

Detect a node manually by specifying an IP address to detect and the account information.

Table B.1 REST API for manual node detection

| REST API | Reference |
|---|---|
| POST /nodes/discovery/manual | 4.4.1 Execution of Manual Discovery of Node |

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 Detection

Retrieve the progress and the results of manual detection.

Table B.2 REST API for retrieving results of manual detection

| REST API | Reference |
|---|---|
| GET /nodes/discovery/manual | 4.4.2 Retrieving Results of Manual Discovery of Node |

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 detection 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 detection 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",
    "ManualDiscoveredNodes":[{
     "ManualNodeId":1,
     "IpAddress":"192.168.1.10",
     "IpVersion":"V4",
     "NodeStatus":"Success",
     "NodeType":"server",
     "Model":"PRIMERGY RX2540 M4",
     "SerialNumber":"XXXXXXXX",
     "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 Detected Nodes

Register manually detected nodes in ISM. Execute after confirming that the manual detection process is complete in "(2) Retrieving Results of Manual Detection" and that Status of Manual Detection Node is Success.

The subsequent syntax examples are based on the following assumptions. You can retrieve the IDs for manual detection and of manually detected nodes as described in "(2) Retrieving Results of Manual Detection."

- ID for manual detection: 1
- ID of manually detected node: 1
- Node name: Server-1
- Information on installation position in rack
  - Rack ID: 1
  - Installation position: 11 (11 - 12)
  - Number of units in rack: 2

### Note

If you are going to specify information on the installation positions in racks, execute "4.3.6 Registration of Racks" before registering manually detected nodes.

Table B.3 REST API for registration of manually detected 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)

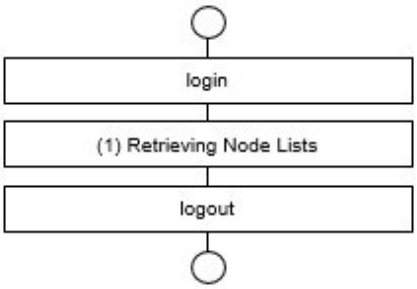
```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/
NodesDiscoveryManualManualDiscoveryIdManualNodeId-POST-Out.0.0.1.json",
 "MessageInfo":[],
 "IsmBody":{
  "Node":{
   "NodeId":10110,
   "Name":"Server-1",
   "Type":"server",
   "Model":"PRIMERGY RX2540 M4",
   "IpAddress":"192.168.1.10",
   "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 an overview of processing for displaying 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 use the curl command.

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 obtained from ISM are assumed to be stored in "/tmp/certificate.crt".
- The session ID obtained at login is assumed to be "123456789".

### (1) Retrieving Node Lists

Retrieve 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"
```

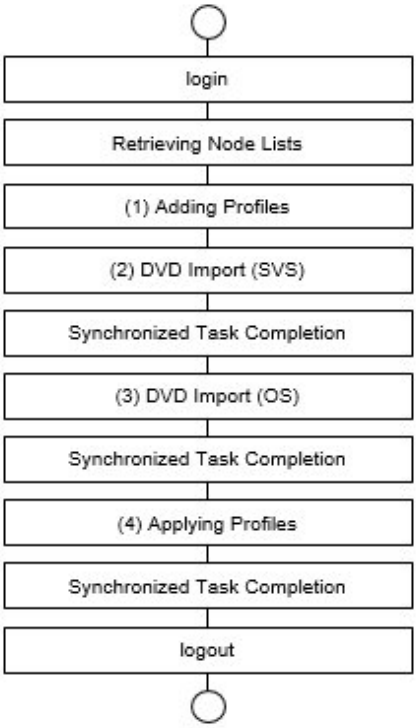
Example of response (JSON)


```
{
 "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 Applying Profiles

This section provides examples of REST API usage for applying profile for installing the Red Hat Enterprise Linux 7.4 (x86_64) OS on devices that are registered as nodes.

The following is an overview of processing for applying profiles.




## Point

- For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."
- For information on "Retrieving Node Lists" as mentioned in above flow, refer to "B.2 List Display of Node Statuses."
- For information on "Synchronized Task Completion" as mentioned in 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 use the curl command.

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 obtained from ISM are assumed to be stored in "/tmp/certificate.crt".
- The session ID obtained 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

Add 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) Applying Profiles

Apply profiles to nodes.

Table B.8 REST API for applying 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"}}'
```

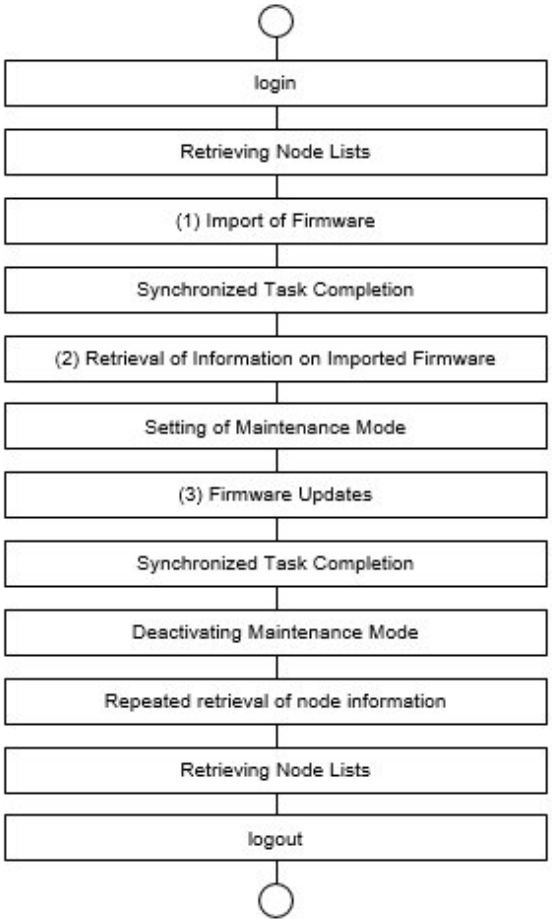
Example of response (JSON)

```
{
 "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesNodeIdProfilesAssign-POST-Out.
0.0.1.json",
 "MessageInfo":[],
 "IsmBody":{
 "TaskId": "12"
 }
}
```

## B.4 Firmware Updates

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 an overview of processing 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" as mentioned in above flow, refer to "B.2 List Display of Node Statuses."
- For information on "Synchronized Task Completion" as mentioned in 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 use the curl command.

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 obtained from ISM are assumed to be stored in "/tmp/certificate.crt".
- The session ID obtained 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) Import of 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 "ServerView Infrastructure Manager V2.2 User's Manual" - "2.1.2 FTP Access."
- For information on checking the firmware information, refer to "4.6.2 List Retrieval for Nodes Detailed Information" or "4.6.3 Separate Retrieval for Nodes Detailed 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"
                    },
~
                {
                        "Model": "RX200 S8",
                        "VersionTemplate": "*.*F&*.*",
                        "VersionExample": "7.82F&3.60"
                    },
~
                 {
                        "Model": "PRIMEQUEST 3800L",
                        "VersionTemplate": "PA*",
                        "VersionExample": "PA17082"
                    }
                ]
            }
        ]
    }
}
```

### (2) Retrieval of Information on Imported Firmware

After completing a firmware import task, retrieve 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 the REST API for firmware updates.

### Setting of Maintenance Mode

Set the nodes on which to apply the firmware into Maintenance Mode.

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 Updates

Use the firmware stored in the repository when you start firmware updates.

**Point**

If you also import any documents when you import firmware, you can check these documents.

For information on checking documents, refer to "4.11.3 List Retrieval for Firmware Documents."

Table B.13 REST API for starting firmware updates

| REST API | Reference |
|---|---|
| POST /nodes/firmware/update | 4.11.1 Starting Firmware Updates |

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 firmware update task has completed, on some devices firmware updates become effective only by restarting the node. Restart such nodes any time as needed. For information on devices that need to be restarted, refer to the section on "Behavior during updates" in "ServerView Infrastructure Manager V2.2 User's Manual" - "2.2.4.2 Updating Firmware."

## Deactivating Maintenance Mode

Deactivate the Maintenance Mode on the nodes on which application of firmware has completed.

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"
        }
    }
}
```

## Repeated retrieval of node information

After deactivating the Maintenance Mode, the node information must be updated in order to check whether the firmware was correctly applied to the devices.

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"
```

```
    }
}
```

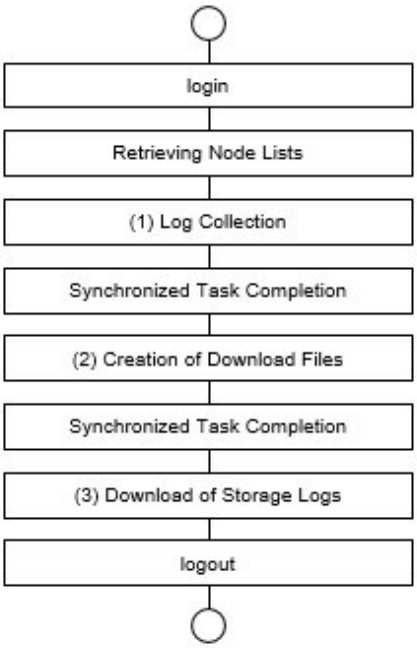
### Retrieval of node list

After completing repeated retrieval of node information, retrieve a list of the nodes. Check the firmware information to confirm whether the firmware was applied to the devices.

## 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 an overview of processing for extracting logs.




**Point**

- For "login" and "logout" in the above flow, refer to "3.1.2 Session Authentication."
- For information on "Retrieving Node Lists" as mentioned in above flow, refer to "B.2 List Display of Node Statuses."
- For information on "Synchronized Task Completion" as mentioned in 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 use the curl command.

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 obtained from ISM are assumed to be stored in "/tmp/certificate.crt".
- The session ID obtained 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, carry out 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 "http://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

Register 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 "http://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 "http://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 to collect 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 "http://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, create 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 "http://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) Download of Archived Logs

Retrieve the corresponding download URLs and download the download files of the archived logs.

Table B.21 REST API for retrieving download files of archived logs

| REST API | Reference |
|---|---|
| GET /nodes/logs/archivedlog/downloadfiles | 4.12.12 Retrieving Information on Archived Log Download Files |

Example of request

```
curl "http://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": []
}
```

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
```

# Appendix C List of Profile Parameters (ProfileData)

This section explains detailed information about the below parameters:

- 4.10.3 Adding Profiles
- 4.10.5 Separate Retrieval for Profiles
- 4.10.6 Updating Profiles
- 4.10.17 Adding Policies
- 4.10.19 Separate Retrieval for Policies
- 4.10.20 Updating Policies

## C.1 Server-BX

| Parameter | Type | Description |
|---|---|---|
| BIOS | object | BIOS Settings |
| SasController | string | Assigns the operation of the onboard SAS/SATA storage controller unit (SCU).<br>If none are set, assigns null.<br>- Enabled: Enables SCU.<br>- Disabled: Disables SCU. |
| SasSataOpRom | string | Specifies the operation of Option ROM for SAS/SATA controller.<br>Assign when SasController is Enabled.<br>If none are set, assigns null.<br>- Enabled: Will enable Option ROM.<br>- Disabled: Will disable Option ROM. |
| SasSataDriver | string | Specifies the type of Option ROM for SAS/SATA controller.<br>Specifies when SasSataOpRom is Enabled.<br>If none are set, assigns null.<br>- LSI MegaRAID: Use Option ROM which uses Embedded MegaRAID.<br>- Intel RSTe: Use Intel RSTe-use Option ROM. |
| HyperThreading | string | Assigns the CPU's Hyper Threading Technology operation.<br>When installing a CPU without this function, this settings will have no meaning.<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| XDBitfunctionalityAndNXMemoryProtection | string | Assigns the CPU's Execute Disable Bit operation.<br>This function is called XD (eXecute Disable) bit or NX (No eXecute) bit. |

| Parameter | Type | Description |
|---|---|---|
| | | If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| VirtualizationTechnology | string | Assigns operation of the CPU's virtualization support function<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| IntelVTd | string | Assigns the CPU's Virtualization Technology for Directed I/O function operation.<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| PowerTechnologyCpu | string | Assigns the CPU's power management operation.<br>If none are set, assigns null.<br>- Energy Efficient: Operates at a level optimized for energy efficiency.<br>- Custom: Sets detailed operation according to added setup items<br>- Disabled: Will disable power management function. |
| EnhancedSpeedStep | string | Specifies operation of power saving functions.<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| TurboMode | string | Assigns the CPU's Turbo Boost Technology operation.<br>When installing any CPU without this function, these settings do not apply and are disabled.<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| NUMA | string | Assigns operation of NUMA (Non-Uniform Memory Access) function.<br>If none are set, assigns null.<br>- Enabled: Enable NUMA function.<br>- Disabled: Will disable NUMA function. |
| DDR_Performance | string | Specifies operation of memory module.<br>Memory modules operates at a different speed (frequency).<br>At a higher speed, performance improves and at a lower speed it is more energy efficient.<br>Usable memory speed varies depending on the installed memory module construction. |

| Parameter | Type | Description |
|---|---|---|
| | | If none are set, assigns null.<br>- Low-Voltage optimized: High speed setting allowed at low voltage<br>- Energy optimized: Settings that operates at the lowest level possible for energy efficiency.<br>- Performance optimized: Fastest settings available to get the best performance |
| Csm | string | Assigns the CSM (Compatibility Support Module) execution operation.<br>Legacy operating system can run only when the CSM is loaded.<br>If none are set, assigns null.<br>- Enabled: CSM will be executed to ensure UEFI operating system can startup.<br>- Disabled: CSM will not be executed to ensure only UEFI operating system can startup. |
| BootOptionFilter | string | Assigns boot operation of a drive.<br>If none are set, assigns null.<br>- UEFI and Legacy: Can boot from UEFI OS drive and Legacy OS drive.<br>- Legacy only: Can only boot from Legacy OS drive.<br>- UEFI only: Can only boot from UEFI OS drive. |
| LaunchPxeOpRomPolicy | string | Specifies PXE Option ROM to start.<br>For PXE boot, there are usable, normal (Legacy) PXE boot and UEFI PXE boots available.<br>If none are set, assigns null.<br>- Do not launch: Option ROM will not start up.<br>- UEFI only: Only UEFI Option ROM can be started.<br>- Legacy only: Only start up Legacy Option ROM. |
| LaunchStorageOpRomPolicy | string | Assigns the Storage Option ROM for startup.<br>If none are set, assigns null.<br>- Do not launch: Storage Option ROM will not start up.<br>- UEFI only: Only UEFI Storage Option ROM can be started.<br>- Legacy only: Only Legacy Storage Option ROM will be started. |
| OtherPciDeviceRomPriority | string | Assigns Option ROM with the exception network, mass storage device and video which will startup with the device.<br>If none are set, assigns null.<br>- UEFI OpROM: Only UEFI Option ROM is started.<br>- Legacy OpROM: Only start up Legacy Option ROM. |
| NetworkStack | string | Assigns whether UEFI Network Stack can be used for network access in UEFI. |

| Parameter | Type | Description |
|---|---|---|
| | | For instance, when unable to use UEFI network stack, UEFI install cannot be executed via PXE.<br>If none are set, assigns null.<br>- Disabled: Cannot use UEFI network stack.<br>- Enabled: Can use UEFI network stack. |
| IPv4PxeSupport | string | Specifies whether PXE UEFI Boot by IPv4 can be used in UFI mode for installation of an operating system.<br>If none are set, assigns null.<br>- Disabled: Cannot use PXE UEFI Boot by IPv4.<br>- Enabled: Can use PXE UEFI Boot by IPv4. |
| IPv6PxeSupport | string | Specifies whether PXE UEFI Boot by IPv6 can be used in UFI mode for installation of an operating system.<br>If none are set, assigns null.<br>- Disabled: Cannot use PXE UEFI Boot by IPv6.<br>- Enabled: Can use PXE UEFI Boot by IPv6. |
| LaunchSlot1Oprom | string | Assigns execution of extension ROM built into PCI slot 1.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot2Oprom | string | Assigns execution of extension ROM built into PCI slot 2.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot3Oprom | string | Assigns execution of extension ROM built into PCI slot 3.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot4Oprom | string | Assigns execution of extension ROM built into PCI slot 4.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot5Oprom | string | Assign execution of extension ROM built into PCI slot 5. |

| Parameter | Type | Description |
|---|---|---|
| | | Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot6Oprom | string | Assigns execution of extension ROM built into PCI slot 6.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| SyncRTCwithMMB | string | Specifies if Real Time Clock should be synchronized with the management blade.<br>If none are set, assigns null.<br>- Enabled: Synchronizes.<br>- Disabled: Does not synchronize. |
| AdjustDateTime | string | When applying with the profile, specify if the of a server should be changed based on the time of controlling server.<br>Can be set only when Sync RTC with Mgmt Blade is disabled.<br>If none are set, assigns null.<br>- Local Time: Assigns Time zone settings according to that of the managing server.<br>- UTC: Assigns converted time to UTC from time zone settings of management server. |
| iRMC | object | Settings of iRMC (Integrated Remote Management Controller) |
| ConfPostErrorHalt | string | Assigns performance at startup error of a server<br>If none are set, assigns null.<br>- Continue: Even if an error occurs, continue startup process.<br>- Halt on errors: When an error occurs, stop startup until there is an input key. |
| ConfPowerControlMode | string | Assigns settings for power-saving and low-noise operations of a server.<br>If none are set, assigns null.<br>- O/S Controlled: OS controlled<br>- Minimum Power: Operation which prioritizes low power usage. |
| ConfPowerFailBehavior | string | After the AC power input is cut, assigns the power operation to when it is restored.<br>If none are set, assigns null.<br>- As Before: Preserves the status in case of a power cut or failure. (It will power one if the power is set to ON when |

| Parameter | Type | Description |
|---|---|---|
| | | cut. When its power supply has been turned off , it will not accept power activation)<br>- Remain Off: Keeps power OFF continuously<br>- Always On: power will always remain ON |
| ConfSoftWatchdogEnable | string | Assigns a regular communication checking during running of the OS at software watchdog.<br>If none are set, assigns null.<br>- Enabled: Monitors transmissions.<br>- Disabled: Does not monitor transmissions. |
| ConfSoftWatchdogBehavior | string | Assigns an operation when the OS does not communicate due to software watchdog.<br>Assigns for case that ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Continue: Continue processing.<br>- Reset: Restarts a server.<br>- Power Cycle: After turning off power of a server for once, then turns it on. |
| ConfSoftWatchdogTime | integer | Assigns a value from 1-100 minutes for monitoring time by the software watchdog.<br>Assigns for case that ConfBootWatchdogEnable is Enabled.<br>It is judged as unable to communicate when there is no communication after a specified time here.<br>If none are set, assigns null. |
| ConfBootWatchdogEnable | string | In Boot watchdog, assigns the monitoring time operation from after POST ends to when OS boots.<br>Assign when ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Enabled: Monitor time.<br>- Disabled: Does not monitor time. |
| ConfBootWatchdogBehavior | string | Assigns the operation when the OS does not run within the time set in Boot watchdog.<br>Assign when ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Continue: Continue process.<br>- Reset: Restarts a server.<br>- Power Cycle: After turning off power of a server for once, then turns it on. |
| ConfBootWatchdogTime | integer | Assigns a value from 1-100 minutes for the Boot watchdog monitoring time.<br>Assigns when ConfBootWatchdogEnable is Enabled.<br>It is judged as abnormality when OS cannot start after a specified time here. |

| Parameter | Type | Description |
|---|---|---|
| | | If none are set, assigns null. |
| ConfBmcSnmpServiceEnable | string | Assigns SNMP service performance at iRMC.<br>If none are set, assigns null.<br>- Enabled: Enables it.<br>- Disabled: Disables it. |
| ConfBMCSnmpServicePort | integer | Assigns port that is on standby by SNMP.<br>Typically it becomes a UDP 161 port.<br>If none are set, assigns null. |
| ConfBMCSnmpServiceEnableV3Only | string | Assigns the SNMP protocol.<br>If none are set, assigns null.<br>- All (SNMPv1/v2c/v3): All protocol support (SNMPv1/v2c/v3)<br>- SNMPv3 only:SNMPv3 |
| ConfBMCSnmpServiceCommunityName | string | Assigns the community name for when it is SNMP v1/v2c.<br>If none are set, assigns null.<br>The number of characters assignable is up to 18 characters at maximum.<br>Characters and symbols assignable are A-Z, a-z, 0-9 and (*/:,_?:-@&)%!.<br>Blank symbols and \ may not be used. |
| ConfBMCSnmpV3UserServiceEnabled | string | Assigns SNMPv3 support operations for a user.<br>If none are set, assigns null.<br>- Enabled: Enables it.<br>- Disabled: Disable it. |
| ConfBMCSnmpV3UserAuthType | string | Assigns authentication protocols that SNMPv3 uses for authentication.<br>If none are set, assigns null.<br>- Uses SHA:SHA (Secure Hash Algorithm) for authentication.<br>- MD5: Use in MD5 (Message-Digest Algorithm 5) certification.<br>- none: Does not use authentication. |
| ConfBMCSnmpV3UserPrivType | string | Assigns encryption protocol that SNMPv3 uses to encrypt SNMPv3 traffic.<br>If none are set, assigns null.<br>- Uses DES:DES (Digital Encryption Standard) for SNMPv3 traffic encryption.<br>- Uses AES:AES (Advanced Encryption Standard) 128 bit encryption for SNMPv3 traffic encryption.<br>- none: Does not use encryption. |
| ConfBMCSnmpV3UserAccessType | string | Assigns access privilege of a user. |

| Parameter | Type | Description |
|---|---|---|
| | | "Read only" has been set as fixed.<br>If none are set, assigns null.<br>- Read Only: Read-only |
| ConfBMCSnmpTrapCommunityName | string | Assigns the SNMP community name.<br>If none are set, assigns null.<br>The number of characters assignable is up to 18 characters at maximum.<br>Characters and symbols assignable are A-Z, a-z, 0-9 and (*/:,_?:-@&)%!.<br>Blank symbols and \ may not be used. |
| ConfBMCSnmpV3UserSelected | string | Assigns SNMPv3 user already defined in SNMPv3 trap destination.<br>Specifies a user name that has been created on iRMC.<br>If none are set, assigns null.<br>A user name can be assigned with 16 character at maximum.<br>A valid user name should start with an alphabet.<br>For the remaining part of the name, it can accept only alphabets, digits, under bar, dash, period and at mark (@).<br>You cannot use blank symbols. |
| ConfBMCSnmpTrapDestName1 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.). |

| Parameter | Type | Description |
|---|---|---|
| ConfBMCSnmpTrapDestName4 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.). |
| ConfBMCSnmpProtocol1 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol2 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |

| Parameter | Type | Description |
|---|---|---|
| ConfBMCSnmpProtocol3 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol4 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol5 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol6 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol7 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| IOVirtualization | object | Settings of virtual IO<br>For details, refer to "D.3 IOVirtualization." |
| OSInstallation | object | Settings of OS installation<br>For details, refer to "D.4 OSInstallation." |

## C.2 Storage-DX

| Parameter | Type | Description |
|---|---|---|
| StandRaid | object | RAID settings |
| RaidGroup | array | List of RAID Groups |

| Parameter | Type | Description |
|---|---|---|
| RaidGroupName | string | Name of RAID Group |
| RaidLevel | string | RAID level of disk array to be built<br>- RAID1: RAID level 1<br>- RAID5: RAID level 5<br>- RAID6: RAID level 6<br>- RAID1: 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<br>- 2.5Inch: 2.5-in<br>- 3.5Inch: 3.5-in |
| Type | string | Disk Interface<br>- SAS:SAS<br>- NL-SAS: Near line SAS<br>- SED: Disk for self-encrypting<br>- SSD:SSD |
| Size | string | Disk Capacity<br>- 100GB<br>- 200GB<br>- 300GB<br>- 400GB<br>- 450GB<br>- 600GB<br>- 800GB<br>- 900GB<br>- 1TB<br>- 1.2TB<br>- 1.6TB<br>- 1.8TB<br>- 2TB<br>- 3TB<br>- 4TB<br>- 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 |

| Parameter | Type | Description |
|---|---|---|
| Disks | array | Disk Information List to be registered as Hot Spare |
| Inch | string | Disk inch<br>- 2.5Inch: 2.5-in<br>- 3.5Inch: 3.5-in |
| Type | string | Disk Interface<br>- SAS:SAS<br>- NL-SAS: Near line SAS<br>- SED: Disk for self-encrypting<br>- SSD:SSD |
| Size | string | Disk Capacity<br>- 100GB<br>- 200GB<br>- 300GB<br>- 400GB<br>- 450GB<br>- 600GB<br>- 800GB<br>- 900GB<br>- 1TB<br>- 1.2TB<br>- 1.6TB<br>- 1.8TB<br>- 2TB<br>- 3TB<br>- 4TB<br>- 6TB |
| HostAffinity | object | Setting 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 |

| Parameter | Type | Description |
|---|---|---|
| HostType | string | Host type<br>- iscsi:iSCSI<br>- fc:FC |
| FcParameter | array | Host Information for FC<br>Designate when HostType is "FC." |
| HostName | string | Host name |
| HostWwn | string | Host WWN |
| IscsiParameter | array | Host Information for iSCSI<br>Designate when HostType is "iSCSI." |
| HostName | string | Host name |
| IscsiName | string | iSCSI name<br>Assign "iqn." or "eui" at the head. |
| DetailSettings | object | Detail Settings of Profile |
| PostRunCommand | string | Control command to be executed in ETERNUS before running profile applying operation (building of RAID/Hot spare) |
| PreRunCommand | string | Control command to be executed in ETERNUS after running profile applying operation (building of RAID/Hot spare) |

## C.3 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<br>- on: Enables SNMP function.<br>- off: Disables SNMP function. |
| Agent | object | SNMP Agent Function |
| Address | object | Address Information of SNMP Agent |
| Address | string | Address of SNMP Agent<br>Assigns "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254,192.0.0.1- 223.255.255.254"<br>When 0.0.0.0 is assigned, erases all settings. |
| Engineid | object | Information of SNMP Engine ID |
| Engineid | string | SNMP Engine ID<br>Assigns 1-27 characters as a string.<br>Assigns for when using SNMPv3. |
| Manager | array | SNMP Manager Function<br>Setting available for up to a maximum of 8.<br>Assigns for when using SNMPv1, SNMPv2c. |

| Parameter | Type | Description |
|---|---|---|
| Number | string | SNMP Host Definition Number<br>Assigns "0"-"7" in the character string. |
| Address | string | IP Address of SNMP Host<br>Assigns "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254,192.0.0.1- 223.255.255.254"<br>When 0.0.0.0 is assigned, allow access from all hosts. |
| Community | string | SNMP Community Name<br>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<br>- v1: Transmits a SNMPv1 trap.<br>- v2c: Transmits a SNMPv2 trap.<br>- off: Does not transmit SNMP trap. |
| Write | string | Writing permission from the SNMP Manager<br>- enable: Writing from SNMP manager is permitted.<br>- disable: Writing from SNMP manager is not permitted. |
| User | array | SNMP User Function<br>Setting available for up to a maximum of 8.<br>Assigns for when using SNMPv3. |
| Number | string | SNMP User Definition Number<br>Assigns "0"-"7" in the character string. |
| Name | object | SNMP User Name Information |
| Name | string | SNMP User Name<br>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<br>Assigns "0"-"7" in the character string. |
| Address | string | IP Address of SNMP Host<br>Assigns "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.<br>When 0.0.0.0 is assigned, allow access from all IPv4 hosts.<br>Assigns "::2-fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff,fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.<br>When :: is assigned, allow access from all IPv6 hosts. |
| Notification | object | SNMP Trap Notification Host Address Information |
| Number | string | SNMP Host Definition Number<br>Assigns "0"-"7" in the character string. |
| Address | string | IP Address of SNMP Host |

| Parameter | Type | Description |
|---|---|---|
| | | Assigns "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.<br>Assigns "::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 Authenticated Protocol<br>- Use the md5:MD5.<br>- sha: Uses SHA.<br>- none: Does not use a protocol for authentication. |
| Password | string | SNMP Authenticated Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 8 to 16 characters. |
| Priv | object | SNMP Encrypted Protocol Information |
| Protocol | string | SNMP Encrypted Protocol<br>- des: Uses DES.<br>- none: Does not use a protocol for encryption. |
| Password | string | SNMP Encrypted Password<br>Set the password encrypted with AES256+Base64.<br>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<br>- all: Allows writing to MIB.<br>- none: Does not allow writing to MIB |
| Read | object | SNMP MIB Reading Permission Information |
| Access | string | SNMP MIB Reading Permission View<br>- all: Allows reading of MIB.<br>- none: Does not allow reading from MIB. |
| Notify | object | SNMP Trap Notification Permission Information |
| Access | string | SNMP Trap Notification Permission<br>- all: Allows SNMP trap notification.<br>- none: Does not allow SNMP trap notification. |
| AutoTime | object | Information of automatic time settings |
| Server | object | Information of a Time Informing Server |
| Address | string | IP Address of a Time Informing Server<br>Assigns "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.<br>Assigns "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:: - feff:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |
| Protocol | string | Protocol used |

| Parameter | Type | Description |
|---|---|---|
| | | - time: Uses TCP.<br>- sntp: Uses UDP. |
| Interval | object | An interval of Automatic Time Setting |
| Time | string | An interval of Automatic Time Setting<br>Specify "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 is using |
| Offset | string | Time Zone that the Device is using<br>Assigns sexagesimal digits [-2359]-[2359] in the character string. |
| Account | object | Password information of Device administrator |
| Password | string | Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 8 to 32 characters. |
| Stp | object | STP |
| Mode | string | Operation Mode for STP<br>- disable: Does not use STP.<br>- stp: STP operating mode<br>- rstp: RSTP operating mode<br>- mstp: MSTP operating mode |

## C.4 Switch-CFX

| Parameter | Type | Description |
|---|---|---|
| Interface | array | Interface information<br>Setting available for up to a maximum of 256. |
| Targets | string | ether Port Subject for Setting<br>Specify by either "chassis ID/ether port number" or "domain ID/switch ID/chassis ID/ether port number".<br>When chassis ID is 0 and ether port number is 1, it specifies "0/1. "<br>It is also possible to assign a range using a character of "-" as a case of "0/1-0/3" as well as to assign partially by using a character of "," as a case of "0/1,0/3".<br>- Domain ID: To be set in decimal system within a range of 1-32.<br>- Set by decimal system within a range of 1-8.<br>- Domain ID: Set by decimal system within a range of 0-2.<br>- ether port number: Set in decimal digits |
| Type | object | Information by type of ether port |

| Parameter | Type | Description |
|---|---|---|
| Mode | string | Type of ether port<br>- endpoint: C-Fabric End Point |
| Lldp | object | LLDP Operation Information of ether Port |
| Mode | string | LLDP Operation of ether Port<br>- disable: LLDP function does not work.<br>- enable: Transmits/receives LLDP information.<br>- send: Performs only transmission of LLDP information.<br>- Receive: Performs reception of LLDP information only. |
| Cfab | object | Usage Mode Information by type of ether Port |
| Mode | string | Usage Mode by type of ether Port<br>- auto: Operates by port type as detected automatically<br>- 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<br>- on: Enables SNMP function.<br>- off: Disables SNMP function. |
| Agent | array | SNMP Agent Function<br>Setting available for up to 32 at maximum. |
| Domainid | string | Domain ID<br>Assigns "1"-"32" in the character string. |
| Address | object | Address Information of SNMP Agent |
| Address | string | Address of SNMP Agent<br>Assigns "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.<br>When 0.0.0.0 is assigned, erases all settings.<br>Assigns "::2-fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff,fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.<br>When :: is assigned, erases all settings. |
| Engineid | object | SNMP Engine ID Information |
| Engineid | string | SNMP Engine ID<br>Assigns 1-27 characters as a string.<br>Assigns for when using SNMPv3. |
| Manager | array | SNMP Manager Function<br>Setting available for up to 8 at maximum.<br>Assigns for when using SNMPv1, SNMPv2c. |
| Number | string | SNMP Host Definition Number<br>Assigns "0"-"7" in the character string. |

| Parameter | Type | Description |
|---|---|---|
| Address | string | IP Address of SNMP Host<br>Assigns "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.<br>When 0.0.0.0 is assigned, allow access from all IPv4 hosts.<br>Assigns "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff,fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6.<br>When :: is assigned, allow access from all IPv6 hosts. |
| Community | string | SNMP Community Name<br>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<br>- v1: Transmits a SNMPv1 trap.<br>- v2c: Transmits a SNMPv2 trap.<br>- off: Does not transmit SNMP trap. |
| Write | string | Writing permission from the SNMP Manager<br>- enable: Writing from SNMP manager is permitted.<br>- disable: Writing from SNMP manager is not permitted. |
| User | array | SNMP User Function<br>Setting available for up to 8 at maximum.<br>Assigns for when using SNMPv3. |
| Number | string | SNMP User Definition Number<br>Assigns "0"-"7" in the character string. |
| Name | object | SNMP User Name Information |
| Name | string | SNMP User Name<br>Specifies any string consists of 1-32 characters. |
| Address | object | SNMP Host Address Information |
| Number | string | SNMP Host Definition Number<br>Assigns "0"-"7" in the character string. |
| Address | string | IP Address of SNMP Host<br>Assigns "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.<br>Assigns "::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<br>Assigns "0"-"7" in the character string. |
| Address | string | IP Address of SNMP Host<br>Assigns "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. |

| Parameter | Type | Description |
|---|---|---|
| | | Assigns "::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 Authenticated Protocol<br>- Use the md5:MD5.<br>- sha: Uses SHA.<br>- none: Does not use a protocol for authentication. |
| Password | string | SNMP Authenticated Password<br>Set the password encrypted with AES256+Base64.<br>A password before encryption has a length of 8 to 16 characters. |
| Priv | object | SNMP Encrypted Protocol Information |
| Protocol | string | SNMP Encrypted Protocol<br>- des: Uses DES.<br>- none: Does not use a protocol for encryption. |
| Password | string | SNMP Encrypted Password<br>Set the password encrypted with AES256+Base64.<br>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<br>- all: Allows writing to MIB.<br>- none: Does not allow writing to MIB |
| Read | object | SNMP MIB Reading Permission Information |
| Access | string | SNMP MIB Reading Permission View<br>- all: Allows reading of MIB.<br>- none: Does not allow reading from MIB. |
| Notify | object | SNMP Trap Notification Permission Information |
| Access | string | SNMP Trap Notification Permission<br>- all: Allows SNMP trap notification.<br>- none: Does not allow SNMP trap transmission. |
| AutoTime | object | Information of automatic time settings |
| Server | object | Information of a Time Informing Server |
| Address | string | IP Address of a Time Informing Server<br>Assigns "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.<br>When 0.0.0.0 is assigned, use the address informed from the DHCP server.<br>When 255.255.255.255 is specified, use the broadcast address.<br>Assigns "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:: - feff:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |

| Parameter | Type | Description |
|---|---|---|
| | | When :: is assigned, use the address informed from the DHCP server. |
| Protocol | string | Protocol used<br>- time: Uses TCP.<br>- sntp: Uses UDP. |
| Interval | object | An interval of Automatic Time Setting |
| Time | string | An interval of Automatic Time Setting<br>Specify "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 is using |
| Offset | string | Time Zone that the Device is using<br>Assigns sexagesimal digits [-1200]-[1300] in the character string. |
| Account | object | Password information of Device administrator |
| Password | string | Password<br>Set the password encrypted with AES256+Base64.<br>A password before encryption has a length of 8 to 32 characters. |
| Aaa | array | AAA information |
| Groupid | string | Group ID<br>Assigns "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<br>- on: Enables LDAP function.<br>- off: Disables LDAP function. |
| Client | array | Client Information |
| Number | string | Server Definition Number<br>Assigns "0"-"3" in the character string. |
| Serverinfo | object | Server Information |
| Address | string | IP Address of LDAP Authentication Server<br>Assigns "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.<br>Assigns "::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<br>Assigns "1"-"32" in the character string. |
| Address | string | IP Address |

| Parameter | Type | Description |
|---|---|---|
| | | Assigns "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.<br>Assigns "::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<br>E.g.) CN |
| Bindnordn | object | Information of LDAP Authentication Server |
| Name | string | Bind Identification Name Except for Opposing Identification Name<br>E.g.) CN: user, DC: local |
| Admin | object | Information of Administrator's Class for LDAP Authentication Server |
| Classid | string | Number of Class Definition<br>Assigns "0"-"3" in the character string. |
| Adminclass | string | Value of Administrator Classes<br>E.g.) user |

## C.5 Switch-VDX

| Parameter | Type | Description |
|---|---|---|
| Snmp | object | SNMP Function Information |
| Service | object | SNMP Function Settings Information |
| Mode | string | Availability/Non-availability of SNMP Function<br>NOS6 is reflected on the device (enabling and disabling of functions available)<br>NOS4 is not reflected on the device (Cannot be disabled as always being enabled).<br>- on: Enables SNMP function.<br>- off: Disables SNMP function. |
| Host | array | SNMP v1/2c Trap and Destination Settings<br>Setting available for up to 6 at maximum.<br>Assigns for when using SNMPv1/2c. |
| Address | string | IP Address of SNMP Host<br>Assign IPv4, IPv6 address notion according to character strings. |
| Community | string | SNMP Community Name<br>Specifies any of keys set by "Snmp">"Community">"Name" |
| Severitylevel | string | SNMP Trap Level |

| Parameter | Type | Description |
|---|---|---|
| | | - none:None<br>- debug:Debug<br>- info:Informational<br>- warning:Warning<br>- error:Error<br>- critical:Critical |
| Trapversion | string | SNMP Trap Version<br>- 1: SNMP Version 1<br>- 2c: SNMP Version 2c |
| Udpport | string | SNMP Trap Transmission Port Number<br>Assigns "0"-"65535" in the character string. |
| V3host | array | Settings of SNMPv3 Trap and destination of transmission<br>Setting available for up to 6 at maximum.<br>Assigns for when using SNMPv3. |
| Address | string | IP Address of SNMP Host<br>Assign IPv4, IPv6 address notion according to character strings. |
| Username | string | SNMP User Name<br>Assign 1-16 characters in the character string.<br>Specifies any of strings set by "Snmp">"Community">"Name" |
| Notifytype | string | SNMP Trap Type<br>- traps: Trap<br>- informs: Inform |
| Engineid | string | SNMP Engine ID<br>Assigns "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<br>Assigns "0"-"65535" in the character string. |
| Severitylevel | string | SNMP Trap Level<br>- none:None<br>- debug:Debug<br>- info:Informational<br>- warning:Warning<br>- error:Error<br>- critical:Critical |
| Community | array | SNMP Community Information<br>Setting available for up to 256 at maximum. |

| Parameter | Type | Description |
|---|---|---|
| | | When applying with the profile, in order to delete a community that exists by default, there is a need to recreate it if necessary. |
| Name | string | SNMP Community Name<br>Assigns 1-64 characters in the character string. |
| Write | object | SNMP Community Writing Permission Information |
| Access | string | SNMP Community Writing Permission<br>NOS6 is not reflected on the device (direct associating function for the community not available).<br>NOS4 is reflected on the device (function available).<br>- enable: Writing to SNMP community is permitted.<br>- disable: Writing to SNMP community is not permitted. |
| Group | object | SNMP Group Information |
| Name | string | SNMP Group Name<br>Assign 1-16 characters in the character string.<br>Specifies any of strings set by keys of "Snmp"-->"Group"-->"Name". |
| User | array | SNMP User Information<br>Setting available for up to 10 at maximum. |
| Username | string | SNMP User Name<br>Assign 1-16 characters in the character string. |
| Groupname | string | SNMP Group Name<br>Assign 1-16 characters in the character string.<br>Specifies any of strings set by keys of "Snmp"-->"Group"-->"Name". |
| Auth | object | SNMP Authenticated Protocol Information |
| Auth | string | SNMP Authenticated Protocol<br>- md5: Uses the md5.<br>- sha: Uses SHA.<br>- noauth: Does not use a protocol for authentication. |
| Password | string | SNMP Authenticated Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 1 to 32 characters. |
| Priv | object | SNMP Encrypted Protocol Information |
| Priv | string | SNMP Encrypted Protocol<br>- DES: Uses DES.<br>- AES128: Usse the AES128.<br>- nopriv: Does not use a protocol for encryption. |
| Password | string | SNMP Encrypted Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 1 to 32 characters. |

| Parameter | Type | Description |
|---|---|---|
| Group | array | SNMP Group Information<br>Setting available for up to 10 at maximum.<br>NOS6 is reflected on the device (MIB access possibility grouping function available).<br>NOS4 is not reflected on the device (function not available). |
| Name | string | Group Name<br>Assigns 1-16 characters in the character string. |
| Snmpversion | string | SNMP Version<br>- v1: SNMP Version 1<br>- v2c: SNMP Version 2c<br>- v3: SNMP Version 3 |
| V3 | object | SNMPv3 Information |
| Securitylevel | string | Security Level for SNMPv3<br>Assigns for when using SNMPv3.<br>- priv: Enables authentication and encryption.<br>- auth: Enables authentication.<br>- noauth: Disables authentication and encryption |
| Read | object | SNMP MIB Reading Permission Information |
| Access | string | SNMP MIB Reading Permission<br>- all: Allows reading of MIB.<br>- none: Does not allow reading from MIB. |
| Write | object | SNMP MIB Writing Permission Information |
| Access | string | SNMP MIB Writing Permission<br>- all: Allows writing to MIB.<br>- none: Does not allow writing to MIB |
| Notify | object | SNMP Trap Notification Permission Information |
| Access | string | SNMP Trap Notification Permission<br>- all: Allows SNMP trap transmission.<br>- none: Does not allow SNMP trap transmission. |
| AutoTime | object | Information of automatic time settings |
| Server | array | Information of a Time Informing Server<br>Setting available for up to 5 at maximum. |
| Address | string | IP Address of a server that provides time information<br>Assigns character strings in accordance with address description of IPv4 and IPv6. |
| Zone | object | Time Zone Information |
| Regioncity | string | Region/City<br>- Africa/Luanda<br>- Africa/Ouagadougou |

| Parameter | Type | Description |
|---|---|---|
| | | - Africa/Bujumbura<br>- Africa/Porto-Novo<br>- Africa/Gaborone<br>- Africa/Kinshasa<br>- Africa/Lubumbashi<br>- Africa/Bangui<br>- Africa/Brazzaville<br>- Africa/Abidjan<br>- Africa/Douala<br>- Africa/Djibouti<br>- Africa/Algiers<br>- Africa/Cairo<br>- Africa/El_Aaiun<br>- Africa/Asmara<br>- Africa/Ceuta<br>- Africa/Addis_Ababa<br>- Africa/Libreville<br>- Africa/Accra<br>- Africa/Banjul<br>- Africa/Conakry<br>- Africa/Malabo<br>- Africa/Bissau<br>- Africa/Nairobi<br>- Africa/Monrovia<br>- Africa/Maseru<br>- Africa/Tripoli<br>- Africa/Casablanca<br>- Africa/Bamako<br>- Africa/Nouakchott<br>- Africa/Blantyre<br>- Africa/Maputo<br>- Africa/Windhoek<br>- Africa/Niamey<br>- Africa/Lagos<br>- Africa/Kigali<br>- Africa/Khartoum<br>- Africa/Freetown |

| Parameter | Type | Description |
|---|---|---|
| | | - Africa/Dakar<br>- Africa/Mogadishu<br>- Africa/Sao_Tome<br>- Africa/Mbabane<br>- Africa/Ndjamena<br>- Africa/Lome<br>- Africa/Tunis<br>- Africa/Dar_es_Salaam<br>- Africa/Kampala<br>- Africa/Johannesburg<br>- Africa/Lusaka<br>- Africa/Harare<br>- America/Antigua<br>- America/Anguilla<br>- America/Curacao<br>- America/Argentina/Buenos_Aires<br>- America/Argentina/Cordoba<br>- America/Argentina/San_Luis<br>- America/Argentina/Jujuy<br>- America/Argentina/Tucuman<br>- America/Argentina/Catamarca<br>- America/Argentina/La_Rioja<br>- America/Argentina/San_Juan<br>- America/Argentina/Mendoza<br>- America/Argentina/Rio_Gallegos<br>- America/Argentina/Ushuaia<br>- America/Aruba<br>- America/Guatemala<br>- America/Guyana<br>- America/Tegucigalpa<br>- America/Port-au-Prince<br>- America/Guadeloupe<br>- America/Jamaica<br>- America/St_Kitts<br>- America/Cayman<br>- America/St_Lucia<br>- America/Marigot |

| Parameter | Type | Description |
|---|---|---|
| | | - America/Adak<br>- America/Martinique<br>- America/Montserrat<br>- America/Mexico_City<br>- America/Cancun<br>- America/Edmonton<br>- America/Cambridge_Bay<br>- America/Yellowknife<br>- America/Inuvik<br>- America/Dawson_Creek<br>- America/Vancouver<br>- America/Whitehorse<br>- America/Thunder_Bay<br>- America/Iqaluit<br>- America/Pangnirtung<br>- America/Resolute<br>- America/Rankin_Inlet<br>- America/Winnipeg<br>- America/Rainy_River<br>- America/Regina<br>- America/Barbados<br>- America/St_Barthelemy<br>- America/La_Paz<br>- America/Noronha<br>- America/Belem<br>- America/Fortaleza<br>- America/Recife<br>- America/Araguaina<br>- America/Maceio<br>- America/Bahia<br>- America/Sao_Paulo<br>- America/Campo_Grande<br>- America/Cuiaba<br>- America/Santarem<br>- America/Porto_Velho<br>- America/Merida<br>- America/Monterrey |

| Parameter | Type | Description |
|---|---|---|
| | | - America/Mazatlan<br>- America/Chihuahua<br>- America/Hermosillo<br>- America/Tijuana<br>- America/Managua<br>- America/Panama<br>- America/Lima<br>- America/Miquelon<br>- America/Puerto_Rico<br>- America/Asuncion<br>- America/Paramaribo<br>- America/El_Salvador<br>- America/Grand_Turk<br>- America/Montevideo<br>- America/St_Vincent<br>- America/Caracas<br>- America/Tortola<br>- America/St_Thomas<br>- America/New_York<br>- America/Detroit<br>- America/Kentucky/Monticello<br>- America/Indiana/Indianapolis<br>- America/Indiana/Vincennes<br>- America/Indiana/Knox<br>- America/Indiana/Winamac<br>- America/Indiana/Marengo<br>- America/Indiana/Vevay<br>- America/Chicago<br>- America/Boa_Vista<br>- America/Manaus<br>- America/Eirunepe<br>- America/Rio_Branco<br>- America/Nassau<br>- America/Belize<br>- America/St_Johns<br>- America/Halifax<br>- America/Glace_Bay |

| Parameter | Type | Description |
|---|---|---|
| | | - America/Moncton<br>- America/Goose_Bay<br>- America/Blanc-Sablon<br>- America/Montreal<br>- America/Toronto<br>- America/Nipigon<br>- America/Swift_Current<br>- America/Dawson<br>- America/Santiago<br>- America/Bogota<br>- America/Costa_Rica<br>- America/Havana<br>- America/Dominica<br>- America/Santo_Domingo<br>- America/Guayaquil<br>- America/Grenada<br>- America/Cayenne<br>- America/Godthab<br>- America/Danmarkshavn<br>- America/Scoresbysund<br>- America/Thule<br>- America/Indiana/Tell_City<br>- America/Indiana/Petersburg<br>- America/Menominee<br>- America/North_Dakota/Center<br>- America/North_Dakota/New_Salem<br>- America/Denver<br>- America/Boise<br>- America/Shiprock<br>- America/Phoenix<br>- America/Los_Angeles<br>- America/Anchorage<br>- America/Juneau<br>- America/Yakutat<br>- America/Nome<br>- America/Port_of_Spain<br>- Antarctica/McMurdo |

| Parameter | Type | Description |
|---|---|---|
| | | - Antarctica/South_Pole<br>- Antarctica/Rothera<br>- Antarctica/Mawson<br>- Antarctica/Davis<br>- Antarctica/Casey<br>- Antarctica/Vostok<br>- Antarctica/DumontDUrville<br>- Antarctica/Syowa<br>- Arctic/Longyearbyen<br>- Asia/Dubai<br>- Asia/Kabul<br>- Asia/Yerevan<br>- Asia/Baku<br>- Asia/Dhaka<br>- Asia/Bahrain<br>- Asia/Brunei<br>- Asia/Thimphu<br>- Asia/Shanghai<br>- Asia/Harbin<br>- Asia/Chongqing<br>- Asia/Urumqi<br>- Asia/Kashgar<br>- Asia/Nicosia<br>- Asia/Tbilisi<br>- Asia/Hong_Kong<br>- Asia/Jakarta<br>- Asia/Pontianak<br>- Asia/Makassar<br>- Asia/Jayapura<br>- Asia/Jerusalem<br>- Asia/Kolkata<br>- Asia/Baghdad<br>- Asia/Tehran<br>- Asia/Amman<br>- Asia/Tokyo<br>- Asia/Bishkek<br>- Asia/Phnom_Penh |

| Parameter | Type | Description |
|---|---|---|
| | | - Asia/Pyongyang<br>- Asia/Seoul<br>- Asia/Kuwait<br>- Asia/Almaty<br>- Asia/Qyzylorda<br>- Asia/Aqtobe<br>- Asia/Aqtau<br>- Asia/Oral<br>- Asia/Vientiane<br>- Asia/Beirut<br>- Asia/Colombo<br>- Asia/Rangoon<br>- Asia/Ulaanbaatar<br>- Asia/Hovd<br>- Asia/Choibalsan<br>- Asia/Macau<br>- Asia/Kuala_Lumpur<br>- Asia/Kuching<br>- Asia/Katmandu<br>- Asia/Muscat<br>- Asia/Manila<br>- Asia/Karachi<br>- Asia/Gaza<br>- Asia/Qatar<br>- Asia/Yekaterinburg<br>- Asia/Omsk<br>- Asia/Novosibirsk<br>- Asia/Krasnoyarsk<br>- Asia/Irkutsk<br>- Asia/Yakutsk<br>- Asia/Vladivostok<br>- Asia/Sakhalin<br>- Asia/Magadan<br>- Asia/Kamchatka<br>- Asia/Anadyr<br>- Asia/Riyadh<br>- Asia/Singapore |

| Parameter | Type | Description |
|---|---|---|
| | | - Asia/Damascus<br>- Asia/Bangkok<br>- Asia/Dushanbe<br>- Asia/Dili<br>- Asia/Ashgabat<br>- Asia/Taipei<br>- Asia/Samarkand<br>- Asia/Tashkent<br>- Asia/Ho_Chi_Minh<br>- Asia/Aden<br>- Atlantic/Bermuda<br>- Atlantic/Cape_Verde<br>- Atlantic/Canary<br>- Atlantic/Stanley<br>- Atlantic/Faroe<br>- Atlantic/South_Georgia<br>- Atlantic/Reykjavik<br>- Atlantic/Madeira<br>- Atlantic/Azores<br>- Atlantic/St_Helena<br>- Australia/Lord_Howe<br>- Australia/Hobart<br>- Australia/Currie<br>- Australia/Melbourne<br>- Australia/Sydney<br>- Australia/Brisbane<br>- Australia/Lindeman<br>- Australia/Adelaide<br>- Australia/Darwin<br>- Australia/Perth<br>- Australia/Eucla<br>- Europe/Andorra<br>- Europe/Tirane<br>- Europe/Vienna<br>- Europe/Mariehamn<br>- Europe/Sarajevo<br>- Europe/Brussels |

| Parameter | Type | Description |
|---|---|---|
| | | - Europe/Sofia<br>- Europe/Minsk<br>- Europe/Zurich<br>- Europe/Prague<br>- Europe/Berlin<br>- Europe/Copenhagen<br>- Europe/Tallinn<br>- Europe/Madrid<br>- Europe/Helsinki<br>- Europe/Paris<br>- Europe/London<br>- Europe/Guernsey<br>- Europe/Oslo<br>- Europe/Gibraltar<br>- Europe/Athens<br>- Europe/Zagreb<br>- Europe/Budapest<br>- Europe/Dublin<br>- Europe/Isle_of_Man<br>- Europe/Rome<br>- Europe/Jersey<br>- Europe/Vaduz<br>- Europe/Vilnius<br>- Europe/Luxembourg<br>- Europe/Riga<br>- Europe/Monaco<br>- Europe/Chisinau<br>- Europe/Podgorica<br>- Europe/Skopje<br>- Europe/Malta<br>- Europe/Amsterdam<br>- Europe/Warsaw<br>- Europe/Lisbon<br>- Europe/Bucharest<br>- Europe/Belgrade<br>- Europe/Kaliningrad<br>- Europe/Moscow |

| Parameter | Type | Description |
|---|---|---|
| | | - Europe/Volgograd<br>- Europe/Samara<br>- Europe/Stockholm<br>- Europe/Ljubljana<br>- Europe/Bratislava<br>- Europe/San_Marino<br>- Europe/Istanbul<br>- Europe/Kiev<br>- Europe/Uzhgorod<br>- Europe/Zaporozhye<br>- Europe/Simferopol<br>- Europe/Vatican<br>- Indian/Cocos<br>- Indian/Christmas<br>- Indian/Chagos<br>- Indian/Comoro<br>- Indian/Antananarivo<br>- Indian/Mauritius<br>- Indian/Maldives<br>- Indian/Reunion<br>- Indian/Mahe<br>- Indian/Kerguelen<br>- Indian/Mayotte<br>- Pacific/Pago_Pago<br>- Pacific/Rarotonga<br>- Pacific/Easter<br>- Pacific/Galapagos<br>- Pacific/Fiji<br>- Pacific/Truk<br>- Pacific/Ponape<br>- Pacific/Kosrae<br>- Pacific/Guam<br>- Pacific/Tarawa<br>- Pacific/Enderbury<br>- Pacific/Kiritimati<br>- Pacific/Majuro<br>- Pacific/Kwajalein |

| Parameter | Type | Description |
|---|---|---|
| | | - Pacific/Saipan<br>- Pacific/Noumea<br>- Pacific/Norfolk<br>- Pacific/Nauru<br>- Pacific/Niue<br>- Pacific/Auckland<br>- Pacific/Chatham<br>- Pacific/Tahiti<br>- Pacific/Marquesas<br>- Pacific/Gambier<br>- Pacific/Port_Moresby<br>- Pacific/Pitcairn<br>- Pacific/Palau<br>- Pacific/Guadalcanal<br>- Pacific/Fakaofo<br>- Pacific/Tongatapu<br>- Pacific/Funafuti<br>- Pacific/Johnston<br>- Pacific/Midway<br>- Pacific/Wake<br>- Pacific/Honolulu<br>- Pacific/Efate<br>- Pacific/Wallis<br>- Pacific/Apia |
| Account | object | Account Information |
| Password | string | Password<br>Set the password encrypted with AES256+Base64.<br>A password before encryption has a length of 8 to 32 characters. |

## C.6 Switch-PSWITCH

| Parameter | Type | Description |
|---|---|---|
| Snmp | object | SNMP Function Information |
| Service | object | SNMP Function Settings Information |
| Mode | string | Availability/Non-availability of SNMP Function<br>- on: Enables SNMP function.<br>- off: Disables SNMP function. |
| Host | array | SNMP v1/2c Trap and Destination Settings |

| Parameter | Type | Description |
|---|---|---|
| | | Setting available for up to 8 at maximum.<br>Assigns for when using SNMPv1/2c. |
| Address | string | IP Address of SNMP Host<br>Assigns character strings in accordance with address description of IPv4 and IPv6. |
| Community | string | SNMP Community Name<br>Assigns 1-20 characters in the character string.<br>Specifies any of character strings set by keys"Snmp"-->"Community"-->"Name". |
| Trapversion | string | SNMP Trap Version<br>- 1: SNMP Version 1<br>- 2c: SNMP Version 2c |
| Udpport | string | SNMP Trap Transmission Port Number<br>Assigns "1"-"65535" in the character string. |
| V3host | array | SNMPv3 Trap and Destination Settings<br>Setting available for up to 8 at maximum.<br>Assigns for when using SNMPv3. |
| Address | string | IP Address of SNMP Host<br>Assigns character strings in accordance with address description of IPv4 and IPv6. |
| Username | string | SNMP User Name<br>Assigns 1-30 characters in the character string.<br>Specifies any of strings set by "Snmp">"User">"Username" |
| Notifytype | string | SNMP Trap Type<br>- traps: Trap<br>- informs: Inform |
| Udpport | string | SNMP Trap Transmission Port Number<br>Assigns "1"-"65535" in the character string. |
| Community | array | SNMP Community Information<br>Setting available for up to 8 at maximum. |
| Name | string | SNMP Community Name<br>Assigns 1-20 characters in the character string. |
| Write | object | SNMP Community Writing Permission Information |
| Access | string | SNMP Community Writing Permission<br>- enable: Writing to SNMP community is permitted.<br>- disable: Writing to SNMP community is not permitted. |
| Group | object | SNMP Group Information |
| Name | string | SNMP Group Name<br>Assigns 1-30 characters in the character string. |

| Parameter | Type | Description |
|---|---|---|
| | | Specifies any of strings set by keys of "Snmp"-->"Group"-->"Name". |
| User | array | SNMP User Information<br>Setting available for up to 8 at maximum. |
| Username | string | SNMP User Name<br>Assigns 1-30 characters in the character string. |
| Groupname | string | SNMP Group Name<br>Assigns 1-30 characters in the character string.<br>Specifies any of strings set by keys of "Snmp"-->"Group"-->"Name". |
| Auth | object | SNMP Authenticated Protocol Information |
| Auth | string | SNMP Authenticated Protocol<br>- Md5: Uses the MD5.<br>- sha: Uses SHA.<br>- noauth: Does not use a protocol for authentication. |
| Password | string | SNMP Authenticated Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 1 to 32 characters. |
| Priv | object | SNMP Encrypted Protocol Information |
| Priv | string | SNMP Encrypted Protocol<br>- des: Uses DES.<br>- nopriv: Does not use a protocol for encryption. |
| Password | string | SNMP Encrypted Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 1 to 32 characters. |
| Group | array | SNMP Group Information<br>Setting available for up to 8 at maximum. |
| Name | string | Group Name<br>Assigns 1-30 characters in the character string. |
| Snmpversion | string | SNMP Version<br>- v1: SNMP Version 1<br>- v2c: SNMP Version 2c<br>- v3: SNMP Version 3 |
| V3 | object | SNMPv3 Information |
| Securitylevel | string | Security Level for SNMPv3<br>Assigns for when using SNMPv3.<br>- priv: Enables authentication and encryption.<br>- auth: Enables authentication.<br>- noauth: Disables authentication and encryption |

| Parameter | Type | Description |
|---|---|---|
| Read | object | SNMP MIB Reading Permission Information |
| Access | string | SNMP MIB Reading Permission<br>- Default: Enable MIB read out.<br>- none: Does not allow reading from MIB. |
| Write | object | SNMP MIB Writing Permission Information |
| Access | string | SNMP MIB Writing Permission<br>- Default: Allows writing to MIB.<br>- none: Does not allow writing to MIB |
| Notify | object | SNMP Trap Notification Permission Information |
| Access | string | SNMP Trap Notification Permission<br>- Default: Enable SNMP trap notifications.<br>- none: Does not allow SNMP trap transmission. |
| AutoTime | object | Information of automatic time settings |
| Server | array | Information of a Time Informing Server<br>Setting available for up to 3 at maximum. |
| Address | string | IP Address of a server that provides time information<br>Assigns character strings in accordance with address description of IPv4 and IPv6. |
| Mode | string | Mode used<br>- broadcast: Synchronizes the time by inquiring the broadcast information to the SNTP server.<br>- unicast: SNTP client works with a SNTP server in a relation of point-to-point. |
| Interval | object | An interval of Automatic Time Setting |
| Time | integer | An interval of Automatic Time Setting<br>Assigns a second value between 6-10 seconds<br>Default value is 6 seconds. |
| Zone | object | Time Zone Information |
| Offset | string | Time Zone that the Device is using<br>Assigns sexagesimal digits [-1200]-[1300] in the character string. |
| Account | object | Account Information |
| Password | string | Password<br>Sets the password encrypted with AES256+Base64.<br>A password before encryption has a length of 8 to 64 characters. |

# Appendix D Details of Profile Parameters (ProfileData)

This section explains detailed information about the below parameters:

- 4.10.3 Adding Profiles
- 4.10.5 Separate Retrieval for Profiles
- 4.10.6 Updating Profiles
- 4.10.17 Adding Policies
- 4.10.19 Separate Retrieval for Policies
- 4.10.20 Updating Policies
- C.1 Server-BX

## D.1 BIOS

| Parameter | | Type | Description |
|---|---|---|---|
| BIOS | | object | BIOS Settings |
| | SasController | string | Assigns the operation of the onboard SAS/SATA storage controller unit (SCU).<br>If none are set, assigns null.<br>- Enabled: Enables SCU.<br>- Disabled: Disable SCU. |
| | SasSataOpRom | string | Specifies the operation of Option ROM for SAS/SATA controller.<br>Assign when SasController is Enabled.<br>If none are set, assigns null.<br>- Enabled: Enables Option ROM.<br>- Disabled: Disables Option ROM. |
| | SasSataDriver | string | Specifies the type of Option ROM for SAS/SATA controller.<br>Assigns when SasSataOpRom is Enabled.<br>If none are set, assigns null.<br>- LSI MegaRAID: Use Option ROM which uses Embedded MegaRAID.<br>- Intel RSTe: Use Intel RSTe-use Option ROM. |
| | HyperThreading | string | Assigns the CPU's Hyper Threading Technology operation.<br>When installing a CPU without this function, this settings will have no meaning.<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| | XDBitfunctionalityAndNXMemoryProtection | string | Assign the CPU's Execute Disable Bit operation.<br>This function is called XD (eXecute Disable) bit or NX (No eXecute) bit.<br>If none are set, assigns null. |

| Parameter | Type | Description |
|---|---|---|
| | | - Enabled: Enable function.<br>- Disabled: Will disable function. |
| VirtualizationTechnology | string | Assigns virtualization support function operation of the CPU.<br>If none are set, assigns null.<br>- Enabled: Enable function.<br>- Disabled: Will disable function. |
| IntelVTd | string | Assigns the CPU's Virtualization Technology for Directed I/O function operation.<br>If none are set, assigns null.<br>- Enabled: Enables function.<br>- Disabled: Disables function. |
| PowerTechnologyCpu | string | Assigns power management operation of the CPU.<br>If none are set, assigns null.<br>- Energy Efficient: Operates at a level optimized for energy efficiency.<br>- Custom: Sets detailed operation according to added setup items<br>- Disabled: Disables power management function. |
| EnhancedSpeedStep | string | Specifies operation of power saving functions.<br>If none are set, assigns null.<br>- Enabled: Enables function.<br>- Disabled: Disables function. |
| TurboMode | string | Assigns the CPU's Turbo Boost Technology operation.<br>When installing any CPU without this function, these settings do not apply and are disabled.<br>If none are set, assigns null.<br>- Enabled: Enables function.<br>- Disabled: Disables function. |
| NUMA | string | Assigns operation of NUMA (Non-Uniform Memory Access) function.<br>If none are set, assigns null.<br>- Enabled: Enables NUMA function.<br>- Disabled: Disables NUMA function. |
| DDR_Performance | string | Specifies operation of memory module.<br>Memory modules operates at a different speed (frequency).<br>At a higher speed, performance improves and at a lower speed it is more energy efficient.<br>Usable memory speed varies depending on the installed memory module construction.<br>If none are set, assigns null. |

| Parameter | Type | Description |
|---|---|---|
| | | - Low-Voltage optimized: High speed setting allowed at low voltage<br>- Energy optimized: Settings that operates at the lowest level possible for energy efficiency.<br>- Performance optimized: Fastest settings available to get the best performance |
| Csm | string | Assign the CSM (Compatibility Support Module) execution operation.<br>Legacy operating system can run only when the CSM is loaded.<br>If none are set, assigns null.<br>- Enabled: CSM will be executed to ensure UEFI operating system can startup.<br>- Disabled: CSM will not be executed to ensure only UEFI operating system can startup. |
| BootOptionFilter | string | Assigns boot operation of a drive.<br>If none are set, assigns null.<br>- UEFI and Legacy: Can boot from UEFI OS drive and Legacy OS drive.<br>- Legacy only: Can only boot from Legacy OS drive.<br>- UEFI only: Can only boot from UEFI OS drive. |
| LaunchPxeOpRomPolicy | string | Specifies PXE Option ROM to start.<br>For PXE boot, there are usable, normal (Legacy) PXE boot and UEFI PXE boots available.<br>If none are set, assigns null.<br>- Do not launch: Option ROM will not start up.<br>- UEFI only: Only UEFI Option ROM can be started.<br>- Legacy only:Starts up only Legacy Option ROM. |
| LaunchStorageOpRomPolicy | string | Assigns the Storage Option ROM to be started.<br>If none are set, assigns null.<br>- Do not launch: Storage Option ROM will not start up.<br>- UEFI only: Only UEFI Storage Option ROM can be started.<br>- Legacy only:Only Legacy Storage Option ROM will be started. |
| OtherPciDeviceRomPriority | string | Assigns Option ROM with the exception network, mass storage device and video which will startup with the device.<br>If none are set, assigns null.<br>- UEFI OpROM: Only UEFI Option ROM is started.<br>- Legacy OpROM:Only start up Legacy Option ROM. |
| NetworkStack | string | Assigns whether UEFI Network Stack can be used for network access in UEFI.<br>For instance, when unable to use UEFI network stack, UEFI install cannot be executed via PXE.<br>If none are set, assigns null. |

| Parameter | Type | Description |
|---|---|---|
| | | - Disabled: Cannot use UEFI network stack.<br>- Enabled: Can use UEFI network stack. |
| IPv4PxeSupport | string | Specifies whether PXE UEFI Boot by IPv4 can be used in UFI mode for installation of an operating system.<br>If none are set, assigns null.<br>- Disabled: Cannot use PXE UEFI Boot by IPv4.<br>- Enabled: Can use PXE UEFI Boot by IPv4. |
| IPv6PxeSupport | string | Specifies whether PXE UEFI Boot by IPv6 can be used in UFI mode for installation of an operating system.<br>If none are set, assigns null.<br>- Disabled: Cannot use PXE UEFI Boot by IPv6.<br>- Enabled: Can use PXE UEFI Boot by IPv6. |
| LaunchSlot1Oprom | string | Assign execution of extension ROM built into PCI slot 1.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot2Oprom | string | Assign execution of extension ROM built into PCI slot 2.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot3Oprom | string | Assigns execution of extension ROM built into PCI slot 3.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot4Oprom | string | Assign execution of extension ROM built into PCI slot 4.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot5Oprom | string | Assign execution of extension ROM built into PCI slot 5.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null. |

| Parameter | Type | Description |
|---|---|---|
| | | - Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot6Oprom | string | Assign execution of extension ROM built into PCI slot 6.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot7Oprom | string | Assigns execution of extension ROM built into PCI slot 7.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot8Oprom | string | Assigns execution of extension ROM built into PCI slot 8.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot9Oprom | string | Assigns execution of extension ROM built into PCI slot 9.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot10Oprom | string | Assign execution of extension ROM built into PCI slot 10.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot11Oprom | string | Assigns execution of extension ROM built into PCI slot 11.<br>Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |
| LaunchSlot12Oprom | string | Assigns execution of extension ROM built into PCI slot 12. |

| Parameter | | Type | Description |
|---|---|---|---|
| | | | Even though it is possible to assign profile to many slots, do not assign to any slot that actually does not exist.<br>If none are set, assigns null.<br>- Enabled: Executes extended ROM.<br>- Disabled: Does not execute extended ROM. |

## D.2 iRMC

| Parameter | | Type | Description |
|---|---|---|---|
| iRMC | | object | Settings of iRMC (Integrated Remote Management Controller) |
| | ConfDefaultGuiLanguage | string | Assigns initial settings of language<br>Becomes valid when iRMC Web Interface is called next time.<br>If none are set, assigns null.<br>- English<br>- German<br>- Japanese |
| | ConfBmcTimeSyncSource | string | Specifies time display performance of iRMC.<br>If none are set, assigns null.<br>- System RTC: iRMC acquires time from a system clock of a target server for controlling.<br>- NTP Server: iRMC synchronizes with another NTP server which uses network time protocol (NTP) and operates on its own time taken from a reference source. |
| | ConfBmcRtcTimeMode | string | Specifies time display performance of iRMC.<br>If none are set, assigns null.<br>- UTC: Time of iRMC is shown in UTC (coordinated universal time).<br>- Localtime: Displays in local time format. |
| | ConfBmcTimeZoneLocation | string | Assigns time zone to correspond to a location of a server<br>If none are set, assigns null.<br>- Asia/Tokyo<br>- US/Pacific<br>- US/Mountain<br>- US/Central<br>- US/Eastern<br>- Europe/Berlin<br>- Europe/London<br>- UTC |
| | ConfBmcNtpServer0 | string | Assigns IP address of the primary NTP server or DNS name.<br>If none are set, assigns null. |

| Parameter | Type | Description |
|---|---|---|
| ConfBmcNtpServer1 | string | Assigns IP address of the secondary NTP server or DNS name.<br>If none are set, assigns null. |
| ConfPostErrorHalt | string | Assigns performance at startup error of a server<br>If none are set, assigns null.<br>- Continue: Even if an error occurs, continue startup process.<br>- Halt on errors: When an error occurs, stop startup until there is an input key. |
| ConfPowerControlMode | string | Assigns settings for power-saving and low-noise operations of a server.<br>If none are set, assigns null.<br>- O/S Controlled: OS controlled<br>- Minimum Power: Operation which prioritizes low power usage. |
| ConfDisableFanTest | string | Assigns diagnostic execution of the fan<br>If none are set, assigns null.<br>- Enabled: Conducts test daily at specified time.<br>- Disabled: Does not conduct fan test. |
| ConfFanDailyTestTime | string | Specifies starting time of the fan test.<br>Becomes valid when executing the fan test.<br>If none are set, assigns null. |
| ConfPowerFailBehavior | string | After the AC power input is cut, assigns the power operation to when it is restored.<br>If none are set, assigns null.<br>- As Before: Preserves the status in case of a power cut. (It will power one if the power is set to ON when cut. When its power supply has been turned off , it will not accept power activation)<br>- Remain Off: Keeps power OFF continuously.<br>- Always On: Keeps power ON continuously. |
| ConfSoftWatchdogEnable | string | Assigns a regular communication checking during running of the OS at software watchdog.<br>If none are set, assigns null.<br>- Enabled: Monitors transmissions.<br>- Disabled: Does not monitor transmissions. |
| ConfSoftWatchdogBehavior | string | Assigns an operation when the OS does not communicate due to software watchdog.<br>Assigns for case that ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Continue: Continue process.<br>- Reset: Restarts a server.<br>- Power Cycle: After turning off power of a server for once, then turns it on. |

| Parameter | Type | Description |
|---|---|---|
| ConfSoftWatchdogTime | integer | Assigns a value from 1-100 minutes for monitoring time by the software watchdog.<br>Assigns for case that ConfBootWatchdogEnable is Enabled.<br>It is judged as unable to communicate when there is no communication after a specified time here.<br>If none are set, assigns null. |
| ConfBootWatchdogEnable | string | In Boot watchdog, assign the monitoring time operation from after POST ends to when OS runs.<br>Assigns when ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Enabled: Monitors time.<br>- Disabled: Does not monitor time. |
| ConfBootWatchdogBehavior | string | Assigns the operation when the OS does not run within the time set in Boot watchdog.<br>Assigns when ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Continue: Continue process.<br>- Reset: Restarts a server.<br>- Power Cycle: After turning off power of a server for once, then turns it on. |
| ConfBootWatchdogTime | integer | Assigns a value from 1-100 minutes for the Boot watchdog monitoring time.<br>Assigns when ConfBootWatchdogEnable is Enabled.<br>It is judged as abnormality when OS cannot start after a specified time here.<br>If none are set, assigns null. |
| ConfBMCTelnetPort | integer | Specifies Telnet port for iRMC.<br>If none are set, assigns null. |
| ConfBMCSshPort | integer | Specifies SSH (Secure Shell) port for iRMC.<br>If none are set, assigns null. |
| ConfBMCTelnetEnable | string | Assigns connection with Telnet.<br>If none are set, assigns null.<br>- Enabled: Enables Telnet connection.<br>- Disabled: Disables Telnet connection. |
| ConfBMCSshEnable | string | Assigns connection with SSH.<br>If none are set, assigns null.<br>- Enabled: Enables SSH connection.<br>- Disabled: Disables SSH connection. |
| ConfBmcSnmpServiceEnable | string | Assigns SNMP service performance at iRMC.<br>If none are set, assigns null.<br>- Enabled: Enables it. |

| Parameter | Type | Description |
|---|---|---|
| | | - Disabled: Disable it. |
| ConfBMCSnmpServicePort | integer | The SNMP service will assign the port that is on standby.<br>Typically it becomes a UDP 161 port.<br>If none are set, assigns null. |
| ConfBMCSnmpServiceEnableV3Only | string | Assigns the SNMP protocol.<br>If none are set, assigns null.<br>- All (SNMPv1/v2c/v3): All protocol support (SNMPv1/v2c/v3)<br>- SNMPv3 only:SNMPv3 |
| ConfBMCSnmpServiceCommunityNam e | string | Assigns the community name for when it is SNMP v1/v2c.<br>If none are set, assigns null.<br>The number of characters assignable is up to 18 characters at maximum.<br>Characters and symbols assignable are A-Z, a-z, 0-9 and (*/:,_?:-@&) %!.<br>You cannot use blank symbols and \. |
| ConfBMCSnmpV3UserServiceEnabled | string | Assigns SNMPv3 support operations for a user.<br>If none are set, assigns null.<br>Enabled: Enables it.<br>Disabled: Disable it. |
| ConfBMCSnmpV3UserAuthType | string | Assigns authentication protocols that SNMPv3 uses for authentication.<br>If none are set, assigns null.<br>- Uses SHA:SHA (Secure Hash Algorithm) for authentication.<br>- MD5: Uses in MD5 (Message-Digest Algorithm 5) certification.<br>- none: Does not use authentication. |
| ConfBMCSnmpV3UserPrivType | string | Assigns encryption protocol that SNMPv3 uses to encrypt SNMPv3 traffic.<br>If none are set, assigns null.<br>- Use DES:DES (Digital Encryption Standard) for SNMPv3 traffic encryption.<br>- Use AES:AES (Advanced Encryption Standard) 128 bit encryption for SNMPv3 traffic encryption.<br>- none: Does not use encryption. |
| ConfBMCSnmpV3UserAccessType | string | Assigns access privilege of a user.<br>"Read only" has been set as fixed.<br>If none are set, assigns null.<br>- Read Only: Read-only |
| ConfBMCSnmpTrapCommunityName | string | Assigns the SNMP community name.<br>If none are set, assigns null.<br>The number of characters assignable is up to 18 characters at maximum. |

| Parameter | Type | Description |
|---|---|---|
| | | Characters and symbols assignable are A-Z, a-z, 0-9 and (*/:,_?:-@&) %!.<br>You cannot use blank symbols and \. |
| ConfBMCSnmpV3UserSelected | string | Assigns SNMPv3 user already defined in SNMPv3 trap destination.<br>Specifies a user name that has been created on iRMC.<br>If none are set, assigns null.<br>A user name can be assigned with 16 character at maximum.<br>A valid user name should start with an alphabet.<br>For the remaining part of the name, it can accept only alphabets, digits, under bar, dash, period and at mark (@).<br>You cannot use blank symbols. |
| ConfBMCSnmpTrapDestName1 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum. |

| Parameter | Type | Description |
|---|---|---|
| | | Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable 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".<br>If none are set, assigns null.<br>The number of characters assignable is up to 64 characters at maximum.<br>Characters and symbols assignable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.). |
| ConfBMCSnmpProtocol1 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol2 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol3 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol4 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol5 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c |

| Parameter | Type | Description |
|---|---|---|
| | | - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol6 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol7 | string | Assigns the version of SNMP protocol used in reception of trap.<br>If none are set, assigns null.<br>- SNMPv1: SNMP Protocol Version 1<br>- SNMPv2c: SNMP Protocol Version 2c<br>- SNMPv3: SNMP Protocol Version 3 |

## D.3 IOVirtualization

| Parameter | Type | Description |
|---|---|---|
| IOVirtualization | object | Settings of virtual IO |
| AdapterConfigIrmc | object | Settings of virtual IO |
| UseVirtualAddresses | string | Specifies if virtual address should be used in profile.<br>- true:Uses a virtual address. By turning UseVirtualAddresses of the port to false, only virtual address of specific port can be turned to invalid.<br>- false:Dose not use a virtual address. Do not specify all of VirtualAddresses of this profile. |
| BootMenuEnable | string | Specifies if the boot menu should be enabled.<br>- true: Enables the boot menu.<br>- false: Disables the boot menu. |
| SmuxSetting | string | Assigns settings of SMUX.<br>SMUX means a function to change connection between LAN card and Fabric.<br>Omit this settings for any platform not supported for SMUX setup.<br>Becomes equivalent with a state specified for Fabric4 when omitted.<br>- Use the Fabric3:Fabric3.<br>- Use the Fabric4:Fabric4.<br>- Fabric3+4:LAN1 uses Fabric3 and LAN2 uses Fabric4.<br>- Fabric4+3:LAN1 uses Fabric4 and LAN2 uses Fabric3. |
| SRIOV | string | Specifies if SR-IOV should be used.<br>- true: Enables SR-IOV. By turning SRIOV of the port to false, only virtual address of specific port can turned to invalid.<br>- false:Disables SR-IOV. |
| BootMode | string | Shows a boot mode for use when there is IO channel to be defined as a boot device. |

| Parameter | Type | Description |
|---|---|---|
| | | - LegacyFirst:Prioritizes Legacy Boot (BIOS). Uses UEFI Boot as well.<br>- LegacyOnly:Uses only Legacy Boot (BIOS).<br>- UEFIFirst:Prioritizes UEFI Boot. Uses Legacy Boot (BIOS) as well.<br>- UEFIOnly:Uses only UEFI Boot. |
| Slots | object | Slot management |
| Slot | array | Slot management |
| OnboardControllers | object | Assigns settings of onboard.<br>Omits if there is no need to configure onboard. |
| OnboardController | array | Assigns settings of onboard.<br>Assign either CNAAdapter, LANAdapter, FCAdapter. |
| CNAAdapter | object | Assigns the settings of the CNA adapter.<br>Omit if there is no need to configure the CNA adapter.<br>For details, refer to "D.3.1 CNAAdapter." |
| LANAdapter | object | LAN Adapter Settings<br>For details, refer to "D.3.2 LANAdapter." |
| FCAdapter | object | FC Adapter Settings<br>For details, refer to "D.3.3 FCAdapter." |
| AddOnCards | object | Assigns settings of PCI card.<br>Omit if there is no need to configure the PCI card. |
| AddOnCard | array | Assigns settings of PCI card.<br>Assigns either CNAAdapter, LANAdapter, FCAdapter. |
| @AddOnCardIdx | integer | Assigns a number the PCI card will attach.<br>The value starts from 1. |
| CNAAdapter | object | CNA Adapter Settings<br>Omit if there is no need to configure the CNA adapter.<br>For details, refer to "D.3.1 CNAAdapter." |
| LANAdapter | object | LAN Adapter Settings<br>For details, refer to "D.3.2 LANAdapter." |
| FCAdapter | object | FC Adapter Settings<br>For details, refer to "D.3.3 FCAdapter." |
| DaughterCards | object | Assigns settings of an expansion card.<br>Omit if there is no need to configure an expansion card. |
| DaughterCard | array | Assigns settings of an expansion card.<br>Assign either CNAAdapter, LANAdapter, FCAdapter. |
| @DaughterCardIdx | integer | Assigns a number an expansion card belongs to.<br>The value starts from 1. |
| CNAAdapter | object | Settings of CNA Adapter<br>Omit if there is no need to configure the CNA adapter. |

| Parameter | Type | Description |
|---|---|---|
| | | For details, refer to "D.3.1 CNAAdapter." |
| LANAdapter | object | LAN Adapter Settings<br>For details, refer to "D.3.2 LANAdapter." |
| FCAdapter | object | FC Adapter Settings<br>For details, refer to "D.3.3 FCAdapter." |

## D.3.1 CNAAdapter

| Parameter | Type | Description |
|---|---|---|
| CNAAdapter | object | Assign the settings of the CNA adapter.<br>Omit if there is no need to configure the CNA adapter. |
| Ports | object | Port Settings |
| Port | array | Port Settings |
| @PortIdx | integer | Assigns a number of a port.<br>The value starts from 1. |
| PortEnable | string | Setting of Port Validity<br>- true: Enables a port.<br>- false: Does not enable a port. |
| Functions | object | CAN Function<br>Assigns either LANFunction, FCoEFunction, or ISCSIFunction. |
| Function | array | CAN Function |
| @FunctionIdx | integer | Assigns a number of Function.<br>The value starts from 1. |
| LANFunction | object | LAN Function |
| FunctionEnable | string | Setting of Function Validity<br>- true: Enables Function.<br>- false: Does not enable Function. |
| VLANId | integer | Assigns the VLAN ID. |
| Bandwidth | integer | Specifies settings of bandwidth.<br>Assigns respective IO channels so that the total is 100.<br>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<br>It should be exceeding the value of bandwidth of this function. |
| SRIOV | string | Settings to enable SR-IOV<br>- true: Enables SR-IOV.<br>- false: Disables SR-IOV. |
| UseVirtualAddresses | string | Settings of the use of virtual address<br>- true: Uses a virtual address.<br>- false:Does not use virtual address. |

| Parameter | Type | Description |
|---|---|---|
| VirtualAddress | object | Assigns a virtual address.<br>It is unnecessary when a virtual address is not used.<br>Virtual MAC address, WWPN and IQN have to be unique as a whole.<br>WWMM, except for identical cards, should be unique as a whole.<br>IQN, WWPN, WWNN are duplicate and there is a possibility of the volume crashing if the same volume is accessed at the same time.<br>When virtual MAC addresses duplicate, net communication gets disabled.<br>Multi-cast MAD address cannot be used as virtual MAC address.<br>When setting a virtual address optionally, there is a possibility of overlapping with the values of other cards at the time of factory shipment<br>It is recommended to configure a virtual address in the following range:<br>MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1)<br>WWN(50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| MAC | string | Assigns a virtual MAC address.<br>Divide into 2-digit half-width English characters using a colon(:) or hyphen(-).<br>When assigning a virtual address automatically, specify null. |
| BootProtocol | string | Settings of boot methods<br>None: Does specify how to boot.<br>PXE: Uses PXE. |
| BootPriority | integer | Sequence of booting should be specified by values 1 to 4.<br>Any redundant value in a profile cannot be used. |
| PXEBootEnvironment | object | Settings of PXE boot |
| IPUsage | string | Assigns the IP protocol to use in PXE boot.<br>- IP4first:Uses the IPv4 first.<br>- IP4only: Uses IPv4 only.<br>- IP6first:Uses the IPv6 first.<br>- IP6only: Uses IPv6 only. |
| FCoEFunction | object | FCoE Function |
| FunctionEnable | string | Settings of Function Validity<br>- true: Enables Function.<br>- false: Does not enable Function. |
| Bandwidth | integer | Specifies settings of bandwidth.<br>Assigns respective IO channels so that the total is 100.<br>If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally to meet this value. |

| Parameter | Type | Description |
|---|---|---|
| RateLimit | integer | Maximum share percent of bandwidth available at this function<br>It should be exceeding the value of bandwidth of this function. |
| SRIOV | string | Settings to enable SR-IOV<br>- true: Enables SR-IOV.<br>- false: Disables SR-IOV. |
| UseVirtualAddresses | string | Settings of the use of virtual address<br>- true: Uses a virtual address.<br>- false:Does not use virtual address. |
| VirtualAddress | object | Virtual Address<br>It is unnecessary when a virtual address is not used.<br>Virtual MAC address, WWPN and IQN have to be unique as a whole.<br>WWMM, except for identical cards, should be unique as a whole.<br>IQN, WWPN, WWNN are duplicate and there is a possibility of the volume crashing if the same volume is accessed at the same time.<br>When virtual MAC addresses duplicate, net communication gets disabled.<br>Multi-cast MAD address cannot be used as virtual MAC address.<br>When setting a virtual address optionally, there is a possibility of overlapping with the values of other cards at the time of factory shipment<br>It is recommended to configure a virtual address in the following range:<br>MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1)<br>WWN(50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| WWNN | string | Assigns a virtual WWNN.<br>Divide into 2 digit half-width English characters using (:).<br>When assigning a virtual address automatically, specify null. |
| WWPN | string | Assigns a virtual WWNN.<br>Divide into 2 digit half-width English characters using (:).<br>WWPN, including other profiles, should be unique as a whole.<br>When assigning a virtual address automatically, specify null. |
| MAC | string | Assigns a virtual MAC address.<br>Divide into 2-digit half-width English characters using a colon(:) or hyphen(-).<br>When assigning a virtual address automatically, specify null. |
| BootProtocol | string | Settings of boot methods<br>- None: Does specify how to boot.<br>- FC: Use the FC. |
| BootPriority | integer | Sequence of booting should be specified by values 1 to 4. |

| Parameter | Type | Description |
|---|---|---|
| | | Any redundant value in a profile cannot be used. |
| FCBootEnvironment | object | FC Boot Settings |
| FCTargets | object | FC Target Settings |
| FCTarget | array | FC Target Settings<br>Assigns information of the first and second storages that start up by SAN boot. |
| @FCTargetIdx | integer | Assigns information of the first and second storages that start up by SAN boot. |
| TargetWWPN | string | Assigns WWPN of storage that starts up by SAN boot. |
| TargetLUN | integer | Assigns LUN of storage that starts up by SAN boot. |
| FCLinkSpeed | string | Assigns speed of connection.<br>- auto: Automatic<br>- 1:1 Gbit/s<br>- 2:2 Gbit/s<br>- 4:4 Gbit/s<br>- 8:8 Gbit/s<br>- 16:16 Gbit/s |
| FCTopology | string | Assigns a form of connection.<br>- auto_loop: Automatic (It tries connect by Arbitrated loop at the beginning)<br>- PtP:Point-to-Point<br>- auto_PtP: Automatic (It tries to Point-to-Point connection at the beginning)<br>- loop:Arbitrated loop |
| ISCSIFunction | object | iSCSI Function |
| FunctionEnable | string | Settings of Function Validity<br>- true: Enables Function.<br>- false: Does not enable Function. |
| VLANId | integer | VLAN ID |
| Bandwidth | integer | Specifies settings of bandwidth.<br>Assigns respective IO channels so that the total is 100.<br>If the total bandwidth is not 100, the bandwidth value is adjusted internally to meet this value. |
| RateLimit | integer | Maximum share percent of bandwidth available at this function<br>It should be exceeding the value of bandwidth of this function. |
| SRIOV | string | Settings to enable SR-IOV<br>- true: Enables SR-IOV.<br>- false: Disables SR-IOV. |
| UseVirtualAddresses | string | Settings of the use of virtual address<br>- true: Uses a virtual address. |

| Parameter | Type | Description |
|---|---|---|
| | | - false:Does not use virtual address. |
| VirtualAddress | object | Assigns a virtual address.<br>It is unnecessary when a virtual address is not used.<br>Virtual MAC address, WWPN and IQN have to be unique as a whole.<br>WWMM, except for identical cards, should be unique as a whole.<br>IQN, WWPN, WWNN are duplicate and there is a possibility of the volume crashing if the same volume is accessed at the same time.<br>When virtual MAC addresses duplicate, net communication gets disabled.<br>Multi-cast MAD address cannot be used as virtual MAC address.<br>When setting a virtual address optionally, there is a possibility of overlapping with the values of other cards at the time of factory shipment<br>It is recommended to configure a virtual address in the following range:<br>MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1)<br>WWN(50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| MAC | string | Virtual MAC Address<br>Divide into 2-digit half-width English characters using a colon(:) or hyphen(-).<br>When assigning a virtual address automatically, specify null. |
| BootProtocol | string | Settings of boot methods<br>None: Does specify how to boot.<br>Use ISCSI:iSCSI. |
| BootPriority | integer | Sequence of booting should be specified by values 1 to 4.<br>Any redundant value in a profile cannot be used. |
| ISCSIBootEnvironment | object | Setting of iSCSI Boot |
| ISCSIInitiator | object | Setting of iSCSI Initiator |
| DHCPUsage | string | IP Address for Initiator<br>true: Acquires an address from DHCP server dynamically.<br>false: Sets up an address statically. |
| Name | string | Initiator IQN<br>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<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| SubnetMask | string | Subnet Mask |

| Parameter | Type | Description |
|---|---|---|
| | | Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| GatewayIPv4Address | string | Gateway Address<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| VLANId | integer | VLAN ID used when sending the required HBA.<br>Assign in the case of CNA iSCSI function. |
| ISCSITarget | object | Setting of iSCSI Target |
| DHCPUsage | string | Setting of how to acquire IP Address of a target<br>- true: Acquires an address from DHCP server dynamically.<br>- false: Sets up an address statically. |
| Name | string | Target IQN<br>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 "-")<br>It is possible to omit when the DHCPUsage of the ISCSITarget is true. |
| IPv4Address | string | Target IP Address<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| PortNumber | integer | Target Port Number<br>It is assigned when DHCPUsage is false. It can be omitted even when DHC PUsage is false.<br>If omitted, set to 3260. |
| BootLUN | integer | Assigns LUN number (0-255) of the target .<br>It is assigned when DHCPUsage is false. |
| AuthenticationMethod | string | Setting of authentication methods<br>- None: No Authentication<br>- CHAP: CHAP Authentication<br>- MutualCHAP: Mutual CHAP Authentication |
| ChapUserName | string | Authentication user name<br>Specifies a string with less than 127 characters consisting of alphametric characters and symbols.<br>Assign when the AuthenticationMethod is anything besides None.<br>You may not use symbols by type of hardware.<br>It is recommended to use only alphametric characters. |
| ChapSecret | string | Secret of CHAP Authentication<br>Set the password encrypted with AES256+Base64. |

| Parameter | Type | Description |
|---|---|---|
| | | For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols.<br>Assign when the AuthenticationMethod is anything besides None.<br>You may not use symbols by type of hardware. It is recommended to use only alphametric characters. |
| MutualChapSecret | string | Secret of Mutual CHAP Authentication<br>Set the password encrypted with AES256+Base64.<br>For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols.<br>Assign when the AuthenticationMethod is anything besides None.<br>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 Configuration |
| Port | array | Port Configuration |
| @PortIdx | integer | Assigns a number of a port.<br>The value starts from 1. |
| PortEnable | string | Setting of Port Validity<br>- true: Enables a port.<br>- false: Does not enable a port. |
| SRIOV | string | Settings to enable SR-IOV<br>- true: Enables SR-IOV.<br>- false: Disables SR-IOV. |
| UseVirtualAddresses | string | Settings of the use of virtual address<br>- true: Uses a virtual address.<br>- false:Does not use virtual address. |
| VirtualAddress | object | Assigns a virtual address.<br>It is unnecessary when a virtual address is not used.<br>Virtual MAC address, WWPN and IQN have to be unique as a whole.<br>WWMM, except for identical cards, should be unique as a whole.<br>IQN, WWPN, WWNN are duplicate and there is a possibility of the volume crashing if the same volume is accessed at the same time.<br>When virtual MAC addresses duplicate, net communication gets disabled.<br>Multi-cast MAD address cannot be used as virtual MAC address. |

| Parameter | Type | Description |
|---|---|---|
| | | When setting a virtual address optionally, there is a possibility of overlapping with the values of other cards at the time of factory shipment<br>It is recommended to configure a virtual address in the following range:<br>MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1)<br>WWN(50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| MAC | string | Virtual MAC Address<br>Divide into 2-digit half-width English characters using a colon(:) or hyphen(-).<br>When assigning a virtual address automatically, specify null. |
| BootProtocol | string | Settings of boot methods<br>- None: Does specify how to boot.<br>- PXE: Uses PXE.<br>- Use ISCSI:iSCSI. |
| BootPriority | integer | Sequence of booting should be specified by values 1 to 4.<br>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<br>- true: Acquires an address from DHCP server dynamically.<br>- false: Sets up an address statically. |
| Name | string | Initiator IQN<br>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<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| SubnetMask | string | Subnet Mask<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| GatewayIPv4Address | string | Gateway Address<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| VLANId | integer | VLAN ID used when sending the required HBA.<br>Assign in the case of CNA iSCSI function. |
| ISCSITarget | object | Setting of iSCSI Target |
| DHCPUsage | string | Setting of how to acquire IP Address of a target<br>- true: Acquires an address from DHCP server dynamically.<br>- false: Sets up an address statically. |

| Parameter | Type | Description |
|---|---|---|
| Name | string | Target IQN<br>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 "-")<br>It is possible to omit when the DHCPUsage of the ISCSITarget is true. |
| IPv4Address | string | Target IP Address<br>Specifies a string consisting half-width digits (0-255) and period (".").<br>It is assigned when DHCPUsage is false. |
| PortNumber | integer | Target Port Number<br>It is assigned when DHCPUsage is false. It can be omitted even when DHC PUsage is false. If omitted, set to 3260. |
| BootLUN | integer | Assigns LUN number (0-255) of the target .<br>It is assigned when DHCPUsage is false. |
| AuthenticationMethod | string | Setting of authentication methods<br>None: No Authentication<br>CHAP: CHAP Authentication<br>MutualCHAP: Mutual CHAP Authentication |
| ChapUserName | string | Authentication user name<br>Specifies a string with less than 127 characters consisting of alphametric characters and symbols.<br>Assign when the AuthenticationMethod is anything besides None.<br>You may not use symbols by type of hardware. It is recommended to use only alphametric characters. |
| ChapSecret | string | Secret of CHAP Authentication<br>Set the password encrypted with AES256+Base64.<br>For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols.<br>Assign when the AuthenticationMethod is anything besides None.<br>You may not use symbols by type of hardware.<br>It is recommended to use only alphametric characters. |
| MutualChapSecret | string | Secret of Mutual CHAP Authentication<br>Set the password encrypted with AES256+Base64.<br>For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols.<br>Assign when the AuthenticationMethod is anything besides None.<br>You may not use symbols by type of hardware.<br>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.<br>- IP4first: Uses the IPv4 first.<br>- IP4only: Uses IPv4 only. |

| Parameter | Type | Description |
|---|---|---|
| | | - IP6first:Uses the IPv6 first.<br>- 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 | Assigns a number of a port.<br>The value starts from 1. |
| PortEnable | string | Setting of Port Validity<br>- true: Enables a port.<br>- false: Does not enable a port. |
| SRIOV | string | Settings to enable SR-IOV<br>- true: Enables SR-IOV.<br>- false: Disables SR-IOV. |
| UseVirtualAddresses | string | Settings of the use of virtual address<br>- true: Uses a virtual address.<br>- False: Does not use virtual address. |
| VirtualAddress | object | Assigns a virtual address.<br>It is unnecessary when a virtual address is not used.<br>Virtual MAC address, WWPN and IQN have to be unique as a whole.<br>WWMM, except for identical cards, should be unique as a whole.<br>IQN, WWPN, WWNN are duplicate and there is a possibility of the volume crashing if the same volume is accessed at the same time.<br>When virtual MAC addresses duplicate, net communication gets disabled.<br>Multi-cast MAD address cannot be used as virtual MAC address.<br>When setting a virtual address optionally, there is a possibility of overlapping with the values of other cards at the time of factory shipment.<br>It is recommended to configure a virtual address in the following range:<br>MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1)<br>WWN(50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| WWNN | string | Assigns a virtual WWNN.<br>Divide into 2-digit half-width English characters using (:).<br>When assigning a virtual address automatically, specify null. |
| WWPN | string | Assigns a virtual WWNN. |

| Parameter | Type | Description |
|---|---|---|
| | | Divide into 2 digit half-width English characters using (:). WWPN, including other profiles, should be unique as a whole.<br>When assigning a virtual address automatically, specify null. |
| BootProtocol | string | Settings of boot methods<br>None: Does specify how to boot.<br>FC: Use the FC.<br>Set as None or FC when FCAdapter. |
| BootPriority | integer | Sequence of booting should be specified by values 1 to 4.<br>Any redundant value in a profile cannot be used. |
| FCBootEnvironment | object | FC Boot Settings |
| FCTargets | object | FC Target Settings |
| FCTarget | array | FC Target Settings<br>Assigns information of the first and second storages that start up by SAN boot. |
| @FCTargetIdx | integer | Assigns information of the first and second storages that start up by SAN boot. |
| TargetWWPN | string | Assigns WWPN of storage that starts up by SAN boot. |
| TargetLUN | integer | Assigns LUN of storage that starts up by SAN boot. |
| FCLinkSpeed | string | Setting of Connection Speed<br>- auto: Automatic<br>- 1:1 Gbit/s<br>- 2:2 Gbit/s<br>- 4:4 Gbit/s<br>- 8:8 Gbit/s<br>- 16:16 Gbit/s |
| FCTopology | string | Setting of form of connection<br>- auto_loop: Automatic (It tries connect by Arbitrated loop at the beginning)<br>- PtP:Point-to-Point<br>- auto_PtP: Automatic (It tries to Point-to-Point connection at the beginning)<br>- loop:Arbitrated loop |

## D.4 OSInstallation

| Parameter | Type | Description |
|---|---|---|
| OSInstallation | object | Settings of OS installation |
| Linux | object | Linux Settings |
| OsType | object | OS Classification |
| Type | string | Type of OS media that is imported<br>- Red Hat Enterprise Linux 7.4 (x86_64) |

| Parameter | Type | Description |
|---|---|---|
| | | - Red Hat Enterprise Linux 7.3 (x86_64)<br>- Red Hat Enterprise Linux 7.2 (x86_64)<br>- Red Hat Enterprise Linux 7.1 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86_64)<br>- Red Hat Enterprise Linux 6.9 (x86)<br>- Red Hat Enterprise Linux 6.8 (x86_64)<br>- Red Hat Enterprise Linux 6.8 (x86)<br>- Red Hat Enterprise Linux 6.7 (x86_64)<br>- Red Hat Enterprise Linux 6.7 (x86)<br>- Red Hat Enterprise Linux 6.6 (x86_64)<br>- Red Hat Enterprise Linux 6.6 (x86)<br>- CentOS 7.3 (x86_64)<br>- CentOS 7.2 (x86_64)<br>- CentOS 7.1 (x86_64)<br>- CentOS 6.9 (x86_64)<br>- CentOS 6.9 (x86)<br>- CentOS 6.8 (x86_64)<br>- CentOS 6.8 (x86)<br>- CentOS 6.7 (x86_64)<br>- CentOS 6.7 (x86)<br>- CentOS 6.6 (x86_64)<br>- CentOS 6.6 (x86)<br>- SUSE Linux Enterprise Server 12 SP3 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP2 (x86_64)<br>- SUSE Linux Enterprise Server 12 SP1 (x86_64)<br>- SUSE Linux Enterprise Server 12 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86_64)<br>- SUSE Linux Enterprise Server 11 SP4 (x86) |
| ServerViewSuiteDVD | object | Settings of ServerView Suite DVD |
| Version | string | Version number of DVD to use at installation<br>When omitting settings of ServerView Suite DVD, use the newest version from versions imported. |
| PostScript | object | Settings of any 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 |

| Parameter | Type | Description |
|---|---|---|
| | | - RAID:RAID<br>- SATA:SATA<br>- SAS:SAS<br>- FC:FC<br>- ISCSIHBA:iSCSI HBA |
| RAIDController | string | Types of Array Controllers<br>- Disabled: Does not use array controller.<br>- OnBoard: Uses onboard array controller.<br>- SasRaid01: Uses array controller enabled for SAS RAID0/1.<br>- SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. |
| RAIDLevel | string | RAID level of disk array to be built<br>- RAID0: RAID level 0<br>- RAID1: RAID level 1<br>- RAID1E: RAID level 1E<br>- RAID5: RAID level 5<br>- RAID6: RAID level 6<br>- 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 controlled LAN<br>If omitted, use the lead port onboard. |
| AdapterInfo | object | Information of an adapter to be used as controlled LAN<br>Assign either MAC Address or AdapterInfo. |
| AdapterType | string | Types of Adapters<br>- Onboard:On Board<br>- Add On Card: PCI card |
| SlotIndex | integer | Slot number<br>Assigns when Adapter Type is Add On Card. |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as controlled LAN<br>Assign either MAC Address or Adapter. |
| PxeBootInfo | object | Settings of PXE boot |
| BootType | string | Class of boot<br>- Legacy<br>- UEFI:UEFI (Unified Extensible Firmware Interface)<br>Specified operation varies by model.<br>There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration. |

| Parameter | Type | Description |
|---|---|---|
| | | When unspecified, it will turn out to the following specified states.<br>- UEFI for PRIMEQUEST 3000B after PRIMERGY RX/CX M4<br>- Legacy in any platform other than those mentioned above |
| Volumes | object | Specifies a mount point |
| boot | object | Settings of /Boot |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Uses up to max capacity of the partition.<br>- Disabled: Does not use up to max capacity of the partition. |
| swap | object | Settings of /swap |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Class of File System<br>- swap: Swap |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Uses up to max capacity of the partition.<br>- Disabled: Does not use up to max capacity of the partition. |
| root | object | Settings of /root |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File Systems |

| Parameter | Type | Description |
|---|---|---|
| | | - ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Use up to the partition's max capacity.<br>- Disabled: Does not use up to max capacity of the partition. |
| home | object | Settings of /home |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Use up to the partition's max capacity.<br>- Disabled: Does not use up to max capacity of the partition. |
| var | object | Settings o /var |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4 |

| Parameter | Type | Description |
|---|---|---|
| | | - xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Use up to the partition's max capacity.<br>- Disabled: Does not use up to max capacity of the partition. |
| user | object | Settings of /user |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Create partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Class of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Uses up to the partition's max capacity.<br>- Disabled: Does not use up to the partition's max capacity. |
| opt | object | Settings of /opt |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Create partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat |

| Parameter | Type | Description |
|---|---|---|
| | | xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Uses up to the partition's max capacity.<br>- Disabled: Does not use up to the partition's max capacity. |
| tmp | object | Settings of /tmp |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Uses up to the partition's max capacity.<br>- Disabled: Does not use up to the partition's max capacity. |
| AdditionalVolumes | array | Specifies a mount point |
| Volume | object | Specifies a mount point |
| MountPoint | string | Name of a mount point to create |
| CreatePartition | string | Creation of Partitions<br>- Enabled: Creates partition.<br>- Disabled: Does not create partition. |
| FileSystem | string | Types of File System<br>- ext2:ext2<br>- ext3:ext3<br>- ext4:ext4<br>- xfs:XFS<br>- vfat:vfat<br>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |

| Parameter | Type | Description |
|---|---|---|
| PartitionSize | integer | Capacity of partitions (MB)<br>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<br>- Enabled: Uses up to the partition's max capacity.<br>- Disabled: Does not use up to the partition's max capacity. |
| BasicSettings | object | Basic Settings |
| Language | string | Specifying language<br>- English<br>- German<br>- Japanese |
| Keyboard | string | Type of Keyboard<br>- United States - English: English Keyboard<br>- German: German Keyboard<br>- Japanese: Japanese Keyboard |
| TimeZone | string | Assignment of Time Zone<br>- GMT Standard Time<br>- Pacific Standard Time<br>- Mountain Standard Time<br>- Central Standard Time<br>- Eastern Standard Time<br>- W. Europe Standard Time<br>- Tokyo Standard Time |
| SystemClockUsesUTC | string | Use of UTC at the system clock<br>- Enabled: Uses UTC in system clock.<br>- Disabled: Does not use UTC in system clock. |
| PackageSettings | object | Settings of packages to install |
| SelectPackages | object | Selection of package groups |
| SelectPackageList | array(string) | Package groups to install<br>- 32bit<br>- additional-devel<br>- apparmor<br>- backup-client<br>- backup-server<br>- base<br>- basic-desktop<br>- Basis-Devel<br>- cifs-file-server |

| Parameter | Type | Description |
|---|---|---|
| | | - compat-libraries<br>- console-internet<br>- core<br>- debugging<br>- desktop-debugging<br>- desktop-platform<br>- desktop-platform-devel<br>- development<br>- dhcp_dns_server<br>- dial-up<br>- directory_server<br>- directory-client<br>- directory-server<br>- documentation<br>- Dom0<br>- eclipse<br>- emacs<br>- file_server<br>- file-server<br>- fonts<br>- ftp-server<br>- gateway_server<br>- general-desktop<br>- german-support<br>- gnome<br>- gnome-basic<br>- gnome-desktop<br>- graphical-admin-tools<br>- graphics<br>- hardware-monitoring<br>- identity-management-server<br>- infiniband<br>- input-methods<br>- internet-browser<br>- japanese-support<br>- java-platform<br>- kde |

| Parameter | Type | Description |
|---|---|---|
| | | - kde-desktop<br>- kvm_server<br>- kvm_tools<br>- lamp_server<br>- large-systems<br>- legacy-unix<br>- legacy-x<br>- load-balancer<br>- mail_server<br>- mail-server<br>- mainframe-access<br>- mariadb<br>- mariadb-client<br>- mysql<br>- mysql-client<br>- network-file-system-client<br>- network-server<br>- network-tools<br>- nfs-file-server<br>- ofed<br>- oracle_server<br>- performance<br>- perl-runtime<br>- php<br>- platform-devel<br>- postgresql<br>- postgresql-client<br>- print_server<br>- print-client<br>- printing<br>- print-server<br>- remote-desktop-clients<br>- remote-system-management<br>- ruby-runtime<br>- sap_server<br>- scientific<br>- security-tools |

| Parameter | Type | Description |
|---|---|---|
| | | - server-platform<br>- server-platform-devel<br>- smart-card<br>- storage-client-fcoe<br>- storage-client-iscsi<br>- storage-client-multipath<br>- storage-server<br>- system-admin-tools<br>- system-management<br>- system-management-messaging-client<br>- system-management-snmp<br>- system-management-wbem<br>- technical-writing<br>- tex<br>- turbogears<br>- virtualization<br>- virtualization-client<br>- virtualization-hypervisor<br>- virtualization-platform<br>- virtualization-tools<br>- WBEM<br>- web-server<br>- web-servlet<br>- x11<br>- xen_server<br>- 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<br>- Enabled: Uses X Window System.<br>- Disabled: Does not use X Window System.<br>Can omit it for SUSE Linux Enterprise Server. |
| DisplayResolution | string | Assigning of Screen Resolution<br>- 640x480<br>- 800x600<br>- 1024x768 |

| Parameter | Type | Description |
|---|---|---|
| | | - 1152x864<br>- 1280x800<br>- 1280x1024<br>- 1400x1050<br>- 1600x1200<br>- 1920x1440<br>- 2048x1536<br>Can omit it for SUSE Linux Enterprise Server. |
| ColorDepth | string | Assigning of the number of colors on the screen<br>- 8<br>- 16<br>- 24<br>- 32<br>Can omit it for SUSE Linux Enterprise Server. |
| DefaultDesktop | string | Type of desktop to use in default<br>- GNOME: Uses the GNOME.<br>- KDE: Uses KDE.<br>- None: Does not specify.<br>Can omit it for SUSE Linux Enterprise Server. |
| StartXWindowsSystemOnBoot | string | X Window System starts up at the system boot<br>- Enabled: Uses X Window System.<br>- Disabled: Does not startup X Window System.<br>Can omit it for SUSE Linux Enterprise Server. |
| InstallBootloader | string | Installation of a boot loader<br>- Enabled: Installs boot loader.<br>- Disabled: Does not install boot loader. |
| BootloaderLocation | string | Destination of installation of a boot loader<br>- MBR:Master Boot Record |
| KernelParameters | string | Kernel Parameter |
| SELinux | string | Setting for using SE Linux<br>Enforcing: Uses enforcing mode.<br>- Disabled: Does use in disabled mode.<br>- Permissive: Uses at the mode is permissive |
| UseShadowPasswords | string | Setting for the use of Shadow Password<br>- Enabled: Uses shadow password.<br>- Disabled: Does not use shadow password. |
| UseMD5 | string | Settings of MD5 for encryption of password<br>- Enabled: Uses MD5 for password encryption. |

| Parameter | Type | Description |
|---|---|---|
| | | - Disabled: Does not use MD5 for password encryption. |
| EnableNSCD | string | Settings for using Name Switch Cache<br>Enabled: Uses Name Switch Cache.<br>Disabled: Does not use Name Switch Cache. |
| AdditionalParameters | object | Applications automatically installed after OS install. |
| SelectApplicationList | array(string) | Applications to install<br>ServerView Agentless Service<br>ServerView CIM Provider<br>ServerView RAID Manager<br>AIS Connect<br>ServerView Operations Manager<br>Java Runtime<br>SV Agent<br>SV Agent SLES<br>SV Update Agent<br>SV Update Agent SLES<br>DSNAP<br>Software Support Guide<br>Dynamic Reconfiguration utility PQ2<br>REMCS Option PQ2<br>HBA blockage PQ2<br>SIRMS PQ2<br>ServerView Mission Critical Option PQ2 |
| 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<br>Enabled: Uses DNS acquired host name.<br>Disabled: Does not install DNSAP. |
| ComputerName | string | Unspecified host name used when host name cannot be acquired from DNS host. |
| DhcpEnable | string | Setting of the use of DHCP<br>Enabled: Uses DHCP.<br>Disabled: Does not use DHCP. |
| NetworkInterface | object | Network Settings |
| IPv4 | object | IPv4 Settings |
| Address | string | IP Address |
| SubnetMask | string | Subnet Mask |

| Parameter | Type | Description |
|---|---|---|
| DefaultGateWay | string | Default Gateway |
| DnsServer | string | IP Address of DNS Server<br>This configuration does not use DHCP; it can be omitted even when setting IP address, subnet mask and default gateway. |
| AdditionalSettings | object | Settings to add |
| WaitTimeForFinishOsInstallation | integer | Wait time (minutes) when OS installation completed<br>Effective at SUSE Linux Enterprise Server. Use the default value (12 minuets) when omitted. |
| Windows | object | Settings of Windows |
| OsType | object | OS Classification |
| Type | string | Type of imported OS media<br>- Windows Server 2016 Datacenter (Fujitsu Media)<br>- Windows Server 2016 Standard (Fujitsu Media)<br>- Windows Server 2016 (Microsoft Media)<br>- Windows Server 2016 (Microsoft VL Media)<br>- Windows Server 2012 R2 Datacenter (Fujitsu Media)<br>- Windows Server 2012 R2 Standard (Fujitsu Media)<br>- Windows Server 2012 R2 (Microsoft Media)<br>- Windows Server 2012 R2 (Microsoft VL Media)<br>- Windows Server 2012 Datacenter (Fujitsu Media)<br>- Windows Server 2012 Standard (Fujitsu Media)<br>- Windows Server 2012 (Microsoft Media)<br>- Windows Server 2012 (Microsoft VL Media)<br>- Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 Standard + SP1 (Fujitsu Media)<br>- Windows Server 2008 R2 + SP1 (Microsoft Media)<br>- Windows Server 2008 R2 + SP1 (Microsoft VL Media) |
| CoreVersion | string | Core Version<br>- Full: Full installation<br>- Core: Core install |
| Edition | string | Edition<br>- Standard: standard<br>- Datacenter: data center<br>- Enterprise: enterprise |
| ServerViewSuiteDVD | object | Settings of ServerView Suite DVD |
| Version | string | Version number of DVD to use at installation<br>When omitting settings of ServerView Suite DVD, use the newest version from versions imported. |

| Parameter | Type | Description |
|---|---|---|
| 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<br>- RAID:RAID<br>- SATA:SATA<br>- SAS:SAS<br>- FC:FC<br>- ISCSIHBA:iSCSI HBA |
| RAIDController | string | Types of Array Controllers<br>- Disabled: Does not use array controller.<br>- OnBoard: Uses onboard array controller.<br>- SasRaid01: Uses array controller enabled for SAS RAID0/1.<br>- SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. |
| RAIDLevel | string | RAID level of disk array to be built<br>- RAID0: RAID level 0<br>- RAID1: RAID level 1<br>- RAID1E: RAID level 1E<br>- RAID5: RAID level 5<br>- RAID6: RAID level 6<br>- 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 controlled LAN<br>If omitted, use the lead port on board. |
| AdapterInfo | object | Information of an adapter to be used as controlled LAN<br>Assign either MACAddress (MAC Address) or AdapterInfo (Adapter). |
| AdapterType | string | Types of Adapters<br>- Onboard:On Board<br>- Add On Card: PCI card |
| SlotIndex | integer | Slot number<br>Assigns Adapter Type in the case of the Add On Card. |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as controlled LAN<br>Assign either MAC Address or Adapter. |
| PxeBootInfo | object | Settings of PXE boot |

| Parameter | Type | Description |
|---|---|---|
| BootType | string | Class of boot<br>- Legacy<br>- UEFI:UEFI (Unified Extensible Firmware Interface)<br>Specified operation varies by model.<br>There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration.<br>When unspecified, it will turn out to the following specified states.<br>- UEFI for PRIMEQUEST 3000B after PRIMERGY RX/CX M4<br>- Legacy in any platform other than those mentioned above |
| Volumes | array | Volume List |
| Volume | object | Information of Volume |
| Label | string | Volume Name |
| FileSystem | string | Type of File System |
| SpecifyPartitionSize | string | Selection of Automatic Setting/Specification of Partition Size<br>- NTFS:NT File System |
| PartitionSize | integer | Partition Size |
| QuickFormat | string | Settings for the use of quick format of partition<br>- Enabled: Uses quick format.<br>- Disabled: Does not use quick format. |
| BasicSettings | object | Basic Settings |
| TimeZone | string | Time Zone<br>- GMT Standard Time<br>- Pacific Standard Time<br>- Mountain Standard Time<br>- Central Standard Time<br>- Eastern Standard Time<br>- W. Europe Standard Time<br>- Tokyo Standard Time |
| Language | string | Region and Language<br>- English<br>- German<br>- Japanese |
| Keyboard | string | Language and Type of Keyboard<br>- United States - English: English Keyboard<br>- United States - International: English international keyboard<br>- German: German Keyboard<br>- Japanese: Japanese Keyboard |

| Parameter | Type | Description |
|---|---|---|
| ProductID | string | Product key |
| SystemSettings | object | System settings |
| DisplayResolution | string | Screen Resolution<br>- 640x480<br>- 800x600<br>- 1024x768<br>- 1152x864<br>- 1280x1024<br>- 1600x1200 |
| RefreshRate | string | Refresh Rate<br>- 60<br>- 70<br>- 72<br>- 75<br>- 80<br>- 85<br>- 100 |
| ColorDepth | string | The number of colors shown on the screen<br>- 1<br>- 4<br>- 8<br>- 15<br>- 16<br>- 24<br>- 32 |
| Service | object | Service |
| Snmp | object | SNMP Settings |
| Setup | string | SNMP Service Installation Settings<br>- true: Installs SNMP service.<br>- 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 |

| Parameter | Type | Description |
|---|---|---|
| | | - None<br>- Read Create<br>- Read Write<br>- Read Only<br>- Notify |
| SnmpAgent | object | SNMP Agent Settings |
| 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<br>- Enabled: Sends certification trap.<br>- Disabled: Does not send certification trap. |
| AcceptSnmpPacketsFromLocalhost | string | Settings for receiving Localhost SNMP packet<br>- Enabled: Receives SNMP packet.of Localhost.<br>- Disabled: Does not receive SNMP packet.of Localhost. |
| AcceptHostName | string | Host Name that receives the SNMP packet |
| ServiceApp | string | Settings of Application Services<br>- Enabled: Uses application service.<br>- Disabled: Does not use application service. |
| ServiceEndToEnd | string | End-To-End service settings<br>- Enabled: Uses End-To-End service.<br>- Disabled: Does not use End-To-End service. |
| ServiceInternet | string | Settings of Internet Service<br>- Enabled: Uses Internet service.<br>- Disabled: Does not use Internet service. |
| ServiceDataLink | string | Configuration of Data Link Service<br>- Enabled: Uses data link service.<br>- Disabled: Does not use data link service. |
| ServicePhysical | string | Settings of Physical Service<br>- Enabled: Uses physical service.<br>- Disabled: Does not use physical service. |
| AdditionalParameter | object | Settings of remote assistance |
| RemoteDesktop | string | Settings for the use of remote desktop<br>- Enabled: Uses remote desktop.<br>- Disabled: Does not remote desktop. |
| RemoteAssistance | string | Settings of the use of remote assistance<br>- Enabled: Uses remote assistance.<br>- Disabled: Does not use remote assistance. |

| Parameter | Type | Description |
|---|---|---|
| FullRemoteControl | string | Settings of remote control<br>- Enabled: Uses remote control.<br>- Disabled: Does not remote control. |
| ExpiredHours | integer | Maximum time to active an invitation |
| ScvmmFirewallException | string | Settings of firewall needed to register in SCVMM.<br>- Enabled: Sets up required firewall to register for SCVMM.<br>- 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<br>- Enabled: Installs Java Runtime Environment (JRE).<br>- Disabled: Does not install Java Runtime Environment (JRE).<br>Cannot install if CoreVersion is Core. |
| SVAgent | string | Settings of ServerView Agent Installation<br>- Enabled: Installs ServerView agent.<br>- Disabled: Does not install ServerView agent. |
| SVUpdateAgent | string | Settings of ServerView Update Agent Installation<br>- Enabled: Installs ServerView update agent.<br>- Disabled: Does not install ServerView update agent.<br>Installing ServerView update agent calls for installation of ServerView agent. |
| DSNAP | string | Setting of Installation of DSNAP<br>- Enabled: Installs DSNAP.<br>- Disabled: Does not install DSNAP. |
| SoftwareSupportGuide | string | Settings of installation of software support guide.<br>- Enabled: Installs software support guide.<br>- Disabled: Does not install software support guide. |
| RAIDManager | string | Settings of Server View RAID Manager Installation<br>- Enabled: Installs Server View RAID Manager.<br>- Disabled: Does not install Server View 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 |
| SystemSettings | object | System settings |
| DomainOrWorkgroup | string | Settings for participating in work group domain<br>- 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<br>- Enabled: Enables DHCP.<br>- Disabled: Does not enable DHCP. |
| Address | string | IP Address |
| SubnetMask | string | Subnet Mask |
| DefaultGateWay | string | Gateway |
| DnsDomainName | string | DNS Domain Name<br>This configuration does not use DHCP; it can be omitted even when setting IP address, subnet mask and default gateway. |
| DnsServer | string | IP Address of DNS Server<br>This configuration does not use DHCP; it can be omitted even when setting IP address, subnet mask and default gateway. |
| Vmware | object | Settings of virtual environment management software |
| OsType | object | OS Classification |
| Type | string | Type of imported OS media<br>- VMware ESXi 6.5 Update 1 (Fujitsu Media)<br>- VMware ESXi 6.5 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 3 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 2 (Fujitsu Media)<br>- VMware ESXi 6.0 Update 1 (Fujitsu Media)<br>- VMware ESXi 5.5 Update 3 (Fujitsu Media) |
| ServerViewSuiteDVD | object | Settings of ServerView Suite DVD |
| Version | string | Version number of DVD to use at installation<br>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<br>- RAID:RAID<br>- SATA:SATA |

| Parameter | Type | Description |
|---|---|---|
| | | - SAS:SAS<br>- FC:FC<br>- ISCSIHBA:iSCSI HBA |
| RAIDController | string | Settings of RAID Controller<br>- Disabled: Does not use array controller.<br>- OnBoard: Uses onboard array controller.<br>- SasRaid01: Uses array controller enabled for SAS RAID0/1.<br>- SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. |
| RAIDLevel | string | RAID level of disk array to be built<br>- RAID0: RAID level 0<br>- RAID1: RAID level 1<br>- RAID1E: RAID level 1E<br>- RAID5: RAID level 5<br>- RAID6: RAID level 6<br>- 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 controlled LAN<br>If omitted, use the lead port on board. |
| AdapterInfo | object | Information of an adapter to be used as controlled LAN<br>Assign either MACAddress (MAC Address) or AdapterInfo (Adapter). |
| AdapterType | string | Types of Adapters<br>- Onboard:On Board<br>- Add On Card: PCI card |
| SlotIndex | integer | Slot number<br>Assign Adapter Type in the case of the Add On Card. |
| PortIndex | integer | Port Number |
| MACAddress | string | MAC address to be used as controlled LAN<br>Assigns either MAC Address or Adapter. |
| PxeBootInfo | object | Settings of PXE boot |
| BootType | string | Class of boot<br>- Legacy: legacy<br>- UEFI:UEFI (Unified Extensible Firmware Interface)<br>Specified operation varies by model.<br>There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration.<br>When unspecified, it will turn out to the following specified states. |

| Parameter | Type | Description |
|---|---|---|
| | | - UEFI for PRIMEQUEST 3000B after PRIMERGY RX/CX M4<br>- Legacy in any platform other than those mentioned above |
| BasicSettings | object | Basic Settings |
| LicenseAgreement | string | Setting of acknowledgment of a license agreement<br>- Enabled: Agrees to the license agreement terms.<br>- Disabled: Does not agree to the license agreement terms. |
| Keyboard | string | Language and Type of Keyboard<br>- United States - English: English Keyboard<br>- German: German Keyboard<br>- Japanese: Japanese Keyboard |
| NetworkSettings | object | Network Settings |
| SetupStandardNetworkForVM | string | Configurations for setting up VM standard network<br>- Enabled: Sets up VM standard network.<br>- 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 virtualization management software after installation<br>- Enabled: Registers virtualization management software.<br>- Disabled: Does not register virtualization management software.<br>For registration, disable DHCP at the network settings and input an IP address. |
| CmsName | string | Cloud Management Software name of virtualization management software registered in ServerView Infrastructure Manager |
| AddLocation | string | Specify a folder name or cluster name of registration destination of a host.<br>Any name containing two-byte characters including Japanese cannot be assigned. When folders are created hierarchically, it assigns a name of the bottom folder.<br>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 |
| NetworkSettings | object | Network Settings |
| GetComputerNameViaDNS | string | Setting of how to use a Host Name for acquiring DNS<br>- Enabled: Uses DNS acquired host name.<br>- Disabled: Does not install DNSAP. |
| ComputerName | string | Host name |
| DhcpEnable | string | Setting of the use of DHCP |

| Parameter | Type | Description |
|---|---|---|
| | | - Enabled: Uses DHCP.<br>- Disabled: Does not use DHCP. |
| NetworkInterface | object | Settings of network interface |
| IPv4 | object | Settings of network interface |
| Address | string | Fixed IP address |
| SubnetMask | string | Subnet Mask |
| DefaultGateWay | string | Gateway |
| DnsServer | string | IP address of DNS Server<br>This configuration does not use DHCP; it can be omitted even when setting IP address, subnet mask and default gateway. |

## D.5 MMB

| Parameter | Type | Description |
|---|---|---|
| MMB | object | Partition settings of MMB (Management Board) |
| ConfRetryCounterMax | integer | Specifies the number of retrying to restart OS when the OS is shut down due to watchdog or hardware error.<br>If none are set, assigns null.<br>Specify 0 when not to restart.<br>Specify the number of restarts (1-10) when trying to restart. |
| ConfRetryZeroAction | string | Assigns operations when exceeding the number of re-trying.<br>If none are set, assigns null.<br>- Stop rebooting and Power off: Stops reboot and turns off partition.<br>- Stop rebooting: Stops reboot and stops partition.<br>- Diagnostic Interrupt assert: Indicates the stop of reboot process and NMI interruption of the partition. |
| ConfSoftWatchdogEnable | string | Assigns a regular communication checking during running of the OS at software watchdog.<br>If none are set, assigns null.<br>- Enabled: Monitors transmissions.<br>- Disabled: Does not monitor transmissions. |
| ConfSoftWatchdogBehavior | string | Assigns an operation when the OS does not communicate due to software watchdog.<br>Assigns for case that ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Continue: Continue process.<br>- Reset: Restarts a server.<br>- Power Cycle: After turning off power of a server for once, then turns it on.<br>- NMI: Generates NMI. |

| Parameter | Type | Description |
|---|---|---|
| ConfSoftWatchdogTime | integer | Assigns a value from 1-6000 seconds for monitoring time by the software watchdog.<br>Assigns for case that ConfBootWatchdogEnable is Enabled.<br>It is judged as abnormality when unable to communicate after a specified time here.<br>If none are set, assigns null. |
| ConfBootWatchdogEnable | string | In Boot watchdog, assign the monitoring time operation from after POST ends to when OS runs.<br>Assign when ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Enabled: Monitors time.<br>- Disabled: Does not monitor time. |
| ConfBootWatchdogBehavior | string | Assigns the operation when the OS does not run within the time set in Boot watchdog.<br>Assign when ConfBootWatchdogEnable is Enabled.<br>If none are set, assigns null.<br>- Continue: Continue process.<br>- Reset: Restarts a server.<br>- Power Cycle: After turning off power of a server for once, then turns it on. |
| ConfBootWatchdogTime | integer | Assigns a value from 1-6000 seconds for the Boot watchdog monitoring time.<br>Assign when ConfBootWatchdogEnable is Enabled.<br>It is judged as abnormality when OS cannot start after a specified time here.<br>If none are set, assigns null. |

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