

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 are required to understand to use 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.



Describes the content of an important subject.



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) SUSE 12 SP3(Intel64) or SLES 12 SP3(AMD64) SLES 12 SP3(Intel64) | SUSE Linux Enterprise Server or Linux |
| SUSE Linux Enterprise Server 12 SP2 (for AMD64 & Intel64) | SUSE 12 SP2(AMD64) SUSE 12 SP2(Intel64) or SLES 12 SP2(AMD64) SLES 12 SP2(Intel64) | |
| SUSE Linux Enterprise Server 12 SP1 (for AMD64 & Intel64) | SUSE 12 SP1(AMD64) SUSE 12 SP1(Intel64) or SLES 12 SP1(AMD64) SLES 12 SP1(Intel64) | |
| SUSE Linux Enterprise Server 12 (for AMD64 & Intel64) | SUSE 12(AMD64) SUSE 12(Intel64) or SLES 12(AMD64) SLES 12(Intel64) | |
| SUSE Linux Enterprise Server 11 SP4 (for AMD64 & Intel64) | SUSE 11 SP4(AMD64) SUSE 11 SP4(Intel64) or SLES 11 SP4(AMD64) SLES 11 SP4(Intel64) | |
| SUSE Linux Enterprise Server 11 SP4 (for x86) | SUSE 11 SP4(x86) or SLES 11 SP4(x86) | |
| 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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Modification History

| Edition | Publication Date | Section | | Modification Overview |
|---------|------------------|-----------------------|---|----------------------------------|
| 01 | December 2017 | - | | First edition |
| 02 | March 2018 | 1.2 Handled Resources | - | Modified the list |
| | | 2.1.2 Request Data | - | Added an item in the precautions |

| Edition | Publication Date | Section | | Modification Overview |
|---------|------------------|--|----------------------|--|
| | | 2.6.1 Retrieving the Resource ID | - | Modified the parameters as follows: <ul style="list-style-type: none"> - Action ID Actionid -> ActionId - Alarm setting ID Alarmid->AlarmId - Power Capping setting ID Cappingid -> CappingId - Log ID Logid->Id - Repository ID Repositoryid -> RepositoryId - Task ID Cluster id -> ClusterId - Storage Pool ID Pool id -> PoolId - Job ID Jobid->JobId |
| | | 4.1.10 Individual Retrieval of User Groups | [Response Parameter] | Added the following parameters <ul style="list-style-type: none"> - SystemVolumeSize and its subordinates: Size, Threshold, UsedSize and UsedSizeRate |
| | | 4.1.11 Update of User Group Information | [Request Parameter] | Added the following parameters <ul style="list-style-type: none"> - SystemVolumeSize and its subordinate: Threshold |
| | | | [Response Parameter] | Added the following parameters <ul style="list-style-type: none"> - Description - SystemVolumeSize and its subordinates: Size, Threshold, UsedSize and UsedSizeRate |
| | | 4.3.1 Node Registration | [Request Parameter] | Modified the descriptions for RackId, Position, OccupySize, AccountType, PortNum, AccountName and Password |
| | | | [Node Type] | Added node types |
| | | 4.3.4 Update of Nodes | [Request Parameter] | Modified the descriptions for RackId, Position and OccupySize |
| | | 4.3.27 Account Registration | [Request Parameter] | Modified the descriptions for AccountType, PortNum, AccountName and Password |
| | | | [Response Parameter] | Modified the descriptions for AccountType and AccountName |

| Edition | Publication Date | Section | | Modification Overview |
|---------|------------------|--|----------------------|---|
| | | 4.3.28 List Retrieval for Accounts | [Response Parameter] | Modified the descriptions for AccountType and AccountName |
| | | 4.3.29 Individual Retrieval of Account Information | [Response Parameter] | Modified the descriptions for AccountType and AccountName |
| | | 4.3.30 Updating of Account Information | [Request Parameter] | Modified the descriptions for AccountType, PortNum, AccountName and Password |
| | | | [Response Parameter] | Modified the descriptions for AccountType and AccountName |
| | | 4.4.1 Execution of Manual Node Discovery | [Request Parameter] | Modified the descriptions for AccountType, PortNum, AccountName and Password |
| | | 4.4.2 Retrieving Results of Manual Node Discovery | [Response Parameter] | Added the following parameters <ul style="list-style-type: none"> - ManualDiscoveryType - CsvFile Modified the descriptions for AccountType and ManualDiscoverySetting |
| | | 4.4.3 Registration of Manually Discovered Nodes | [Request Parameter] | Modified the descriptions for RackId, Position and OccupySize |
| | | 4.4.5 Registration of Automatically Discovered Nodes | [Request Parameter] | Modified the descriptions for RackId, Position, OccupySize, AccountType, PortNum, AccountName and Password |
| | | 4.4.6 Execution of Manual Node Discovery by Specifying CSV | - | New addition |
| | | 4.4.7 Retrieving Key Names and Alternatives for the Value to be Entered in the CSV Files | - | New addition |
| | | 4.6.2 List Retrieval for Detailed Node Information | [Response Parameter] | Added the following parameters <ul style="list-style-type: none"> - ConnectionBladeList and its subordinates: Name, ProductName, Manufacture, SerialNumber, SlotNumber and EkeyStatusPortOverview |
| | | 4.6.4 Registration of OS Information | [Request Parameter] | Modified the description for OsPortNum |
| | | 4.6.7 Updating of OS Information | [Request Parameter] | Modified the description for OsPortNum |
| | | 4.7.10 Updating of Network Monitoring Settings | [Request Parameter] | Modified the following incorrect parameter <ul style="list-style-type: none"> - NetworkMonitoringSettingsList |
| | | | [Response Parameter] | Modified the following incorrect parameter |

| Edition | Publication Date | Section | | Modification Overview |
|---------|------------------|---|----------------------|---|
| | | | | - NetworkMonitoringSettingsList |
| | | 4.8.1 Registration of Action Settings | [Request Parameter] | Added the following parameters - PortNumber - Protocol |
| | | | [Response Parameter] | Added the following parameters - PortNumber - Protocol |
| | | 4.8.2 List Retrieval for Action Settings | [Response Parameter] | Added the following parameters - PortNumber - Protocol |
| | | 4.8.3 Updating of Action Settings | [Request Parameter] | Added the following parameters - PortNumber - Protocol |
| | | | [Response Parameter] | Added the following parameters - PortNumber - Protocol |
| | | 4.8.13 Updating of SNMP Server Settings Information | [Format] | Modified the format |
| | | 4.8.14 Deletion of SNMP Server Settings Information | [Format] | Modified the format |
| | | 4.10.3 Adding Profiles | [Request Parameter] | Modified the description for ReferencePolicyList |
| | | 4.10.4 List Retrieval for Profiles | [Response Parameter] | Modified the descriptions for ProfileList and ReferencePolicyList |
| | | 4.10.5 Individual Retrieval of Profiles | [Response Parameter] | Modified the description for ReferencePolicyList |
| | | 4.10.8 Assigning Profiles to Nodes | [Request Parameter] | Modified the description for ProfileId |
| | | 4.10.13 List Retrieval for Profile Groups | [Response Parameter] | Modified the description for ProfileList |
| | | 4.10.14 Individual Retrieval of Profile Groups | [Response Parameter] | Modified the description for ProfileList |
| | | 4.10.18 List Retrieval for Policies | [Response Parameter] | Modified the description for PolicyList |
| | | 4.10.19 Individual Retrieval of Policies | [Response Parameter] | Modified the description for PolicyType |
| | | 4.10.24 Individual Retrieval of Policy Groups | [Response Parameter] | Modified the description for PolicyList |
| | | 4.10.27 Importing Profiles | [Request Parameter] | Modified the description for FilePath |
| | | 4.10.28 Exporting Profiles | [Response Parameter] | Modified the description for FilePath |
| | | 4.10.29 DVD Import | [Request Parameter] | Modified the description for FilePath |

| Edition | Publication Date | Section | | Modification Overview |
|---------|------------------|---|----------------------|---|
| | | 4.10.34 Backing Up Hardware Settings | [Request Parameter] | Added the following parameter - Description |
| | | 4.10.36 List Retrieval for Registered Backups | [Format] | Modified the format |
| | | | [Query Parameter] | Added the following parameter - restorestatus |
| | | | [Response Parameter] | Added the following parameters - RestoreStatus - RestoredTime Modified the description for TaskId |
| | | 4.10.38 Exporting Registered Backups | [Response Parameter] | Modified the description for FilePath |
| | | 4.10.39 Adding Profiles from Registered Backups | - | New addition |
| | | 4.10.40 Adding Policies from Registered Backups | - | New addition |
| | | 4.10.41 Import of Backups | - | New addition |
| | | 4.10.42 Restoring Hardware Settings | - | New addition |
| | | 4.10.43 Cancellation of Restoring Hardware Settings | - | New addition |
| | | 4.11.1 Starting Update Firmware | [Request Parameter] | Added the following parameters - AfterPowerOn - AutoMaintenance |
| | | 4.11.2 Canceling Update Firmware | [Precautions] | Added an item to the precaution |
| | | 4.11.7 DVD Import | [Request Parameter] | Modified the descriptions for Path and DeleteFtpResource |
| | | 4.11.9 Individual Import Firmware | [Request Parameter] | Modified the description for Path |
| | | 4.11.12 Deleting Individual Firmware | [Overview] | Modified the overview |
| | | 4.12.7 Creating Node Log Download Files | [Request Parameter] | Modified the description for Password |
| | | 4.12.9 Creating Archived Log Download Files | [Request Parameter] | Modified the description for Password |
| | | 4.13.1 Retrieving Port Information from All Nodes | [Response Parameter] | Added the following parameters - PinGroups and its subordinates: PinGroupName, and PortList - Subordinate of PortList: PortName |

| Edition | Publication Date | Section | | Modification Overview |
|---------|------------------|--|---------------------------------|---|
| | | 4.18.2 Registration of Cloud Management Software | [Request Parameter] | Modified the descriptions for CmsType, CmsVersion and PortNum |
| | | | [Response Parameter] | Modified the description for CmsType |
| | | 4.18.3 List Retrieval for Cloud Management Softwares | [Response Parameter] | Modified the description for CmsType |
| | | 4.18.4 Individual Retrieval of Cloud Management Software | [Response Parameter] | Modified the description for CmsType |
| | | 4.18.5 Updating of Cloud Management Software | [Request Parameter] | Modified the description for PortNum |
| | | | [Response Parameter] | Modified the description for CmsType |
| | | Appendix A List of Privileges for Each API | - | Added and modified URI Modified the execution abilities of each authorized user |
| | | Appendix B.4 Update Firmware | Refreshing the node information | Added the Point |
| | | | Setting Maintenance Mode | Added the Point |
| | | | Releasing Maintenance Mode | Added the Point |
| | | Appendix D.3 IOVirtualization | - | Modified the description for SmuxSetting |
| | | Appendix D.3.1 CNAAdapter | - | Modified the descriptions for FCLinkSpeed and VLANId |
| | | Appendix D.3.2 LANAdapter | - | Modified the description for VLANId |
| | | Appendix D.3.3 FCAdapter | - | Modified the description for FCLinkSpeed |
| | | Appendix D.4 OSInstallation | - | Added the following parameters - DnsDomainName - DnsServer2 Modified the descriptions for LogicalDiskType, RAIDController and BootType |

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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 | Datacenter information |
| | /floors | Floor information |
| | /racks | Rack information |
| Event | /event | Event information (ISM operation log, audit log, and SNMP trap) |
| Task | /tasks | Task information |
| Network management | /networks | Network management information |
| Profile | /profiles/profiles | Profile definition and profile definition group information |
| | /profiles/policies | Policy and policy groups information |
| | /profiles/categories | Device category information |
| | /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 |
| 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 Common Specifications

This chapter describes the common 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 describes the REST API protocol.

2.1.1 Communication Method

Communicates in HTTPS.

2.1.2 Request Data

Request data have the following structure:

Method

The available method types are as follows:

- GET
- POST
- PATCH
- DELETE

URL

The URL specifications are as follows:

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

- Port number

Specify 25566.

When you want to change the port number, refer to "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, it is not required to specify the IsmBody key itself.

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

2.1.3 Response Data

Response data have the following structure:

HTTP header (response header)

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

For details, refer to "[2.2.2 Response Header](#)."

HTTP body (response body)

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

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

Example:

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

```

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

```

SchemaType

The following is the structure returned in SchemaType:

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

- JSON schema file name

The following shows how the JSON schema files are named:

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

- Resource name

Unique name for each API resource

- Method name

Either GET, POST, PATCH, or DELETE

- Version number

Version number of the API

Example:

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



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

MessageInfo

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

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

2.2 HTTP Header

2.2.1 Request Header

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

Table 2.1 List of request headers

| Header name | Content | Description |
|---------------------|--|--|
| Content-Type | application/JSON;charset=UTF-8 | These contents must always be specified. |
| X-FJ-Ism-Version | 2.0.0 | Specify the version to be used. If omitted, the latest version is used. |
| X-Ism-Authorization | Session ID | Specify an ID when using session authentication. For details on session authentication, refer to " 2.5.1 Session Authentication ." |
| Authorization | ISM authentication character string | When using one-time authentication, specify a character string. For details on one-time authentication, refer to " 2.5.2 One-Time Authentication ." |
| Cookie | X-Ism-Authorization = session ID | The session ID stored in the client's cookie is specified. |
| If-Match | ETag value that was returned in the response header the last time that the REST API was executed | Specify this when carrying out exclusive control by ETags. Using ETags is recommended for using REST APIs in a given sequence. If omitted, ETag exclusion is not carried out. 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: xxxxxxxxxxxxxxxx
Authorization: ISM xxxxxxxxxxxxxxxx
If-Match: "686897696a7c876b7e"
```

2.2.2 Response Header

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

Table 2.2 List of response headers

| Header name | Content | Description |
|---------------------|---|---|
| HTTP/1.1 | A status code is set. Status code examples: - Normal: 200 OK - When there is an error: 400 Bad Request, etc. | Status line This is always returned without fail. For details regarding the status codes, refer to " 2.3 Status Codes ." |
| Content-Type | application/JSON; charset=UTF-8 | This is always returned without fail. |
| Allow | One of the following is set: GET, POST, PATCH, or DELETE | The method that is available in the specified URI is returned. |
| X-FJ-Ism-Version | 2.0.0 | The used version is returned. |
| X-Ism-Authorization | Session ID | The session ID for session authentication is returned. 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. Using ETags is recommended for using REST APIs in a given sequence. If omitted, ETag exclusion is not carried out. 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: xxxxxxxxxxxxxxxx
```

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

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

2.4 Encryption

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

With the following command examples for Linux for reference, 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>
```

- 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 required 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 the Settings for Power Capping |
| 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 | Id | GET /event/history/audit/show | 4.9.3 List Retrieval for Audit Logs |
| Manual Discovery ID | ManualDiscoveryId | GET /nodes/discovery/manual | 4.4.2 Retrieving Results of Manual Node Discovery |
| Manual Discovery Node ID | ManualNodeId | GET /nodes/discovery/manual | 4.4.2 Retrieving Results of Manual Node Discovery |
| Automatic Discovery Node ID | DiscoveredNodeId | GET /nodes/discovery/auto | 4.4.4 Retrieving Results of Automatic Node Discovery |
| 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 GET /system/settings/repositories/profiles | 4.11.4 List Retrieval for Registered Repositories 4.10.31 List Retrieval for Registered Repositories |
| Task ID | TaskId | GET /tasks | 4.16.2 List Retrieval for Tasks |
| VFAB ID | VfabId | GET /networks/nodes/{nodeid}/vfabs | 4.13.15 List Retrieval for VFAB Settings |
| Virtual Machine ID | VirtualMachineId | GET /resources/virtualmachines | 4.6.10 List Retrieval for Virtual Machines |
| Virtual Router ID | VirtualRouterId | GET /resources/virtualswitches GET /networks/virtualswitches | 4.6.12 List Retrieval for Virtual Switches 4.13.2 Retrieving Virtual Switch Connection Information from All Nodes |
| Storage Pool ID | PoolId | GET /resources/storagepools | 4.15.1 List Retrieval for Storage Pools |
| Cluster ID | ClusterId | GET /resources/clusters | 4.15.4 List Retrieval for Clusters |
| SNMP Settings Management ID | SNMPServerId | GET /event/snmpmanagers | 4.8.12 List Retrieval for SNMP Server Settings Information |

| 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 Update Firmware Jobs |
| Virtual Switch Identification ID | VirtualSwitchInstanceId | GET /resources/virtualswitches | 4.6.12 List Retrieval for Virtual Switches |

The following displays an example of retrieving the node ID.

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

Retrieve node by specifying node name

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

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

Retrieve node by specifying node type

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

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

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

Chapter 3 Usage

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

3.1 Authentication

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 the --cacert option

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



Note

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

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

When the certificate is unsatisfactory in some way, such as an intermediate CA certificate or similar, either 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 the --insecure option

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



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

3.1.2 Session Authentication

This is used when issuing multiple APIs consecutively.

Issue a login API in advance, and then 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 the 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/F1Rxcsia+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/F1Rxcsia+3hh1bBhmRD+E8ApWf/fZHWLJz5ZQU6hbsRHN72GnMk8D
```

Execution of respective API

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

3.1.4 Precautions for Use of the curl Command

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

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

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

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

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

3.2 Exclusive Control of Individual REST APIs

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

1. Issue a REST API, and 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

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

When instructing to retrieve of detailed node information

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

Response (JSON)

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

3.8 Task

APIs that start processes asynchronously with the display, such as ["4.11.1 Starting Update Firmware"](#) or ["4.10.8 Assigning Profiles to Nodes"](#) might return the TaskID in the response body.

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

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

Chapter 4 API Reference

This chapter provides an overview of the ISM REST API.

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

<Method><Resource>

In the case of constructing an actual URL, refer to "[2.1.2 Request Data](#)."

4.1 User Management

User management includes the following functions:

- User management
- ISM authentication
- User group management

4.1.1 Login (Session Authentication)

[Overview]

Logs in with user session authentication.

[Format]

POST /users/login

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| UserName | string | User Name |
| Password | string | Password Specify an encrypted password. Refer to " 2.4 Encryption " for encryption method. |
| SetCookie | string | Cookie Settings Specifies whether or not a Cookie setting response header is returned. <ul style="list-style-type: none">- Enable: Returns Cookie setting response header- Disable: Does not return Cookie setting response header When the key is omitted or when the setting value is empty (""), the Cookie settings will not be carried out. 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 The session ID retrieved after login is output. |
| SetCookie | string | Cookie Settings The same content as that of the request parameter is output. |
| UserId | string | User ID The user ID of the user that logged in is output. |
| MessageId | string | Login Message ID The message ID corresponding to the notification message at the time of login. |
| Message | string | Login Message The notification message at the time of login. |

[Precautions]

- The following are precautions for when login fails:
 - With consecutive failures, one cannot log in for a certain time. The threshold value and the time duration that the user cannot log in are specified by the security policy.
 - After the set amount of time has passed, the failure count will return to 0.
 - You cannot login when the password is no longer valid. Check the detailed user information.
- After log in, if a certain time has elapsed without any operation after the last access, it is automatically logged off. The set time is specified in the security policy.
- When SetCookie is specified, response header is described as follows:
Response Header: "Set-Cookie: X-Ism-Authorization = session ID; secure"
- The login message is output to the ISM log, 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]

Logs out the user.

[Format]

```
POST /users/logout
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Specify session ID in http header as follows:

X-Ism-Authentication:Session ID

4.1.3 User Registration

[Overview]

Registers ISM user.

[Format]

POST /users

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-------------|---------------|---|
| UserName | string | User Name Contains the following restrictions: <ul style="list-style-type: none">- Max length: 32- Half-width alphanumeric characters- Numbers, letters (Upper and lower cases), underscore, \$, period and hyphen can be used.- Cannot begin with "-", can only use "\$" at the end. |
| Password | string | Password Specify an encrypted password. Refer to " 2.4 Encryption " for encryption method. In addition, specify an encrypted character string whose decrypted result is 32 characters or less. Also, you can use Japanese language for a decrypted password. |
| UserRoles | array(string) | List of User Role Information Specify a role to be specified to a user from the following ID: <ul style="list-style-type: none">- Administrator- Operator- Monitor More than one can be specified but the highest role will be added. |
| UserGroupId | string | User Group ID Specify a user group ID to the group which the user belongs to. |
| Language | string | Classification of Language |

| Parameter | Type | Description |
|----------------|--------|---|
| | | Set the language of messages output after login in as one of the following: <ul style="list-style-type: none"> - English (Default value) - Japanese |
| Authentication | string | Authentication Method Specify an authentication method. <ul style="list-style-type: none"> - ISM : ISM authentication - null: Follows the authentication method of the user group If left blank, it assumes null was specified. |
| Description | string | Description Comment column where free information can be set. Will not be used in controls. |
| MomUser | string | Specify availability of link with ISM. <ul style="list-style-type: none"> - Enable: links - Disable: does not link (Default value) |
| InnerControl | string | Information for Internal Controls 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 IDs of users added are output. |
| UserName | string | User Name The same content as that of the request parameter is output. |
| Password | string | Password The same content as that of the request parameter is output. |
| UserRoles | array(string) | List of User Role Information A role specified to a user is output. |
| UserGroupId | string | User Group ID The same content as that of the request parameter is output. |
| NodeGroups | array | List of Information of Node Group Information of the node groups corresponding to the user group are output. |
| NodeGroupId | string | Node Group ID |
| Description | string | Description The same content as that of the request parameter is output. |
| MomUser | string | Availability of link with ISM is output. The same content as that of the request parameter is output. |
| Language | string | Language |

| Parameter | Type | Description |
|----------------|--------|---|
| | | The same content as that of the request parameter is output. |
| Authentication | string | Authentication Method The same content as that of the request parameter is output. |
| InnerControl | string | Information for Internal Controls |
| Modified | string | Date of Update Time and date added in UTC hours is output. |

[Precautions]

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

Administrator > Operator > Monitor

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

- Names starting with __
- administrator
- Admin
- anonymous
- root
- bin
- daemon
- adm
- lp
- sync
- shutdown
- halt
- mail
- operator
- games
- ftp
- nobody
- avahi-autoipd
- systemd-bus-proxy
- systemd-network
- dbus
- polkitd
- abrt
- libstoragemgmt
- tss
- postfix

- chrony
 - sshd
 - ntp
 - tcpdump
 - vaadmin
 - apache
 - postgres
 - svtuser
 - elasticsearch
 - zabbix
- A user should be unique in the whole context of ISM.
 - Only a user holding an Administrator role in the Administrator group can set MomUser parameter to Enable.

4.1.4 List Retrieval for Users

[Overview]

Retrieves a complete list of ISM user information.

[Format]

```
GET /users
```

[Query Parameter]

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

| Parameter | Type | Description |
|----------------|--------|--|
| | | <ul style="list-style-type: none"> - null: Unable to retrieve data <p>For this value, the following values will be output.</p> <ul style="list-style-type: none"> - User authentication method: ISM authentication ISM - User authentication method: Follow user group setting Authentication method for user group |
| Description | string | Description |
| MomUser | string | <p>Availability of link with ISM is output.</p> <ul style="list-style-type: none"> - Enable: links - Disable: does not link |
| LastAccessTime | string | <p>Time and Date of Last Access</p> <p>Time and date of last access by a user in UTC is output.</p> |

[Precautions]

- When omitting request parameters, the users in the following range can be obtained.
 - When the user who executes is a member of the Administrator group.
All users in all user groups registered in the ISM can be retrieved.
 - When the user who executes is not a member of the Administrator group.
All users in the same user group as the executing user can be retrieved.
- Depending on the role of the user who executes, summary of output range is as follows:
 - When holding an Administrator role
All users belonging to the output target user group are output.
 - When having no Administrator role
Outputs only the executing user.

4.1.5 Individual Retrieval of User

[Overview]

Retrieves detailed ISM user information.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

| 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 <ul style="list-style-type: none"> - English - Japanese |
| Authentication | string | Authentication Method <p>Authentication method is output.</p> <ul style="list-style-type: none"> - ISM: ISM authentication - null: Follows the authentication method of the user group |
| Description | string | Description |
| MomUser | string | Availability of link with ISM is output. <ul style="list-style-type: none"> - Enable: links. - Disable: does not link. |
| SessionCount | integer | Session Count |
| LastAccessTime | string | Time and Date of Last Access |
| Modified | string | Date of Update <p>Outputs time and date added or changed in UTC hours.</p> |
| InnerControl | string | Information for Internal Controls |
| Status | string | Status <p>Login enabled status is output.</p> <ul style="list-style-type: none"> - OK <p>Login enabled</p> - LoginLock <p>Unable to log in due to consecutively failed login attempts. Login enabled after a certain time elapsed.</p> - ExpirePassword <p>Unable to login because the password is no longer valid. Can login after re-setting the password.</p> |
| PasswordValidTime | integer | Validity Period of Password <p>When the password validity period has been set, this period is output (in days).</p> <p>If less than a day, it is output in truncated form.</p> <p>When validity of a password is not set, null is output.</p> |
| AccessibleUserGroups | array | List of Information of Accessible User Groups |
| | UserGroup | User Group Information |
| | UserGroupId | User Group ID |
| | UserGroupName | User Group Name |
| | NodeGroups | List of Information of Node Group |

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

[Precautions]

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

4.1.6 Update of User Information

[Overview]

Updates ISM user information.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|---------------|--|
| UserName | string | User Name Contains the following restrictions: <ul style="list-style-type: none"> - Max length: 32 - Half-width alphanumeric characters - Numerical alphabets (Upper and lower cases), under bar, \$, period and hyphen can be used. - Cannot begin with "-", can only use "\$" at the end. |
| Password | string | Password Specify an encrypted password. Refer to " 2.4 Encryption " for encryption method. In addition, specify an encrypted character string whose decrypted result is 32 characters or less. |
| UserRoles | array(string) | List of User Role Information Specify a role to be specified to a user from the following ID: <ul style="list-style-type: none"> - Administrator |

| Parameter | Type | Description |
|----------------|--------|---|
| | | <ul style="list-style-type: none"> - Operator - Monitor |
| UserGroupId | string | User Group ID Specify a user group ID to the group which the user belongs to. |
| Authentication | string | Authentication Method Specify an authentication method. <ul style="list-style-type: none"> - ISM: ISM authentication - null: Follows the authentication method of a user group If left blank(""), it assumes null was specified. When the key is omitted, change of this parameter does not take place. |
| Description | string | Description Comment column where free information can be set. Will not be used in controls. |
| MomUser | string | Specify availability of link with ISM. <ul style="list-style-type: none"> - Enable: links. - Disable: does not link. (Default value) |
| InnerControl | string | Information for Internal Controls 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 The same content as that of the request parameter is output. |
| Password | string | Password The same content as that of the request parameter is output. |
| UserRoles | array(string) | List of User Role Information |
| UserGroupId | string | User Group ID The same content as that of the request parameter is output. |
| AccessibleUserGroups | array | List of Information of Accessible User Groups |
| | UserGroup | User Group Information |
| | UserGroupId | User Group ID |
| | NodeGroups | List of Information of Node Group |
| | NodeRoleId | Node Role ID Only "" is output. |
| | NodeGroupId | Node Group ID |
| Description | string | Description The same content as that of the request parameter is output. |

| Parameter | Type | Description |
|----------------|--------|--|
| MomUser | string | Availability of link with ISM is output. The same content as that of the request parameter is output. |
| Authentication | string | Authentication Method The same content as that of the request parameter is output. |
| Modified | string | Date of Update Outputs update time and date in UTC hours. |
| InnerControl | string | Information for Internal Controls The same content as that of the request parameter is output. |

[Precautions]

- The following are the ranges that this API can change the user information:
 - When the user who executes is a member of the Administrator group.
Can change the information on any user.
 - When the user who executes is not a member of the Administrator group.
The user who executes can change the information on the users in the same user group.
- Required conditions for each change item are as shown below.
 - When changing UserGroupId
Can be changed by executing user holding an Administrator role and belonging to the Administrator group.
 - When changing UserRoles
Can be changed by an executing user holding an Administrator role.
 - When changing UserName, Password, Language, Description, InnerControl
Only users executing with an Administrator role or user's own information can be changed.
 - Do not change InnerControl because this information will be used in the internal controls of the ISM.
 - Contents of Password and InnerControl are not changed unless specifying a key.
 - If "" is specified in the modified content, the content will be deleted.
- The following names cannot be used as they are used with ISM:
 - Names starting with __
 - administrator
 - Admin
 - anonymous
 - root
 - bin
 - daemon
 - adm
 - lp
 - sync
 - shutdown
 - halt

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

4.1.7 Deletion of Users

[Overview]

Deletes ISM users.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

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

4.1.8 Registration of User Groups

[Overview]

Registers ISM user groups.

[Format]

POST /usergroups

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------------|--------|--|
| UserGroupName | string | User Group Name Contains the following restrictions: <ul style="list-style-type: none">- Max length: 64- All these can be used: Japanese, numbers, letters (Upper and lower cases), underscore, \$, period and hyphen. The following cannot be used. <ul style="list-style-type: none">- Single Quotation- Slash- Begins with a period |
| Authentication | string | Authentication Method Authentication method can be selected from the following. <ul style="list-style-type: none">- ISM ISM Authentication (Default value)- LDAP Authentication in link with OpenLDAP or Microsoft Active Directory |
| ParentsUserGroupId | string | Parent User Group ID Only specify "". |

| Parameter | | Type | Description |
|-------------|--------------------|---------|--|
| AccessRange | | string | <p>Access Range</p> <p>Specify if access range of a user group should be made identical with those of other groups.</p> <ul style="list-style-type: none"> - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification <p>Cannot specify other than those mentioned above.</p> |
| Description | | string | <p>Description</p> <p>Comment column where free information can be set. Will not be used in controls.</p> |
| NodeGroupId | | integer | <p>Node Group ID</p> <p>Specify a node group ID for linking.</p> <p>When the key is omitted and specified with null, it is not associated.</p> |
| DirSize | | object | Information on the Size of the Directory |
| | All | object | <p>Information on Directory Size of user group</p> <p>Specify information on directory size for a user group (Unit: MB).</p> <p>When the key is omitted and specified with null, it is not set.</p> |
| | MaxSize | integer | <p>Maximum Size of directory used by a user group</p> <p>For null, it does not set the maximum value.</p> <p>When the key is omitted, it assumes null is specified.</p> |
| | Threshold | integer | <p>Threshold value of directory size used by a user group</p> <p>When the key is omitted, it assumes null is specified.</p> |
| | ArchiveLogDir | object | <p>Information of the directory size where Archive Node Log is stored</p> <p>Specify a directory size (MB) to be used in Archive.</p> <p>When the key is omitted and specified with null, it sets with the maximum value as 0 and threshold value of 0.</p> |
| | MaxSize | integer | <p>Maximum Size of the directory where Node Log is stored</p> <p>When the key is omitted and specified with null, it is set to 0GB.</p> |
| | Threshold | integer | <p>Threshold value of the directory where node logs are saved</p> <p>Assumes 0(%) was specified when null was specified.</p> <p>Assumes 0(%) was specified when key is omitted.</p> |
| | ArchiveMaterialDir | object | <p>Information of the directory size to store the archived log of Archive</p> <p>Specify a directory size (MB) to be used in Archive.</p> <p>When the key is omitted and specified with null, it sets the maximum value to 0 and threshold value to 0%.</p> |
| | MaxSize | integer | Maximum Size of the archived log saving directory |
| | | | |

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

[Response Parameter]

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

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Precautions for Authentication are as shown below.
 - Only one authentication method can be specified for the entire ISM.
 - Only either OpenLDAP or Microsoft Active Directory can be specified as the authentication method in the LDAP.
 - Without any specified authentication method, it shall be assumed that ISM has been specified.
- A registered user cannot be specified when creating a user group.
If you want to register a user, perform user group change or user change after creating a user group.
- The following names cannot be used as they are used with ISM:
 - Names starting with __
 - Administrator

- AbstractionLayer
- anonymous
- A user group should be unique in the whole context of ISM.

4.1.9 List Retrieval for User Groups

[Overview]

Retrieves a complete list of ISM user group information.

[Format]

```
GET /usergroups
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------|---------------------|---------------|--|
| UserGroups | | array | List of User Group Information |
| | UserGroupId | string | User Group ID |
| | UserGroupName | string | User Group Name |
| | NodeGroups | array | List of Information of Node Group |
| | NodeRoleId | string | Node Role ID |
| | | string | Node Group ID |
| | Authentication | string | Authentication Method |
| | UserCount | integer | Number of Users |
| | ParentsUserGroupId | string | Parent User Group ID Only "" is output. |
| | ChildUserGroupCount | integer | Subordinate User Group Number Only 0 is output. |
| | ChildUserGroups | array(string) | List of Subordinate User Group Information Only [] is output. |
| | UserGroupId | string | User Group ID |
| | AccessRange | string | Access Range Announces if access range of a user group should be made identical with those of other groups. <ul style="list-style-type: none">- Administrator: An identical range of access with the Administrator group- null: No specification- "": No specification |
| | Description | string | Description |

4.1.10 Individual Retrieval of User Groups

[Overview]

Retrieves detailed ISM user group information.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|---------------------|-------------|---------------|---|
| UserGroupId | | string | User Group ID |
| UserGroupName | | string | User Group Name |
| NodeGroups | | array | List of Information of Node Group |
| | NodeRoleId | string | Node Role ID |
| | 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 Only "" is output. |
| ChildUserGroups | | array(string) | Subordinate User Group Information List |
| | UserGroupId | string | User Group ID |
| AccessRange | | string | Access Range Announces if access range of a user group should be made identical with those of other groups. <ul style="list-style-type: none">- Administrator: An identical range of access with the Administrator group- null: No specification- "": No specification |
| Description | | string | Description |
| SystemVolumeSize | | object | Information on the ISM-VA System Volume Outputs information on the ISM-VA system volume (Unit: MB) "null" is output for other than the Administrator group. |
| | Size | integer | System Volume Size |
| | Threshold | integer | Threshold Value of the Used System Volume Size Range: 0.00-100.00 (%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Output for 10.12%: 1012 When the value is null, the threshold value for the used system volume size is not set. |

| Parameter | | Type | Description |
|-----------|------------------------|---------|--|
| | UsedSize | integer | System Volume Size being used |
| | UsedSizeRate | integer | Used Rate of the System Volume Size Range: 0.00-100.00(%) Outputs percentage up to 2 digits after decimal point in the form without decimal point. Example: Output for 10.12%: 1012 |
| DiskSize | | integer | Disk Size allocated for the User Group When the value is null, the disk has not been configured. |
| DirSize | | object | Information on the Size of the Directory Outputs information on directory size for a user group. |
| | All | object | Information on Directory Size of User Group Outputs information on directory size for a user group. (Unit: MB) |
| | MaxSize | integer | Maximum Size of the directory used by a user group When a value is null, it is not configured. |
| | | integer | Threshold value of the directory size used by a user group When a value is null, it is not configured. |
| | | integer | Directory Size being used |
| | ArchiveLogDir | | Information of the Directory Size where Archive Node Log is stored Outputs information on the directory size where Archive node log is stored. (Unit: MB) |
| | MaxSize | integer | Maximum Size of the Directory where node logs are stored |
| | | integer | Threshold value of the directory where node logs are saved |
| | | integer | Size of the Directory currently in use where node logs are saved |
| | ArchiveMaterialDir | | Information of the Directory Size to store the archived log of Archive Outputs information on the directory size to store the archived log of Archive. (Unit: MB) |
| | MaxSize | integer | Maximum Size of the archived log saving directory |
| | | integer | Threshold value of the directory where archived logs are saved |
| | | integer | Size of the directory currently in use where node archived logs are saved |
| | ArchiveLogDirForSearch | | Information of Archive's node log directory size used for search Outputs information on the directory size to store node logs of Archive. (Unit: MB) |
| | MaxSize | integer | Maximum Size of the node log directory used for search |
| | | integer | Threshold value of the node log directory used for search |
| | | integer | Size of the directory currently in use for node logs used in searches |
| | RepositoryDirectory | | Directory Size information of the Repositories |

| Parameter | | Type | Description |
|-----------|----------|---------|--|
| | | | Outputs information on the directory size of repositories. (Unit: MB) |
| | MaxSize | integer | Maximum Size of the directory When a value is null, it is not configured. |
| | UsedSize | integer | Directory Size being used |
| Users | | array | List of User Information |
| | UserId | string | User ID |
| | UserName | string | User Name |
| Modified | | string | Date of Update Outputs time and date added or changed in UTC hours. |

[Precautions]

- Can only be executed by a user executing with an Administrator role.
- The following are the ranges in which this API can output detailed information:
 - When the user who executes is a member of the Administrator group.
Can obtain details of any user group.
 - When the user who executes is not a member of the Administrator group.
Obtains details of the user group that the executing user belongs to.

4.1.11 Update of User Group Information

[Overview]

Updates the ISM user group information.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------|--------|---|
| UserGroupName | string | User Group Name Contains the following restrictions: <ul style="list-style-type: none"> - Max length: 64 - All these can be used: Japanese, numbers, letters (Upper and lower cases), underscore, \$, period and hyphen. The following cannot be used. <ul style="list-style-type: none"> - Single Quotation - Slash - Begins with a period |

| Parameter | | Type | Description |
|--------------------|-----------|---------|--|
| Authentication | | string | <p>Authentication Method</p> <p>Authentication method can be selected from the following.</p> <ul style="list-style-type: none"> - ISM ISM Authentication (Default value) - LDAP Authentication in link with OpenLDAP or Microsoft Active Directory |
| ParentsUserGroupId | | string | <p>Parent User Group ID</p> <p>Only ""</p> |
| AccessRange | | string | <p>Access Range</p> <p>Specify if access range of a user group should be made identical with those of other groups.</p> <ul style="list-style-type: none"> - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification <p>Cannot specify other than those mentioned above.</p> |
| Description | | string | <p>Description</p> <p>Comment column where free information can be set. Will not be used in controls.</p> |
| NodeGroupId | | integer | <p>Node Group ID</p> <p>Specify a node group ID for linking.</p> <ul style="list-style-type: none"> - null: Does not associate with a node group. Deselects a link when it has been linked. - Node group ID: Connects with a node group. Changes a link when it has been linked. |
| SystemVolumeSize | | object | <p>Information on ISM-VA System Volume</p> <p>The information on the ISM-VA system volume is ignored other than Administrator group.</p> <p>When the key is omitted, it does not change the settings.</p> <p>Delete settings when null is specified.</p> |
| | Threshold | integer | <p>Threshold Value of the Used System Volume Size</p> <p>Range: 0.00-100.00(%)</p> <p>Outputs percentage up to 2 digits after decimal point in the form without decimal point.</p> <p>Example: Output for 10.12%: 1012</p> |
| DirSize | | object | <p>Information on the size of the directory</p> <p>Specify information on directory size for a user group.</p> <p>When the key is omitted, it does not change the settings.</p> <p>Settings should be deleted (all in default value) when null is specified.</p> |

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

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

[Response Parameter]

| Parameter | | Type | Description |
|----------------------|-------------|---------|--|
| UserGroupId | | string | User Group ID |
| UserGroupName | | string | User Group Name |
| Authentication | | string | Authentication Method |
| NodeGroupId | | integer | Node Group ID ID of node group to link |
| AccessibleNodeGroups | | array | List of Information of Node Group |
| | NodeRoleId | string | Node Role ID |
| | NodeGroupId | string | Node Group ID |
| Users | | array | User Information |
| | UserId | string | User ID |
| | UserName | string | User Name |
| ParentsUserGroupId | | string | Parent User Group ID Only "" is output. |
| AccessRange | | string | Access Range Announces if access range of a user group should be made identical with those of other groups. - Administrator: An identical range of access with the Administrator group - null: No specification - "": No specification |
| Description | | string | Description |
| SystemVolumeSize | | object | Information on the ISM-VA System Volume |

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

| Parameter | | | Type | Description |
|-----------|--|-------------|---------|---|
| | | UsedDirSize | integer | Directory Size being used |
| Modified | | | string | Date of Update Outputs update date in UTC hours. |

[Precautions]

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

4.1.12 Deletion of User Groups

[Overview]

Deletes ISM user groups.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

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

Before deleting a user group, delete the users or move them to a different group.

- Any user group connected with a node group can be deleted.

In this case, a node group is not deleted.

- Note that a user group cannot be restored after deletion.
- Any data connected with a user group is deleted.
- Administrator group cannot be deleted.

4.1.13 Retrieval of LDAP Information

[Overview]

Retrieves the LDAP information set with ISM.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-----------------|---------|---|
| Ldaps | | array | LDAP Information Outputs LDAP information in the order of primary and secondary. |
| | LdapHost | string | LDAP Server Name |
| | Port | integer | Port Number |
| | BaseDn | string | Basic Path |
| | SearchAttribute | string | Search Attribute |
| | BindDn | string | Account for Binding |
| | SSLCertificate | string | SSL Certificate Outputs availability/unavailability of a SSL certificate. <ul style="list-style-type: none">- "On": Assigned SSL certificate- "Off": No specified SSL certificate |
| | Status | string | Status of LDAP Outputs a status of LDAP. <ul style="list-style-type: none">- "Used": This information is currently being used.- "Reserved": This information is currently being reserved. |

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

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- If the LDAP information has never been set, "" character is obtained for all parameters other than Port parameter.

4.1.14 Update of LDAP Information

[Overview]

Sets the LDAP information in ISM.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-----------------|---------|--|
| Ldaps | | array | LDAP Information Specify 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 Specify an encrypted password. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 128 characters or less. |
| | SSLCertificate | string | SSL Certificate Specify when connecting to directory server via SSL. Specify 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 |

| Parameter | | Type | Description |
|-----------|-----------------|---------|---|
| | | | 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 |
| | | | Outputs a parameter as specified. |
| | SSLCertificate | string | SSL Certificate |
| | | | Outputs an SSL certificate as specified. |
| | Status | string | Status of LDAP |
| | | | Outputs a status of LDAP. - "Used": This information is currently being used. - "Reserved": This information is currently being reserved. |
| | Modified | string | Date of Update |
| | | | Outputs update date in UTC hours. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Precautions for LDAP information are as shown below.
 - Only one Authentication method can be specified as a primary and a secondary choice respectively for ISM overall.
 - Only either OpenLDAP or Microsoft Active Directory can be specified as authentication method in the LDAP.
- SSL certificate should be specified 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 the export wizard of the certificate, then choose [Base64 encoded X509(CER)(S)] for specifying a saving path and choose [Finish].
6. Upload the saved file to the directory under the "Administrator/ftp/" by ftp.
7. Specify the name of the above (Specification of Administrator/ftp is not required.)

4.1.15 Switch of LDAP Information

[Overview]

Switches the LDAP information.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

[Precautions]

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

4.1.16 Retrieval of Policy Information

[Overview]

Retrieves the security policy information set in user management.

[Format]

```
GET /users/policy
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------------|---------------------|---------------|--|
| PasswordPolicy | | object | Password policy |
| | UnavailablePastData | integer | Past Passwords Unusable Setting Range: 0-24 Default value: 0 (Does not restrict passwords in the past) |
| | MinimumLength | integer | Minimum Password Length Setting Range: 1-32 Default value: 1 Not word count but byte number |
| | UseCharacterType | integer | Characters may be used in password Outputs how many types should be used from the following. <ul style="list-style-type: none"> - Number - Lowercase - Uppercase - Special characters Setting Range: 0-4 Default value: 0 (unspecified) |
| | ValidPeriod | integer | Password Expiration Date Setting Range: 0-365 (days) Default value: 0 (Indefinite) |
| | InValidUserAction | string | User operation after duration exceeded <ul style="list-style-type: none"> - "Warning": Only warning message - "Lock": Login locked (indefinitely) |
| | UseUserName | boolean | Outputs whether it is possible to specify a password that is identical with the user name. <ul style="list-style-type: none"> - true: Can be specified - false: Cannot be specified |
| | UnavailableString | array(string) | Outputs a character string that cannot be specified as a password in an array. Only 0-256 are output. Outputs an encrypted character string that cannot be specified as a password as a string. Refer to "2.4 Encryption" for encryption method. |
| LoginLockPolicy | | object | Policy for Login Lock |
| | Threshold | integer | Threshold of a Lock Log in will be locked with consecutive fails in row for more than this value. Setting Range: 6-256 Default value: 6 |

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | LockTime | integer | Lock Time Setting Range: 1-1440 (minutes) Default value: 30 |
| | SessionTime | integer | Session Termination Time Setting Range: 2-60 minutes Default value: 30 minutes |
| | Modified | string | Date of Update Outputs update date in UTC hours. |

[Precautions]

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

4.1.17 Update of Policy Information

[Overview]

Updates security policy information configured by user management.

Operations by each item are shown as follows:

- "Past passwords unusable"

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

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

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

- "Password expiration date"

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

- User operation after duration exceeded: When "Warning"

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

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

- User operation after duration exceeded: When "Lock"

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

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

Becomes valid immediately after changing.

[Format]

```
PATCH /users/policy
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|----------------|---------------------|---------------|--|
| PasswordPolicy | | object | Password Policy |
| | UnavailablePastData | integer | Past Passwords Unusable Setting Range: 0-24 Default value: 0 (Does not restrict passwords in the past) |
| | MinimumLength | integer | Minimum Password Length Setting Range: 1-32 Default value: 1 Not word count but byte number |
| | UseCharacterType | integer | Characters that can be used in your password Specify how many types should be used from the following. <ul style="list-style-type: none"> - Number - Lowercase - Uppercase - Special characters Setting Range: 0-4 Default value: 0 (unspecified) |
| | ValidPeriod | integer | Password Expiration Date Setting Range: 0-365 (days) Default value: 0 (Indefinite) |
| | InValidUserAction | string | User operation after duration exceeded <ul style="list-style-type: none"> - "Warning": Only warning message - "Lock": Login locked (indefinitely) |
| | UseUserName | boolean | Specifies whether it is possible to specify a password that is identical with the user name. <ul style="list-style-type: none"> - true: Can be specified - false: Cannot be specified Default value: false |
| | UnavailableString | array(string) | Specify a character string that cannot be specified as a password in an array. Can specify 0-256 pieces. Default value: 0 Specify an encrypted character string that cannot be specified as a password as a string. Refer to " 2.4 Encryption " for encryption method. In addition, specify an encrypted character string whose decrypted result is 32 characters or less. |

| Parameter | | Type | Description |
|-----------------|-----------|---------|--|
| LoginLockPolicy | | object | Policy for Login Lock |
| | Threshold | integer | Threshold of a Lock Log in will be locked after consecutive fails exceeding this value. Setting Range: 6-256 Default value: 6 |
| | LockTime | integer | Lock Time Setting Range: 1-1440 (minutes) Default value: 30 |
| SessionTime | | integer | Session Termination Time Setting Range: 2-60 minutes Default value: 30 minutes |

[Response Parameter]

| Parameter | | Type | Description |
|----------------|---------------------|---------|---|
| PasswordPolicy | | object | Password Policy |
| | UnavailablePastData | integer | Past Passwords Unusable Setting Range: 0-24 Default value: 0 (Does not restrict passwords in the past) |
| | MinimumLength | integer | Minimum Password Length Setting Range: 1-32 Default value: 1 Not word count but byte number |
| | UseCharacterType | integer | Characters that can be used in your password Outputs how many types should be used from the following. <ul style="list-style-type: none"> - Number - Lowercase - Uppercase - Special characters Setting Range: 0-4 Default value: 0 (unspecified) |
| | ValidPeriod | integer | Password Expiration Date Setting Range: 0-365 (days) Default value: 0 (Indefinite) |
| | InValidUserAction | string | User operation after duration exceeded <ul style="list-style-type: none"> - "Warning": Only warning message - "Lock": Login locked (indefinitely) |
| | UseUserName | boolean | Outputs whether it is possible to specify a password that is identical with the user name. |

| Parameter | | Type | Description |
|-----------------|-------------------|---------------|---|
| | | | <ul style="list-style-type: none"> - true: Can be specified - false: Cannot be specified |
| | UnavailableString | array(string) | <p>Outputs a character string that cannot be specified as a password in an array.</p> <p>Only 0-256 are output.</p> <p>Outputs an encrypted character string that cannot be specified as a password as a string. Refer to "2.4 Encryption" for encryption method.</p> |
| LoginLockPolicy | | object | Policy for Login Lock |
| | Threshold | integer | <p>Threshold of a Lock</p> <p>Log in will be locked with consecutive fails in row for more than this value.</p> <p>Setting Range: 6-256</p> <p>Default value: 6</p> |
| | LockTime | integer | <p>Lock Time</p> <p>Setting Range: 1-1440 (minutes)</p> <p>Default value: 30</p> |
| SessionTime | | integer | <p>Validity of Session ID</p> <p>Setting Range: 2-60 minutes</p> <p>Default value: 30 minutes</p> |
| Modified | | string | <p>Date of Update</p> <p>Outputs update date in UTC hours.</p> |

[Precautions]

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

4.2 License Management

4.2.1 Setting Licenses

[Overview]

Registers the information of a license.

[Format]

```
POST /system/licenses
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

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

4.2.2 List Retrieval for License Information

[Overview]

Retrieves the information of a license.

[Format]

```
GET /system/licenses
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|--------------------------|----------------------------------|---------|---|
| Licenses | | array | Information of License |
| | LicenseId | string | License Key |
| | Type | string | License Type <ul style="list-style-type: none"> - Server - Node - Option |
| | Grade | string | License Grade <ul style="list-style-type: none"> - DC - Enterprise - I4P - Trial |
| | InvalidFlag | boolean | Invalid Flag <ul style="list-style-type: none"> - true: invalid - false: valid |
| | ExpirationDate | integer | When a type of license is Server and license grade is Trial, it is the number of days until its expiration. For all cases other than that, fix to 0. |
| | ManagementNodeNumber | integer | When a type of license is Node, it is the number of management nodes. For all cases other than that, fix to 0. |
| | RegistrationTimestampInformation | string | Date of Registration |
| | UpdateTimestampInformation | string | Update Day |
| | ManagementNodeTotalNumber | integer | Total Number of Management Nodes |
| ManagementNodeLeftNumber | | integer | Total Number of Management Nodes Remaining Number subtracted the number of nodes registered with ISM from the number of management nodes. |

4.2.3 Deleting Licenses

[Overview]

Deletes a license.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

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

4.2.4 Replacing Licenses

[Overview]

Replaces the information of a license.

[Format]

```
PATCH /system/licenses
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

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

4.3 Node Management

4.3.1 Node Registration

[Overview]

Registers a node.

[Format]

POST /nodes

[Query Parameter]

None

[Request Parameter]

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

| Parameter | | Type | Description |
|-----------|-------------------|---------|--|
| | | | Key can be omitted. Sets management LAN to be used when executing PXE boot in the server. |
| | ManagementLanMode | string | Specifying Mode for Management LAN <ul style="list-style-type: none"> - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MAC Address: Specify MAC address - Adapter: Specify an adapter |
| | AdapterInfo | object | Information of an adapter to be used as Management LAN When a specified mode is "Adapter", specifying is compulsory. |
| | SlotIndex | integer | Slot Number Specifies 0 for on board. |
| | PortIndex | integer | Port Number |
| | MACAddress | string | MAC Address to be used as the Management LAN When a specified mode is "MACAddress", specifying is compulsory. Checks the input format only when it is enabled. |
| | RackInfo | object | Information on mounting position in a rack |
| | RackId | integer | Rack ID Mounted Specify a mounted Rack ID or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. |
| | Position | integer | Mounting Position (Unit Number) Specify the unit number at the bottom that a node possesses or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. When displaying on the GUI, refer to [Precautions]. |
| | OccupySize | integer | Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM. |
| | MountType | string | PDU Mount Type Key can be omitted. |

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | | | <ul style="list-style-type: none"> - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. Key can be omitted. |
| | Outlet | array | Summary of PDU Connection Information Key can be omitted. Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the destination of connection Presently it is not supported. |
| | Accounts | array | Account Information Key can be omitted. Set up information for access to the node. As for account information required, refer to the manual. |
| | AccountType | string | Account Type Only relevant information for account type specified is used. <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1 - SnmpV2: Used for communication with SNMP v2c - SnmpV3: Used for communication with SNMP v3 - Https: Used for communication with HTTPS(REST) |
| | PortNum | integer | Port Number Used Specify the port number or null. When null specified, sets the standard port number for the protocol. <ul style="list-style-type: none"> - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443) |
| | AccountName | string | User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | Password | string | Account Password Encrypt the password with a method described in " 2.4 Encryption ." It is used when an account type is as follows. |

| Parameter | | Type | Description |
|-----------|---------------|--------|---|
| | | | Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | Property | object | Additional Information according to the Account Type |
| | Ipmi | string | Ipmi Information Key can be omitted. Presently it is not supported. |
| | Ssh | string | Ssh Information Key can be omitted. Presently it is not supported. |
| | SnmpV1 | object | SnmpV1 Information Key can be omitted. It is used when an account type is SnmpV1. |
| | CommunityName | string | Community Name |
| | SnmpV2 | object | SnmpV2 Information Key can be omitted. It is used when an account type is SnmpV2. |
| | CommunityName | string | Community Name |
| | SnmpV3 | object | SnmpV3 Information Key can be omitted. It is used when an account type is SnmpV3. |
| | SecurityLevel | string | Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | AuthProtocol | string | Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA |
| | PrivProtocol | string | Encrypted Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES |
| | PrivPassword | string | Encrypted Password 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 - V4: IPv4 - V6: IPv6 |
| | WebUrl | string | WebURL (such as WebUI of device) to use in main |
| | Urls | array | Miscellaneous WebURL Information |
| | Url | string | WebURL |
| | | string | WebURL Name |
| | Description | string | Description |
| | NodeTagList | array | Node Tag Information |
| | NodeTag | string | Node Tag Name |
| | ManagementLanOption | object | Information of Management LAN Sets management LAN to be used when executing PXE boot in the server. |
| | ManagementLanMode | string | Specifying Mode for Management LAN - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: MAC address - Adapter: Adapter |
| | AdapterInfo | object | Information of an Adapter to be used as Management LAN |
| | SlotIndex | integer | Slot Number |
| | | integer | Port Number |
| | MACAddress | string | MAC Address to be used as Management LAN |
| | RackInfo | object | Information of mounting position in the rack |
| | RackId | integer | Rack ID Mounted |
| | | integer | Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses. |
| | | integer | Number of Units Occupying Racks |
| | MountType | string | PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. |
| | Outlet | array | Summary of PDU Connection Information |

| Parameter | | Type | Description |
|-----------|-----------------|---------|---|
| | | | Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the destination of connection Presently it is not supported. |
| | SlotNum | integer | Slot Number of Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of acquiring node information. |
| | ParentNodeId | integer | Node ID of Parent Node 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 For fabric switch, it is automatically configured at the time of acquiring node information of the fabric. |
| | ChildNodeList | array | Child Node Information A node as a child node is stored. |
| | NodeId | integer | Node ID of Child Node |
| | Type | string | Node Type of Child Node |
| | 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 <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During transmission |
| | AlarmStatus | string | Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error |
| | MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none"> - Normal: Regular Mode - Maintenance: Maintenance Mode |

| Parameter | | Type | Description |
|-----------|----------------|---------|---|
| | 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 is used with ISM.
- You cannot use the following characters in a node name.
Slash (/), back slash (\), colon (:), asterisk (*), question mark (?), double-quotation ("), brackets (<>) and pipeline (|)
- When displaying on the GUI, the controls below are performed.
 - Information on the mounting position in a rack
When a node type is facility, specify 101. Displayed as Rack CDU at upper position of the rack.
When node type is pdu or intelligent-pdu and PDU mount type is OU, specify 201-204. Displayed as 0U PDU beside the rack.
 - Number of units occupying the rack in the information on the mounting position in a rack.
Displayed as nodes of height of 44.5mm 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 BX server | Y | Y | Y | Y |
| server-snmp | Server (SNMP monitoring) | Y | Y | Y | Y |
| 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] |

| Node Type | Model | Node Registration | Acquisition of Node Information | Deletion of Node | Setting of Maintenance Mode |
|-----------------------|---|-------------------|---------------------------------|------------------|-----------------------------|
| 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-bxsbox3 | 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-bxpass thru | PY CB Eth Pass Thru 10Gb 18/18 | - [Note26] | Y | Y | Y |
| switch-bxsb11 | PY CB Eth Switch/IBP 1Gb connection blade | Y | Y | Y | Y |
| switch-bxsbox2 | PY CB Eth Switch/IBP 10Gb 18/8 | Y | Y | Y | Y |
| switch-bxsbox3 | 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 |
| pdu | PDU | Y | Y | Y | Y |
| intelligent-pdu | Intelligent PDU | Y | Y | Y | Y |
| ups | UPS | Y | Y | Y | Y |

| Node Type | Model | Node Registration | Acquisition of Node Information | Deletion of Node | Setting of Maintenance Mode |
|-------------------|--|-------------------|---------------------------------|------------------|-----------------------------|
| 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 retrieving node information of PRIMEQUEST 2000/3000E series, nodes are automatically created.

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

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

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

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

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

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

[Note8]: Execute retrieving of node information for the PRIMERGY CX servers.

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

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

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

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

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

[Note14]: When nodes do not exist, nodes will be deleted automatically at retrieving of node information for the PRIMEQUEST 2000/3000E series.

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

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

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

[Note18]: When nodes do not exist, nodes will be deleted automatically at retrieving of node information for the NetApp (ETERNUS NR) cluster.

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

[Note20]: When nodes do not exist, nodes will be deleted automatically at retrieving of node information for ETERNUS DX.

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

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

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

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

[Note25]: Set ETERNUS DX to the maintenance mode.

[Note26]: When retrieving node information of PRIMERGY BX Chassis (MMB), nodes are automatically created.

4.3.2 List Retrieval for Nodes

[Overview]

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

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

[Format]

```
GET /nodes
```

[Query Parameter]

| Parameter | Type | Description |
|-------------|---------|---|
| name | string | Narrowing down by Node Name |
| type | string | Narrowing down by Node Type For the information on node type that can be specified, refer to [Node Type] in "4.3.1 Node Registration." |
| model | string | Narrowing down by Model Name |
| ipaddress | string | Narrowing down by IP Address |
| rackid | integer | Narrowing down by Rack ID |
| floorid | integer | Narrowing down by Floor ID |
| dcid | integer | Narrowing down by Datacenter ID |
| status | string | Narrowing down by Status <ul style="list-style-type: none">- Error: Error- Warning: Warning- Unknown: Communication impossible- Normal: Normal- Updating: During transmission |
| alarmstatus | string | Narrowing down by Alarm Status <ul style="list-style-type: none">- Error: Error- Warning: Warning- Info: Information- Normal: No notification |
| nodetag | string | Narrowing down by Node Tag Name |
| uniqinfo | string | For Internal Control |

[Response Parameter]

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

| Parameter | | Type | Description |
|-----------|----------------|---------|--|
| | IpAddress | string | IP Address |
| | IpVersion | string | IP Version of IP Address - V4: IPv4 - 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 Mounting Position in the Rack |
| | RackId | integer | Rack ID Mounted |
| | Position | integer | Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses. |
| | OccupySize | integer | Number of Units Occupying Racks |
| | MountType | string | PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. |
| | Outlet | array | Summary of PDU Connection Information Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the Destination of Connection Presently it is not supported. |
| | SlotNum | integer | Slot Number in Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information. |
| | ParentNodeId | integer | Node ID of Parent Node When 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 For fabric switch, it is automatically configured at the time of retrieving node information by the fabric. |
| | ChildNodeList | array | Child Node Information A node as a child node is stored. |
| | NodeId | integer | Node ID of Child Node |
| | Type | string | Node Type of Child Node |

| Parameter | | Type | Description |
|-----------|-----------------|---------|---|
| | SlotNum | integer | Slot Number in Chassis |
| | Fabric | array | Information of Switch Nodes Composing the Fabric |
| | NodeId | integer | Node ID of Switch Node |
| | Status | string | Status of a Node <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During transmission |
| | AlarmStatus | string | Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error |
| | MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none"> - Normal: Regular Mode - Maintenance: Maintenance Mode |
| | NodeGroupId | integer | Node Group ID |
| | UniqInfo | string | Specific Information for Internal Control |
| | UpdateDate | string | Last Update Time |

4.3.3 Individual Retrieval of Node

[Overview]

Retrieves the information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

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

| Parameter | | Type | Description |
|-----------|-----------------|---------|--|
| | | | Presently it is not supported. |
| | SlotNum | integer | Slot Number in Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information. |
| | ParentNodeId | integer | Node ID of Parent Node When 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 the Fabric Node it belongs to For the fabric switch, it is automatically configured at the time of retrieving node information by the fabric. |
| | ChildNodeList | array | Child Node Information A node as a child node is stored. |
| | NodeId | integer | Node ID of Child Node |
| | Type | string | Node Type of Child Node |
| | SlotNum | integer | Slot Number in Chassis |
| | Fabric | array | Information of Switch Nodes Composing the Fabric |
| | NodeId | integer | Node ID of Switch Node |
| | Status | string | Status of a Node <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During transmission |
| | AlarmStatus | string | Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error |
| | MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none"> - Normal: Normal mode - Maintenance: Maintenance mode |
| | NodeGroupId | integer | Node Group ID |
| | UniqInfo | string | Specific Information for Internal Control |
| | AdditionalData | object | Internal Control Information |
| | UpdateDate | string | Last Update Time |

4.3.4 Update of Nodes

[Overview]

Updates the registration information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|---------------------|--------|--|
| Node | | object | Node Information |
| | Name | string | Node Name Designate a unique name in the ISM. |
| | Model | string | Model Name Specify a model name of a device. For machines supported, it may not work normally unless specifying a correct model name. |
| | IpAddress | string | IP Address Designate a unique IP address in the ISM. |
| | IpVersion | string | IP Version of IP Address - V4: IPv4 - V6: IPv6 |
| | WebUrl | string | WebURL (such as WebUI of device) to use in main Key can be omitted. |
| | Urls | array | Miscellaneous WebURL Information Key can be omitted. |
| | Url | string | WebURL |
| | UrlName | string | WebURL Name |
| | Description | string | Description Key can be omitted. |
| | NodeTagList | array | Node Tag Information Key can be omitted. |
| | NodeTag | string | Node Tag Name |
| | ManagementLanOption | object | Information of Management LAN Key can be omitted. Sets management LAN to be used when executing PXE boot in the server. |
| | ManagementLanMode | string | Specifying Mode for the Management LAN - null: No specification |

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| | | | <p>For PXE boot, a port with a smaller slot 0 order is used.</p> <ul style="list-style-type: none"> - MACAddress: Specify MAC address - Adapter: Specify an adapter. |
| | AdapterInfo | object | <p>Information of an Adapter to be used as the Management LAN</p> <p>When a specified mode is "Adapter", specifying is compulsory.</p> |
| | SlotIndex | integer | <p>Slot Number</p> <p>Specifies 0 for on board.</p> |
| | PortIndex | integer | Port Number |
| | MACAddress | string | <p>MAC address to be used as the Management LAN</p> <p>When a specified mode is "MACAddress", specifying is compulsory.</p> <p>Check the input format only when it is enabled.</p> |
| | RackInfo | object | Information of Mounting Position in the Rack |
| | RackId | integer | <p>Rack ID Mounted</p> <p>Specify a mounted Rack ID or null.</p> <p>Specify null for the following cases.</p> <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. |
| | Position | integer | <p>Mounting Position (Unit Number)</p> <p>Specify the unit number at the bottom that a node possesses or null.</p> <p>Specify null for the following cases.</p> <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. <p>When displaying on the GUI, refer to [Precautions].</p> |
| | OccupySize | integer | <p>Number of Units Occupying Racks</p> <p>Specify the number of units occupying racks or null.</p> <p>Specify null for the following cases.</p> <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM. |
| | MountType | string | <p>PDU Mount Type</p> <p>Key can be omitted.</p> <ul style="list-style-type: none"> - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | <p>Do not use it.</p> <p>Key can be omitted.</p> |
| | Outlet | array | Summary of PDU Connection Information |

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | | | Key can be omitted. Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the Destination of Connection Presently it is not supported. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|---------------------|---------|--|
| Node | | object | Node Information |
| | NodeId | integer | Node ID |
| | Name | string | Node Name |
| | Type | string | Node Type |
| | Model | string | Model Name |
| | IpAddress | string | IP Address |
| | IpVersion | string | IP Version of IP Address - V4: IPv4 - V6: IPv6 |
| | WebUrl | string | WebURL (such as WebUI of device) to use in main |
| | Urls | array | Miscellaneous WebURL Information |
| | Url | string | WebURL |
| | | string | WebURL Name |
| | Description | string | Description |
| | NodeTagList | array | Node Tag Information |
| | NodeTag | string | Node Tag Name |
| | ManagementLanOption | object | Information of the Management LAN Sets the management LAN to be used when executing PXE boot in the server. |
| | ManagementLanMode | string | Specifying Mode for the Management LAN - null: No specification For PXE boot, a port with a smaller slot 0 order is used. - MACAddress: MAC address - Adapter: Adapter |
| | AdapterInfo | object | Information of an Adapter to be used as the Management LAN |
| | SlotIndex | integer | Slot Number |
| | | integer | Port Number |
| | MACAddress | string | MAC Address to be used as Management LAN |
| | RackInfo | object | Information of Mounting Position in the Rack |
| | RackId | integer | Rack ID Mounted |

| Parameter | | Type | Description |
|-----------|----------------|---------|--|
| | Position | integer | Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses. |
| | OccupySize | integer | Number of Units Occupying Racks |
| | MountType | string | PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. |
| | Outlet | array | Summary of PDU connection information Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the Destination of Connection Presently it is not supported. |
| | SlotNum | integer | Slot Number of Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of acquiring node information. |
| | ParentNodeId | integer | Node ID of Parent Node 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 For fabric switch, it is automatically configured at the time of acquiring node information by the fabric. |
| | ChildNodeList | array | Child Node Information A node as a child node is stored. |
| | NodeId | integer | Node ID of Child Node |
| | Type | string | Node Type of Child Node |
| | SlotNum | integer | Slot Number in Chassis |
| | Fabric | array | Information of Switch Nodes Composing the Fabric |
| | NodeId | integer | Node ID of Switch Node |
| | Status | string | Status of a Node - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During transmission |
| | AlarmStatus | string | Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. |

| Parameter | Type | Description |
|-----------------|---------|--|
| | | <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification Priority of Status: Normal < Info < Warning < Error |
| MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none"> - Normal: Regular Mode - Maintenance: Maintenance Mode |
| NodeGroupId | integer | Node Group ID |
| UniqInfo | string | Specific Information for Internal Control |
| AdditionalData | object | Internal Control Information |
| UpdateDate | string | Last Update Time |

[Precautions]

- Changing the following values can only be executed by ISM administrators.
RackId, Position, OccupySize, MountType, PduPosition
- Node Name with its head starting with under bar "_" cannot be used as it is used with ISM.
- You cannot use the following characters in a node name.
Slash (/), back slash (\), colon (:), asterisk (*), question mark (?), double-quotation ("), brackets (<>) and pipeline (|)
- When displaying on the GUI, the controls below are performed.
 - Information on the mounting position in a rack
When a node type is facility, specify 101. Displayed as Rack CDU at upper position of the rack.
When node type is pdu or intelligent-pdu and PDU mount type is OU, specify 201-204. Displayed as 0U PDU beside the rack.
 - Number of units occupying the rack in the information on the mounting position in a rack
Displayed as nodes of height of 44.5mm multiplied by the number of units occupying the rack.

4.3.5 Deletion of Nodes

[Overview]

Deletes the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

4.3.6 Registration of Racks

[Overview]

Registers a rack.

[Format]

```
POST /racks
```

[Query Parameter]

None

[Request Parameter]

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

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | Yposition | integer | Y coordinate position where the rack is located Unit: millimeter Can be omitted Increasing downward in plan view. When displaying on the GUI, refer to [Precautions]. |
| | Description | string | Description Can be omitted |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| Rack | | object | Rack Information |
| | RackId | integer | Rack ID |
| | Name | string | Rack Name |
| | Unit | integer | Unit Size |
| | Width | integer | Width of the Rack Unit: millimeter |
| | Depth | integer | Depth of the Rack Unit: millimeter |
| | Height | integer | Height of the Rack Unit: millimeter |
| | FloorId | integer | Floor ID where the Rack is located |
| | Angle | integer | Placement Angle of the Rack |
| | Xposition | integer | X coordinate position where the rack is located Unit: millimeter |
| | Yposition | integer | Y coordinate position where the rack is located Unit: millimeter |
| | Description | string | Description |
| | Status | string | Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last 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 10-50.

- For the width of the rack, set it within a range of 1-3000. When it is 500 or less, GUI displays with 500mm.
- For the depth of the rack, set it within a range of 1-3000. When it is 700 or less, GUI displays with 700mm.
- For the height of the rack, set it within a range of 1-3000. When it is smaller than a value automatically computed based on a unit size, the value of automatic computing is displayed.

Automatic Calculation: Thickness of the bottom plate and top board of a rack (110 mm) + Height of 1 Unit (44.5 mm) x Unit size

- As for placement angle of the rack, set from 0, 90, 180 and 270. In other cases, it is displayed by either 0,90, 180, or 270.
- For both X and Y coordinate positions of the rack installation, set any values that can be accommodated within the relevant floor. When specifying out of this range, it will not be shown by GUI.

4.3.7 List Retrieval for Racks

[Overview]

Retrieves information of all racks.

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

[Format]

```
GET /racks
```

[Query Parameter]

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

[Response Parameter]

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

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

4.3.8 Individual Retrieval of Rack

[Overview]

Retrieves the information of the specified racks.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| Rack | | object | Rack Information |
| | RackId | integer | Rack ID |
| | Name | string | Rack Name |
| | Unit | integer | Unit Size |
| | Width | integer | Width of the Rack Unit: millimeter |
| | Depth | integer | Depth of the Rack Unit: millimeter |
| | Height | integer | Height of the Rack Unit: millimeter |
| | FloorId | integer | Floor ID where the Rack is located |
| | Angle | integer | Placement Angle of the Rack |
| | Xposition | integer | X coordinate position where the rack is located Unit: millimeter |
| | Yposition | integer | Y coordinate position where the rack is located Unit: millimeter |
| | Description | string | Description |
| | Status | string | Status of a Rack A status mounted node with highest severity will be shown. |

| Parameter | | Type | Description |
|-----------|---------------|---------|--|
| | | | Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Rack A status mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update Time |
| | Nodes | array | Information of the node mounted in the rack |
| | NodeId | integer | Node ID |
| | Name | string | Node Name |
| | Type | string | Node Type |
| | RackInfo | object | Information of Mounting Position in the Rack |
| | RackId | integer | Rack ID Mounted |
| | Position | integer | Mounting Position (Unit Number) Outputs unit number at the bottom that a node possesses. |
| | OccupySize | integer | Occupying Volume of Rack by Node |
| | MountType | string | PDU Mount Type - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. |
| | Outlet | array | Summary of PDU Connection Information Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID of Connection Destination Presently it is not supported. |
| | SlotNum | integer | Slot Number in Chassis For CX server, BX server blade and connection blade, it is automatically set at the time of retrieving node information. |
| | ParentNodeId | integer | Node ID of Parent Node When 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 A node as a child node is stored. |
| | NodeId | integer | Node ID of Child Node |
| | Type | string | Node Type of Child Node |
| | SlotNum | integer | Slot Number of Chassis |
| | Status | string | Status of a Node - Error: Error - Warning: Warning |

| Parameter | | Type | Description |
|-----------|-------------|--------|---|
| | | | <ul style="list-style-type: none"> - Unknown: Communication impossible - Normal: Normal - Updating: During transmission |
| | AlarmStatus | string | Alarm Status of a Node <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification |
| | UpdateDate | string | Last Update Time |

4.3.9 Updating of Racks

[Overview]

Updates the information of the specified racks.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|---------|---------|--|
| Rack | | object | Rack Information |
| | Name | string | Rack Name Designate a unique name in the ISM. |
| | Unit | integer | Unit Size When displaying on the GUI, refer to [Precautions]. |
| | Width | integer | Width of the Rack Unit: millimeter When displaying on the GUI, refer to [Precautions]. |
| | Depth | integer | Depth of Rack Unit: millimeter When displaying on the GUI, refer to [Precautions]. |
| | Height | integer | Height of Rack Unit: millimeter When displaying on the GUI, refer to [Precautions]. |
| | FloorId | integer | Floor ID where the Rack is located Can be omitted |
| | Angle | integer | Placement Angle of the Rack Can be omitted |

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

[Response Parameter]

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

| Parameter | | Type | Description |
|-----------|------------|--------|------------------|
| | 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 10-50.
 - For the width of the rack, set it within a range of 1-3000. When it is 500 or less, GUI displays with 500mm.
 - For the depth of the rack, set it within a range of 1-3000. When it is 700 or less, GUI displays with 700mm.
 - For the height of the rack, set it within a range of 1-3000. When it is smaller than a value automatically computed based on a unit size, the value of automatic computing is displayed.
Automatic Calculation: Thickness of the bottom plate and top board of a rack (110 mm) + Height of 1 Unit (44.5 mm) x Unit size
 - As for placement angle of the rack, set from 0, 90, 180 and 270. In other cases, it is displayed by either 0, 90, 180, or 270.
 - For both X and Y coordinate positions of the rack installation, set any values that can be accommodated within the relevant floor. When specifying out of this range, it will not be shown by GUI.

4.3.10 Deletion of Racks

[Overview]

Deletes the specified racks.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators

4.3.11 Registration of Floors

[Overview]

Registers a floor.

[Format]

```
POST /floors
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

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

[Format]

```
GET /floors
```

[Query Parameter]

| Parameter | Type | Description |
|-----------|---------|---------------------------------|
| dcid | integer | Narrowing down by Datacenter ID |

[Response Parameter]

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

4.3.13 Individual Retrieval of Floor

[Overview]

Retrieves the information of the specified floor.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| Floor | | object | Floor Information |
| | FloorId | integer | Floor ID |
| | Name | string | Floor name |
| | DcId | integer | Datacenter ID where the Floor is located |
| | Xsize | integer | X Width of a Floor Unit: meter |
| | Ysize | integer | Y Width of a Floor Unit: meter |
| | Description | string | Description |
| | Status | string | Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Floor A status of the node with the highest severity in a floor will be shown. Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update Time |
| | Racks | array | Rack Information in a Floor |
| | | RackId | Rack ID |
| | | Name | Rack Name |
| | | Unit | Unit Size |
| | | Width | Width of the Rack Unit: millimeter |
| | | Depth | Depth of Rack Unit: millimeter |
| | | Height | Height of Rack Unit: millimeter |
| | | FloorId | Floor ID where the Rack is located |
| | | Angle | Placement Angle of the Rack |

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | Xposition | integer | X coordinate position where the rack is located Unit: millimeter |
| | Yposition | integer | Y coordinate position where the rack is located Unit: millimeter |
| | Description | string | Description |
| | Status | string | Status of a Rack A status of the mounted node with highest severity will be shown. Priority of Status: Updating < Normal < Unknown < Warning < Error |
| | AlarmStatus | string | Alarm Status of a Rack A status of the mounted node with highest severity will be shown. Priority of Status: Normal < Info < Warning < Error |
| | UpdateDate | string | Last Update Time |

4.3.14 Update of Floors

[Overview]

Updates the information of the specified floor.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

4.3.16 Registration of Datacenters

[Overview]

Registers a datacenter.

[Format]

POST /datacenters

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

- Can only be executed by ISM administrators.

4.3.17 List Retrieval for Datacenters

[Overview]

Retrieves the information of all datacenters.

[Format]

```
GET /datacenters
```

[Query Parameter]

None

[Response Parameter]

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

4.3.18 Individual Retrieval of Datacenter

[Overview]

Retrieves the set datacenter information.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------|------|---------|------------------------|
| DataCenter | | object | Datacenter Information |
| | DcId | integer | Datacenter ID |
| | Name | string | Datacenter Name |

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

4.3.19 Update of Datacenters

[Overview]

Updates the information of the specified datacenter.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

- Can only be executed by ISM administrators.

4.3.20 Deletion of Datacenters

[Overview]

Deletes the set datacenter information.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

4.3.21 Registration of Node Groups

[Overview]

Registers a node group.

[Format]

POST /nodegroups

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

- Can only be executed by ISM administrators.
- A node cannot be specified at creating a node group. When setting a node group, perform node allocation after creating a node group.

- The following node names cannot be used as they are used with ISM.
 - A name starting with under bar "_"
 - ISMDefaultGroup
 - ISMSharedGroup

4.3.22 List Retrieval for Node Groups

[Overview]

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

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

[Format]

```
GET /nodegroups
```

[Query Parameter]

| Parameter | Type | Description |
|-----------|---------|-----------------------------------|
| type | integer | Narrowing down by Node Group Type |

[Response Parameter]

| Parameter | Type | Description |
|---------------|---------|--|
| NodeGroups | array | Information of Node Group |
| NodeGroupId | integer | Node Group ID |
| Name | string | Node Group Name |
| ParentGroupId | integer | Parent Node Group Presently it is not supported. |
| Type | integer | Node Group Type <ul style="list-style-type: none"> - 0: Node Group Created by User - 1: ISMDefaultGroup - 2: ISMSharedGroup |
| Nodes | array | Node Information within a Node Group |
| NodeId | integer | Node ID |
| NodeGroups | array | Information of Node Group within a Node Group Only ISMDefaultGroup information is stored. |
| NodeGroupId | integer | Node Group ID |
| UpdateDate | string | Last Update Time |

4.3.23 Individual Retrieval of Node Group

[Overview]

Retrieves the information of the specified node groups.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

4.3.24 Updating of Node Groups

[Overview]

Updates the information of the specified node groups.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|---------------|---------|--|
| NodeGroup | | object | Information of Node Group |
| | Name | string | Node Group Name Designate a unique name in the ISM. |
| | ParentGroupId | integer | Parent Node Group Can be omitted |

| Parameter | Type | Description |
|-----------|------|--------------------------------|
| | | Presently it is not supported. |

[Response Parameter]

| Parameter | Type | Description |
|---------------|---------|---|
| NodeGroup | object | Information of Node Group |
| NodeGroupId | integer | Node Group ID |
| Name | string | Node Group Name |
| ParentGroupId | integer | Parent Node Group Presently it is not supported. |
| Type | integer | Node Group Type <ul style="list-style-type: none"> - 0: Node Group Created by User - 1: ISMDefaultGroup - 2: ISMSharedGroup |
| UpdateDate | string | Last Update Time |

[Precautions]

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

4.3.25 Deletion of Node Groups

[Overview]

Deletes a node group.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by ISM administrators.

- Cannot specify the ISMDefaultGroup as well as the ISMSharedGroup.

4.3.26 Allocation of Nodes to Node Groups

[Overview]

Allocates the specified nodes to the specified node groups.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| Nodes | | array | Information on Allocation of Node Group for Nodes |
| | NodeId | integer | Node ID |
| | NodeGroupId | integer | Node Group ID Cannot specify ISMSharedGroup. |

[Response Parameter]

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

[Precautions]

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

4.3.27 Account Registration

[Overview]

Registers account information to a node.

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------------|---|
| Account | | object | Account Information |
| | AccountType | string | <p>Account Type</p> <p>Only relevant information for account type specified is used.</p> <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST) |
| | PortNum | integer | <p>Port Number used</p> <p>Specify the Port number or null.</p> <p>When null specified, sets the standard port number for the protocol.</p> <ul style="list-style-type: none"> - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443) |
| | AccountName | string | <p>User Account Name</p> <p>It is used when an account type is as follows.</p> <p>Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https</p> |
| | Password | string | <p>Account Password</p> <p>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.</p> <p>Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https</p> |
| | Property | object | Additional Information according to the Account Type |
| | | Ipmi | <p>Ipmi Information</p> <p>Key can be omitted.</p> <p>Presently it is not supported.</p> |
| | | Ssh | <p>Ssh Information</p> <p>Key can be omitted.</p> <p>Presently it is not supported.</p> |
| | | SnmpV1 | <p>SnmpV1 Information</p> <p>Key can be omitted.</p> <p>It is used when an account type is SnmpV1.</p> |
| | | CommunityName | Community Name |
| | | SnmpV2 | <p>SnmpV2 Information</p> <p>Key can be omitted.</p> |

| Parameter | | Type | Description |
|-----------|---------------|--------|---|
| | | | It is used when an account type is SnmpV2. |
| | CommunityName | string | Community Name |
| | SnmpV3 | object | SnmpV3 Information Key can be omitted. It is used when an account type is SnmpV3. |
| | SecurityLevel | string | Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | AuthProtocol | string | Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA |
| | PrivProtocol | string | Encrypted Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES |
| | PrivPassword | string | Encrypted Password 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 - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. |
| | | | |

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

4.3.28 List Retrieval for Accounts

[Overview]

Retrieves all the account information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| Accounts | | array | Account Information |
| | AccountId | integer | Account ID |
| | NodeId | integer | Node ID |
| | AccountType | string | Account Type <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Htps: Used for communication with HTTPS (REST). |
| | AccountName | string | User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Htps |
| | UpdateDate | string | Last Update Time |

4.3.29 Individual Retrieval of Account Information**[Overview]**

Retrieves the account information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---------------------|
| Account | | object | Account Information |
| | AccountId | integer | Account ID |
| | NodeId | integer | Node ID |
| | AccountType | string | Account Type |

| Parameter | | Type | Description |
|-----------|---------------|---------|---|
| | | | <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST). |
| | PortNum | integer | Port Number used |
| | AccountName | string | User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | Property | object | Additional Information according to the Account Type |
| | Ipmi | string | Ipmi Information Presently it is not supported. |
| | Ssh | string | Ssh Information Presently it is not supported. |
| | SnmpV1 | object | SnmpV1 Information It is used when an account type is SnmpV1. |
| | CommunityName | string | Community Name |
| | SnmpV2 | object | SnmpV2 Information It is used when an account type is SnmpV2. |
| | CommunityName | string | Community Name |
| | SnmpV3 | object | SnmpV3 Information It is used when an account type is SnmpV3. |
| | SecurityLevel | string | Security Level <ul style="list-style-type: none"> - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | AuthProtocol | string | Authentication Protocol Used when security level is "authPriv" or "authNoPriv." <ul style="list-style-type: none"> - MD5: Authentication by MD5 - SHA: Authentication by SHA |
| | PrivProtocol | string | Encrypted Protocol Used when security level is "authPriv." <ul style="list-style-type: none"> - DES: Encryption by DES - AES: Encryption by AES |
| | ContextName | string | Context Name |

| Parameter | | | Type | Description |
|-----------|--|------------|--------|------------------|
| | | EngineId | string | Engine ID |
| | | UpdateDate | string | Last Update Time |

4.3.30 Updating of Account Information

[Overview]

Updates the account information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| Account | | object | Account Information |
| | AccountType | string | <p>Account Type</p> <p>Only relevant information for account type specified is used.</p> <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Htps: Used for communication with HTTPS (REST). |
| | PortNum | integer | <p>Port Number used</p> <p>Specify the Port number or null.</p> <p>When null specified, sets the standard port number for the protocol.</p> <ul style="list-style-type: none"> - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443) |
| | AccountName | string | <p>User Account Name</p> <p>It is used when an account type is as follows.</p> <p>Ipmi, Ssh, Ssh-Privileged, SnmpV3, Htps</p> |
| | Password | string | <p>Account Password</p> <p>When not updating, the key can be omitted.</p> |

| Parameter | | Type | Description |
|-----------|---------------|--------|---|
| | | | Encrypt the password with a method described in " 2.4 Encryption ." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | Property | object | Additional Information according to the Account Type When not updating, the key can be omitted. |
| | Ipmi | string | Ipmi Information Key can be omitted. Presently it is not supported. |
| | Ssh | string | Ssh Information Key can be omitted. Presently it is not supported. |
| | SnmpV1 | object | SnmpV1 Information Key can be omitted. It is used when an account type is SnmpV1. |
| | CommunityName | string | Community Name |
| | SnmpV2 | object | SnmpV2 Information Key can be omitted. It is used when an account type is SnmpV2. |
| | CommunityName | string | Community Name |
| | SnmpV3 | object | SnmpV3 Information Key can be omitted. It is used when an account type is SnmpV3. |
| | SecurityLevel | string | Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | AuthProtocol | string | Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. - MD5: Authentication by MD5 - SHA: Authentication by SHA |
| | PrivProtocol | string | Encrypted Protocol Used when security level is "authPriv." - DES: Encryption by DES - AES: Encryption by AES |
| | PrivPassword | string | Encrypted Password When not updating, the key can be omitted. |

| Parameter | | | Type | Description |
|-----------|--|-------------|--------|---|
| | | | | 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 <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - Ssh-Privileged: Used in platform requiring promotion of privilege after Ssh login. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST) |
| | PortNum | | integer | Port Number used |
| | AccountName | | string | User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | Property | | object | Additional Information according to the Account Type |
| | Ipmi | | string | Ipmi Information Presently it is not supported. |
| | Ssh | | string | Ssh Information Presently it is not supported. |
| | SnmpV1 | | object | SnmpV1 Information It is used when an account type is SnmpV1. |
| | CommunityName | | string | Community Name |
| | SnmpV2 | | object | SnmpV2 Information It is used when an account type is SnmpV2. |
| | CommunityName | | string | Community Name |
| | SnmpV3 | | object | SnmpV3 Information It is used when an account type is SnmpV3. |
| | SecurityLevel | | string | Security Level <ul style="list-style-type: none"> - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption |

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

4.3.31 Deletion of Accounts

[Overview]

Deletes the account information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.3.32 Clearing Node Alarms

[Overview]

Clears the alarm of the specified node.

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

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

4.3.33 Changing from/to Maintenance Mode

[Overview]

Changes maintenance mode of a node.

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-----------------|--------|--|
| Node | | object | Node Information |
| | MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none">- Normal: Maintenance Mode Disabled- Maintenance: Maintenance Mode Enabled |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-----------------|--------|--|
| Node | | object | Node Information |
| | MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none">- Normal: Maintenance Mode Disabled- Maintenance: Maintenance Mode Enabled |

[Precautions]

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

4.3.34 List Retrieval for Node Tags

[Overview]

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

[Format]

```
GET /nodes/nodetags
```

[Query Parameter]

None

[Response Parameter]

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

4.4 Node Discovery

4.4.1 Execution of Manual Node Discovery

[Overview]

Executes manual node discovery according to the set requirements.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

| Parameter | | Type | Description |
|-----------|--|---------------|---|
| | | | <p>Specify the Port number or null.</p> <p>When null specified, sets the standard port number for the protocol.</p> <ul style="list-style-type: none"> - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443) |
| | | AccountName | <p>string</p> <p>User Account Name</p> <p>It is used when an account type is as follows.</p> <p>Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https</p> |
| | | Password | <p>string</p> <p>Account Password</p> <p>Encrypt the password with a method described in "2.4 Encryption." It is used when an account type is as follows.</p> <p>Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https</p> |
| | | Property | <p>object</p> <p>Additional Information according to the Account Type</p> |
| | | Ipmi | <p>string</p> <p>IPMI Information</p> <p>Presently it is not supported.</p> |
| | | Ssh | <p>string</p> <p>Ssh Information</p> <p>Presently it is not supported.</p> |
| | | SnmpV1 | <p>object</p> <p>SnmpV1 Information</p> <p>It is used when an account type is SnmpV1.</p> |
| | | CommunityName | <p>string</p> <p>Community Name</p> |
| | | SnmpV2 | <p>object</p> <p>SnmpV2 Information</p> <p>It is used when an account type is SnmpV2.</p> |
| | | CommunityName | <p>string</p> <p>Community Name</p> |
| | | SnmpV3 | <p>object</p> <p>SnmpV3 Information</p> <p>It is used when an account type is SnmpV3.</p> |
| | | SecurityLevel | <p>string</p> <p>Security Level</p> <ul style="list-style-type: none"> - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | | AuthProtocol | <p>string</p> <p>Authentication Protocol</p> <p>Used when security level is "authPriv" or "authNoPriv."</p> <p>Specify AccountName for account information and Password for your password.</p> <ul style="list-style-type: none"> - MD5: Authentication by MD5 - SHA: Authentication by SHA |
| | | PrivProtocol | <p>string</p> <p>Encrypted Protocol</p> <p>Used when security level is "authPriv."</p> |

| Parameter | | | | Type | Description |
|-----------|--|--|--|--------------|---|
| | | | | | <ul style="list-style-type: none"> - DES: Encryption by DES - AES: Encryption by AES |
| | | | | PrivPassword | Encrypted Password Encrypt the password with a method described in " 2.4 Encryption ." Used when security level is "authPriv." |
| | | | | ContextName | Context Name |
| | | | | EngineId | Engine ID |

[Response Parameter]

| Parameter | Type | Description |
|-------------------|---------|------------------------------|
| ManualDiscoveryId | integer | ID for Manual Node Discovery |

[Precautions]

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

How to specify a range of IP Address (examples)

- "192.168.1.10": For specifying a specific IP address
- "192.168.2.10-90": For specifying a range, it should be specified by linking only the last digit with "-."

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

4.4.2 Retrieving Results of Manual Node Discovery

[Overview]

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

[Format]

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

[Query Parameter]

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

[Response Parameter]

| Parameter | | Type | Description |
|---------------------|-----------------------|---------|---|
| ManualDiscoveryList | | array | Result of Manual Node Discovery |
| | ManualDiscoveryId | integer | ID for Manual Node Discovery |
| | Status | string | Status of Discovery Process <ul style="list-style-type: none"> - Running: Execution in progress - Complete: Finished |
| | ManualDiscoveredNodes | array | Manually Discovered Node |
| | ManualNodeId | integer | ID of Manually Discovered Node |

| Parameter | | Type | Description |
|-----------|---------------------|---------|---|
| | IpAddress | string | IP Address of Manually Discovered Node |
| | IpVersion | string | IP Version of IP Address - V4: IPv4 - V6: IPv6 |
| | NodeStatus | string | Status of Manually Discovered Node - Success: Success (supported) - Not supported: Not supported - Error: Failed to discover (Ping communication is successful. Failed to retrieve information.) - Only automatic registration: Not handled by node registration (if fabric switch) |
| | NodeType | string | Node Type For the information on node type, refer to [Node Type] in "4.3.1 Node Registration." For not supported or failed to discover, "other" is set. |
| | Model | string | Model Name of a Device |
| | SerialNumber | string | Serial Number of a Device |
| | Chassis | object | Chassis Information PRIMERGY CX server only. For other models, null is set. |
| | Model | string | Model Name of a Chassis |
| | | string | Serial Number of a Chassis |
| | | integer | Slot Number in Chassis of a Discovered Device |
| | Accounts | array | Information of Account that succeeded in connection Only account information displayed is registered as account information of a node at the time registration of manually discovered node. |
| | AccountType | string | Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST). |
| | | | |
| | | | |
| | | | |
| | DiscoveredDate | string | Discovered Time |
| | ManualDiscoveryType | string | Manual Discovery Type - Ranges: Discovery with the specified IP address ranges - Csv: Discovery with the specified CSV files |
| | CsvFile | string | CSV File Name Output when ManualDiscoveryType is "Csv." |

| Parameter | | Type | Description |
|-----------|------------------------|----------------|---|
| | ManualDiscoverySetting | | Information on Setting of Manual Discovery Output when ManualDiscoveryType is "Ranges." |
| | Ranges | | Range of IP Addresses of Targets for Discovering |
| | | IpAddressRange | IP Address Range |
| | | IpVersion | IP Version of IP Address - V4: IPv4 - V6: IPv6 |
| | Accounts | | Account Information |
| | | AccountType | Account Type - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST). |
| | | PortNum | Port Number used |
| | | AccountName | User Account Name |
| | | Property | Additional Information according to the Account Type |
| | | Ipmi | Ipmi Information Presently it is not supported. |
| | | | Ssh Information Presently it is not supported. |
| | | SnmpV1 | SnmpV1 Information It is used when an account type is SnmpV1. |
| | | CommunityName | Community Name |
| | | SnmpV2 | SnmpV2 Information It is used when an account type is SnmpV2. |
| | | CommunityName | Community Nam |
| | | SnmpV3 | SnmpV3 Information It is used when an account type is SnmpV3. |
| | | SecurityLevel | Security Level - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | | AuthProtocol | Authentication Protocol Used when security level is "authPriv" or "authNoPriv." - MD5: Authentication by MD5 - SHA: Authentication by SHA |

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

[Precautions]

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

4.4.3 Registration of Manually Discovered Nodes

[Overview]

Registers a node for manually discovered nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

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

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | | | When displaying on the GUI, refer to [Precautions]. |
| | OccupySize | integer | Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM. |
| | MountType | string | PDU Mount Type <ul style="list-style-type: none"> - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. |
| | Outlet | array | Summary of PDU Connection Information Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the Destination of Connection Presently it is not supported. |
| | Chassis | object | Chassis Information For PRIMERGY CX servers, nodes are registered if the chassis has not been registered. In case that the chassis has been registered, the chassis information is not updated. |
| | Name | string | Node Name of a Chassis |
| | WebUrl | string | Web URL to be used in main Chassis |
| | Description | string | Description of a Chassis |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| Node | | object | Node Information |
| | NodeId | integer | Node ID |
| | Name | string | Node Name |
| | Type | string | Node Type For the information on node type, refer to [Node Type] in "4.3.1 Node Registration." |
| | Model | string | Model Name |
| | IpAddress | string | IP Address |
| | IpVersion | string | IP Version of IP Address <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | WebUrl | string | WebURL (such as WebUI of device) to use in main |
| | Description | string | Description |

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

| Parameter | | Type | Description |
|-----------|-----------------|---------|--|
| | AlarmStatus | string | <p>Alarm Status of a Node</p> <p>For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes.</p> <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification <p>Severity of Status: Normal < Info < Warning < Error</p> |
| | MaintenanceMode | string | <p>Maintenance Mode</p> <ul style="list-style-type: none"> - Normal: Regular Mode - Maintenance: Maintenance Mode |
| | NodeGroupId | integer | Node Group ID |
| | UniqInfo | string | Specific Information for Internal Control |
| | UpdateDate | string | Last Update Time |

[Precautions]

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

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

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

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

4.4.4 Retrieving Results of Automatic Node Discovery

[Overview]

Retrieves 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 - Upnp: Automatic discovery by Upnp - Redfish: Automatic discovery by Redfish |
| | Ipv4Address | string | Discovered IPv4 Address |
| | Ipv6Address | string | Discovered IPv6 Address When DiscoveryType is Upnp/Redfish, IPv6 link local address is discovered. Node registration cannot be performed for IPv6 link local address. |
| | NodeStatus | string | Automatic Discovery Node Status - Success: Success (supported) - Not supported: Not supported - Error: Discovery failure |
| | NodeType | string | Node Type For the information on node type, refer to [Node Type] in "4.3.1 Node Registration." For not supported or failed to discover, "other" is set. |
| | Model | string | Model Name of a Device |
| | SerialNumber | string | Serial Number of a Device |
| | Chassis | object | Chassis Information PRIMERGY CX server only. For other models, null is set. |
| | Model | string | Model Name of a Chassis |
| | | string | Serial Number of a Chassis |
| | | integer | Slot Number in Chassis of a Discovered Device |
| | DiscoveredDate | string | Discovered Time |

[Precautions]

- Corresponding models of automatic discovery are as follows.
 - Upnp: PSWITCH
 - Redfish: PRIMERGY server, PRIMEQUEST3000B
- Devices already registered in ISM are not discovered.
- When notification is not received from the device for more than 30 minutes after the device is discovered, it will be deleted from the discovery results. Devices removed from the network will be deleted from the discovery results after 30 minutes.

- After connecting the device to the network, it takes time to display the automatic discovery results for the time of periodic notification interval at a maximum.

4.4.5 Registration of Automatically Discovered Nodes

[Overview]

Registers a node for automatically discovered node.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-----------------|--------|---|
| Node | | object | Node Information |
| | Name | string | Node Name |
| | Type | string | Node Type For the information on node types that can be specified, refer to [Node Type] in "4.3.1 Node Registration." Specify the node type retrieved in the automatic discovery result retrieval of nodes. When you want to change it, specify a node type to configure. It may not work normally unless specifying correctly. |
| | Model | string | Model Name Specify the model name retrieved in the automatic discovery result retrieval of nodes. When you want to change it, specify the name of model to configure. It may not work normally unless specifying a correct model name. |
| | IpVersion | string | IP Version Specify the IP version to be registered in ISM. |
| | ModifyIpAddress | object | Device IP Address setting (change) Information Key can be omitted. When the key is omitted, the setting of device is not performed. Refer to [Precautions]. |
| | IpModifyMode | string | IP Address change Mode It works with NotModifyDevice when not specified. - ModifyDevice: Set (change) IP address of the device - NotModifyDevice: Do not set the device |
| | IpAddress | string | IP Address to set for the Device Specify when IpModifyMode is ModifyDevice. |
| | IpVersion | string | IP Version of IP Address to set for the Device Specify when IpModifyMode is ModifyDevice. |

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| | | | <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | Subnet | string | Subnet of IP address to set for the Device Specify when IpModifyMode is ModifyDevice. Specify IP address format when IP version is IPv4 and prefix format for IPv6. E.g.) For IPv4: "255.255.255.0" For IPv6: "64" |
| | Gateway | string | Gateway to set for Device Specify when IpModifyMode is ModifyDevice. |
| | WebUrl | string | WebURL (such as WebUI of device) to use in main |
| | Description | string | Description |
| | NodeTagList | array | Node Tag Information Key can be omitted. |
| | NodeTag | string | Node Tag Name |
| | RackInfo | object | Information of Mounting Position in the Rack For PRIMERGY CX servers, it is registered as information on rack installation position of a chassis. |
| | RackId | integer | Rack ID Mounted Specify a mounted Rack ID or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. |
| | Position | integer | Mounting Position (Unit Number) Specify the unit number at the bottom that a node possesses or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in the ISM. When displaying on the GUI, refer to [Precautions]. |
| | OccupySize | integer | Number of Units Occupying Racks Specify the number of units occupying racks or null. Specify null for the following cases. <ul style="list-style-type: none"> - When not mounted in a rack - When the rack in which the node is mounted is not registered in ISM. |
| MountType | | string | PDU Mount Type |

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| | | | <ul style="list-style-type: none"> - Rack: Type to mount as same as normal nodes - 0U: Type to be mounted beside the rack |
| | PduPosition | string | Do not use it. |
| | Outlet | array | Summary of PDU Connection Information Presently it is not supported. |
| | PowerSocket | integer | Socket Number Presently it is not supported. |
| | NodeId | integer | Node ID at the Destination of Connection Presently it is not supported. |
| | Chassis | object | Chassis Information For PRIMERGY CX servers, nodes are registered if the chassis has not been registered. In case that the chassis has been registered, the chassis information is not updated. |
| | Name | string | Node Name of a Chassis |
| | WebUrl | string | Web URL to be used in main Chassis |
| | Description | string | Description of a Chassis |
| | Accounts | array | Account Information Set up information for access to the node. |
| | AccountType | string | Account Type Only relevant information for account type specified is used. <ul style="list-style-type: none"> - Ipmi: Used when iRMC/BMC/MMB etc. is transmitted with IPMI. - Ssh: Used for communication with Ssh. - SnmpV1: Used for communication with SNMP v1. - SnmpV2: Used for communication with SNMP v2c. - SnmpV3: Used for communication with SNMP v3. - Https: Used for communication with HTTPS (REST). |
| | PortNum | integer | Port Number used Specify the Port number or null. When null specified, sets the standard port number for the protocol. <ul style="list-style-type: none"> - IPMI (No. 623) - SSH (No. 22) - SNMP (No. 161) - HTTPS (No. 443) |
| | AccountName | string | User Account Name It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | Password | string | Account Password |

| Parameter | | Type | Description |
|-----------|--|---------------|---|
| | | | Encrypt the password with a method described in " 2.4 Encryption ." It is used when an account type is as follows. Ipmi, Ssh, Ssh-Privileged, SnmpV3, Https |
| | | Property | Additional Information according to the Account Type |
| | | Ipmi | Ipmi Information Presently it is not supported. |
| | | Ssh | Ssh Information Presently it is not supported. |
| | | SnmpV1 | SnmpV1 Information It is used when an account type is SnmpV1. |
| | | CommunityName | Community Name |
| | | SnmpV2 | SnmpV2 Information It is used when an account type is SnmpV2. |
| | | CommunityName | Community Name |
| | | SnmpV3 | SnmpV3 Information It is used when an account type is SnmpV3. |
| | | SecurityLevel | Security Level <ul style="list-style-type: none"> - authPriv: Authentication and encryption enabled - authNoPriv: Authentication enabled, No encryption - noAuthNoPriv: No authentication nor encryption |
| | | AuthProtocol | Authentication Protocol Used when security level is "authPriv" or "authNoPriv." Specify AccountName for account information and Password for your password. <ul style="list-style-type: none"> - MD5: Authentication by MD5 - SHA: Authentication by SHA |
| | | PrivProtocol | Encrypted Protocol Used when security level is "authPriv." <ul style="list-style-type: none"> - DES: Encryption by DES - AES: Encryption by AES |
| | | PrivPassword | Encrypted Password Encrypt the password with a method described in " 2.4 Encryption ." Used when security level is "authPriv." |
| | | ContextName | Context Name |
| | | EngineId | Engine ID |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------|---------|------------------|
| Node | | object | Node Information |
| | NodeId | integer | Node ID |

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

| Parameter | | Type | Description |
|-----------|-----------------|---------|---|
| | NodeId | integer | Node ID of Child Node |
| | Type | string | Node Type of Child Node |
| | SlotNum | integer | Slot Number in Chassis |
| | Fabric | array | Information of Switch Nodes Composing the Fabric |
| | NodeId | integer | Node ID of Switch Node |
| | Status | string | Status of a Node <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Unknown: Communication impossible - Normal: Normal - Updating: During transmission |
| | AlarmStatus | string | Alarm Status of a Node For a node with subordinate node such as ChildNodeList or Fabric, it shows the highest severity alarm status including such subordinate nodes. <ul style="list-style-type: none"> - Error: Error - Warning: Warning - Info: Information - Normal: No notification Severity of Status: Normal < Info < Warning < Error |
| | MaintenanceMode | string | Maintenance Mode <ul style="list-style-type: none"> - Normal: Regular Mode - 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 performed.
 - Information on the mounting position in a rack
 - When the node type is facility

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

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

Displayed as nodes of height of 44.5mm 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 fixed IP address specified is set. When the fixed IP address is already set, IP address cannot be changed. Set the correct IP address on the device and detect it.

- PSWITCH

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

4.4.6 Execution of Manual Node Discovery by Specifying CSV

[Overview]

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------|--------|---|
| FilePath | string | File names including a folder path name in which the CSV file is stored. |
| PasswordMode | string | Encryption mode for the password Operates in encryption mode unless specified. <ul style="list-style-type: none"> - Encrypted: Encryption enabled - Unencrypted: No encryption |
| FileOption | string | File Options Files are not deleted unless specified. <ul style="list-style-type: none"> - Delete: Deletes files - NotDelete: Does not delete files |

[Response Parameter]

| Parameter | Type | Description |
|-------------------|---------|------------------------------|
| ManualDiscoveryId | integer | ID for Manual Node Discovery |

[Precautions]

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

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

Example for specifying FilePath:

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

- When storing "manualCsv.csv" in the file transfer area: manualCsv.csv
- When creating a folder, (xxx) in the file transfer area and storing "manualCsv.csv" there: xxx/manualCsv.csv
- For the information entered in the CSV file, refer to "Node discovery" in "2.2.1 Node Management" of "ServerView Infrastructure Manager V2.2 User's Manual."

4.4.7 Retrieving Key Names and Alternatives for the Value to be Entered in the CSV Files

[Overview]

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

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-------------|--------|--|
| AccountType | string | <p>Account Type</p> <p>Specify when obtaining a key name for the specified account type.</p> <p>Obtains a key name for all AccountType unless specified.</p> <ul style="list-style-type: none"> - Ipmi: Specify when obtaining a key name required for IPMI communication. - Ssh: Specify when obtaining a key name required for SSH communication. - SnmpV1: Specify when obtaining a key name required for SNMP v1 communication. - SnmpV2: Specify when obtaining a key name required for SNMP v2c communication. - SnmpV3: Specify when obtaining a key name required for SNMP v3 communication. - Htps: Specify when obtaining a key name required for HTTPS communication. |

[Response Parameter]

| Parameter | Type | Description |
|---------------|---------------|---|
| CsvItems | object | Manually Discovered CSV File Information |
| KeyList | array(string) | Key List of the Manually Discovered CSV Files |
| ValueProperty | object | Information on the Value for the Key |
| SnmpType | object | SnmpType Information |
| SelectionList | array(string) | Alternative Values for Keys of Manually Discovered CSV Files (SnmpType) |
| V3SecLevel | object | Information of V3SecLevel |
| SelectionList | array(string) | Alternative Values for Keys of Manually Discovered CSV Files (V3SecLevel) |

| Parameter | | | Type | Description |
|-----------|--|----------------|---------------|---|
| | | V3AuthProtocol | object | Information of V3AuthProtocol |
| | | SelectionList | array(string) | Alternative Values for Keys of Manually Discovered CSV Files (V3AuthProtocol) |
| | | V3PrivProtocol | object | Information of V3PrivProtocol |
| | | SelectionList | array(string) | Alternative Values for Keys of Manually Discovered CSV Files (V3PrivProtocol) |

[Precautions]

- For the information entered in the CSV file, refer to "Node discovery" in "2.2.1 Node Management" of "ServerView Infrastructure Manager V2.2 User's Manual."

4.5 Node Operation

4.5.1 Instruction to Change Power Status

[Overview]

Instructs a change of the power status.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | | Type | Description |
|-----------|-------------|--|--------|---|
| Parts | | | array | List of Power Sources |
| | Name | | string | Name of Power Source Sets PowerManagement. |
| | PowerStatus | | string | Status of Power Sources Configures operation to change a status. Sets a value for any of PowerOn, Reset or Shutdown. |

[Response Parameter]

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

4.5.2 Retrieval of Node LED Information

[Overview]

Retrieves the LED information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

4.5.3 Instruction to Change Node LED Status

[Overview]

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

4.5.4 Output of Power Statuses

[Overview]

Retrieves power status information.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

4.6 Detailed Node Information Management

4.6.1 Instruction to Execute Retrieval of Node Information

[Overview]

Retrieves information from machines for the specified nodes.

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

[Precautions]

- It takes time to obtain node information. Outputs a message (10020303) in the operation log at completion. Check the operation log.
- If retrieving the node information failed, the error is output on the operation log.
- Progress of retrieval of information of the node can be confirmed by acquiring detailed node 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, retrieves information from the OS also. However, even if retrieving the OS information failed, the node information retrieval continues and it completes normally.
- If retrieving the OS information failed, the error is output on the operation log. Check the operation log.

4.6.2 List Retrieval for Detailed Node Information

[Overview]

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

[Format]

```
GET /nodes/inventory
```

[Query Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| level | string | Retrieving Process Level Specify if VariableData should be obtained. Unless specified, it operates with Top. <ul style="list-style-type: none">- Top: No information on VariableData- All: VariableData available It is recommended to use it in combination with a query parameter "target." |
| target | string | Specifying Detailed Node Information Specify parameters in VariableData. Displays only specified information. Specify All for the retrieving process level. Example of specification) |

| Parameter | Type | Description |
|-----------|------|--|
| | | /nodes/inventory?level=All&target=Firmware -> Only Firmware will be displayed in VariableData. |

[Response Parameter]

| Parameter | | Type | Description |
|--------------|---------------------|---------|---|
| Nodes | | array | Detailed Node Information |
| | NodeId | integer | Node ID |
| | ProductName | string | Product Name |
| | Manufacture | string | Vendor Name |
| | SerialNumber | string | Serial Number |
| | Name | string | System Name |
| | MacAddress | string | MAC Address of a Node |
| | HardwareLogTarget | integer | Node Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable |
| | SoftwareLogTarget | integer | OS Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable |
| | ServerViewLogTarget | integer | ServerView Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable |
| | RaidLogTarget | integer | RAID Log Collection Availability Information Used in Log Management. - 0: Disable - 1: Enable |
| | Progress | string | Progress of Node Information Retrieval - Updating: During retrieval. Displays the information retrieved last time. - Complete: Retrieval finished Displays the most up-to-dated information. - Error: Failed to retrieve information. Information will not be renewed. |
| VariableData | | object | Detailed Information |
| | Slot | string | Slot Number Displayed for PRIMERGY CX servers. |
| | PartitionId | string | Number of Partitions Displayed for PRIMEQUEST partition/expansion partition. |

| Parameter | | Type | Description |
|-----------|--|-----------------------|---|
| | | ParentId | string Number of Parent Partitions Displayed for PRIMEQUEST expansion partition. |
| | | PartitioningMode | string Status of Partitions Displayed for PRIMEQUEST partition/expansion partition. - Enable: Partition is enabled. It is in a status of being able to use with startup of OS. - Disable: Partition is invalid. OS cannot be started. |
| | | Fans | array FAN Information |
| | | Name | string Name |
| | | Status | string Status |
| | | Model | string Model Name |
| | | PartNumber | string Parts Number |
| | | SerialNumber | string Serial Number |
| | | ParentName | string Installation Source Information |
| | | Psus | array PSU Information |
| | | Name | string Name |
| | | Status | string Status |
| | | Model | string Model Name |
| | | PartNumber | string Parts Number |
| | | SerialNumber | string Serial Number |
| | | ParentName | string Installation Source Information |
| | | Ports | array Port Information |
| | | Name | string Port Name |
| | | Number | string Port Number |
| | | PortMacAddress | string Port MAC Address When a virtual address is specified, the virtual address is displayed. |
| | | PortWWNN | string WWNN When a virtual address is specified, the virtual address is displayed. |
| | | PortWWPN | string WWPN When a virtual address is specified, the virtual address is displayed. |
| | | ManufactureMacAddress | string Physical Port MAC Address |
| | | ManufactureWWNN | string Physical WWNN |
| | | ManufactureWWPN | string Physical WWPN |
| | | Category | string Port Category LAN/ FC/ FCoE/ iSCSI/ IB/ CNA/ Unknown |
| | | SubCategory | string Port Sub-category |
| | | InterfaceType | string Type of Interface |

| Parameter | | | Type | Description | | | |
|-----------|--|-----------------|-------------------|-------------|---------|---|-----------------------|
| | | LinkStatus | | | string | Status of Link | |
| | | Speed | | | object | Communication Speed | |
| | | | Value | | string | Value | |
| | | | Unit | | string | Unit | |
| | | Duplex | | | string | Duplex Unknown/ Half/ Full | |
| | | VLans | | | array | VLAN Information | |
| | | | VlanId | | integer | VLAN ID | |
| | | | Tag | | string | tag: available/unavailable | |
| | | | Ctag | | integer | CTag Information | |
| | | Lldp | | | string | LLDP Settings Enable/ Disable | |
| | | NeighborDevices | | | array | Information of the Destination of Connection | |
| | | | ChassisMacAddress | | string | Chassis MAC Address at the Destination of Connection | |
| | | | PortName | | string | Name of Port at the Destination of Connection | |
| | | | PortMacAddress | | string | Port MAC Address at the Destination of Connection | |
| | | 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 Displays which component it exists on. | |
| | | | Type | | string | Type of Configuration Unit E.g.) "PCIe" | |
| | | | Name | | string | Name of Configuration Unit E.g.) PCIe Name of PCIe | |
| | | ParentName | | | string | Installation Source Information | |
| | | DetectedOrder | | | integer | Detection Number Displayed 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 |
| | | | DeviceNumber | | | integer | Device Number of Card |

| Parameter | | | | Type | Description | |
|-----------|----------------------|-----------------|-------------|---------|---|---------------------------------------|
| | | FunctionNumber | | integer | Function Number of Card | |
| | | Component | | object | Information of Configuration Unit Displays which component it exists on. | |
| | | | Type | string | Type of Configuration Unit E.g.) MMB | |
| | | | Name | string | Name of Configuration Unit 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 Displayed 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 Enable/ Disable | |
| | | Mlags | | array | MLAG Information | |
| | | | Domain | | string | MLAG Domain |
| | | | MlagId | | string | MLAG ID |
| | | | MlagStatus | | string | MLAG Status |
| | | | PeerLinks | | array(string) | MLAG Peer Link Port |

| Parameter | | | | Type | Description | |
|-----------|--|---------------|----------------|------------|---|------------------------------------|
| | | | NeighborDevice | object | Device Information of Other Party | |
| | | | | MlagId | string | MLAG ID of Other Party |
| | | | | MlagStatus | string | MLAG Status of Other Party |
| | | | | MacAddress | string | MAC Address of Other Party |
| | | | | PeerLinks | array(string) | MLAG Peer Link Port of Other Party |
| | | FcoeMode | | string | FCoE Usage Possibility Information | |
| | | Fcoes | | array | FCoE Information | |
| | | | FcoeName | string | FCoE Name | |
| | | | Mode | string | FCoE Mode | |
| | | | LinkStatus | string | FCoE Status | |
| | | VtepMode | | string | Information to determine if Vtep should be used | |
| | | Vteps | | array | Vtep Information | |
| | | | VxlanId | string | VXLAN Interface Name | |
| | | | IpAddress | string | IP Address | |
| | | | 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 | |
| | | | CacheL1 | string | Cache Size 1 | |

| Parameter | | Type | Description |
|-----------|-----------|---------|---------------------------------|
| | CacheL2 | string | Cache Size 2 |
| | | string | Cache Size 3 |
| | | string | Installation Source Information |
| | Disks | | Disk Information |
| | Status | string | Status |
| | | string | Location of Disk |
| | | string | Disk Type |
| | | string | Vendor Name |
| | | string | Model |
| | | string | Life Information |
| | | string | Drive Name |
| | | string | Controller Name |
| | Volume | | Information of Volume |
| | Number | string | Volume Number |
| | | string | Status |
| | | string | Type of Volume |
| | | string | Volume |
| | | string | Capacity Used |
| | | string | Volume Name |
| | | string | Aggregate Name |
| | Aggregate | | Aggregate Information |
| | Name | string | Aggregate Name |
| | | string | Raid Level |
| | | string | Status |
| | | string | Power Status |
| | | string | Capacity Used |
| | | string | Empty Capacity |
| | | string | Volume |
| | | string | Controller Name |
| | Raid | | RAID Information |
| | Number | string | RAID Number |
| | | string | RAID Name |
| | | string | Status |
| | | string | RAID Level |
| | | string | RAID Capacity |
| | | integer | RAID Capacity |
| | | integer | RAID Empty Capacity |
| | | integer | RAID Disk Number |
| | MMBs | | MMB Information |

| Parameter | | Type | Description |
|-----------|-------------------|---------------------|---|
| | | Name | MMB Name |
| | | Role | Status Active/ Standby |
| | | PartNumber | Parts Number |
| | | SerialNumber | Serial Number |
| | | FirmwareVersion | Integrated Firmware Version Number |
| | | MmbFirmwareVersion | MMB Firmware Version Number |
| | | ProductName | MMB Product Name |
| | | ParentName | Installation Source Information |
| | SBs | | SB Information |
| | | Name | SB Name |
| | | Home | Home Settings |
| | | PartNumber | Parts Number |
| | | SerialNumber | Serial Number |
| | | FirmwareVersion | Firmware Version Number of SB |
| | | BmcFirmwareVersion | Firmware Version Number of BMC |
| | | BiosFirmwareVersion | Firmware Version Number of BIOS |
| | IOUs | | IOU Information |
| | | Name | IOU Name |
| | | Type | IOU Type |
| | | PartNumber | Parts Number |
| | | SerialNumber | Serial Number |
| | PCI_Boxes | | PCI_Box Information |
| | | Name | PCI_Box Name |
| | | PartNumber | Parts Number |
| | | SerialNumber | Serial Number |
| | | Components | Information of Configuration Unit Displays which component it exists on. |
| | | LogicalComponent | Logical Number |
| | | | Type of Configuration Unit E.g.) IOU |
| | | | Name of Configuration Unit E.g.) IOU Name of IOU |
| | | Name | |
| | DUs | | DU Information |
| | | Name | DU Name |
| | | PartNumber | Parts Number |
| | | SerialNumber | Serial Number |
| | FabricInformation | | Fabric Information Displayed for fabric node |

| Parameter | | | | Type | Description | | | | |
|-----------|--|--|---------------------------|--------------------|-----------------------|---|--|--|---------------------|
| | | | 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 null/ Principal | | |
| | | | | FirmwareVersion | | string | Firmware Version Number | | |
| | | | | SwitchRole | | string | C-Fabric Switch Role master/ slave/ unknown | | |
| | | | | MacAddress | | string | MAC Address | | |
| | | | | FirmwareUpdateMode | | string | Update Firmware Mode | | |
| | | | | PortInformation | | array | Port Information | | |
| | | | | | | PortName | | string | Port Name |
| | | | | | | PortNumber | | string | Port Number |
| | | | | | | Catergory | | string | Port Category |
| | | | | | | SubCategory | | string | Port Subcategory |
| | | | | | | 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 | |
| | | | | | ChassisMacAd dress | | string | Chassis MAC Address at the Destination of Connection | |
| | | | | | PortName | | string | Name of Port at the Destination of Connection | |
| | | | | | PortMacAddres s | | string | Port MAC Address at the Destination of Connection | |
| | | | FabricInternalInformation | | object | Inner-fabric Information Displayed for fabric switch | | | |

| Parameter | | | | Type | Description | | |
|-----------|--|---------------------|-----------------|---|--|---|--|
| | | | FabricId | integer | Fabric ID | | |
| | | | DomainId | integer | Domain ID | | |
| | | | SwitchId | integer | Switch ID | | |
| | | | SwitchPriority | string | VCS Principal Switch null/ Principal | | |
| | | | SwitchRole | string | C-Fabric Switch Role master/ slave/ unknown | | |
| | | | PortInformation | array | Port Information | | |
| | | | | PortName | string | Port Name | |
| | | | | NeighborDevices | array | Information of the Destination of Connection | |
| | | | | | ChassisMacAddress | string | Chassis MAC Address at the Destination of Connection |
| | | | | | PortName | string | Name of Port at the Destination of Connection |
| | | PortMacAddress | string | Port MAC Address at the Destination of Connection | | | |
| | | ControllerList | | | array | Controller Information Displayed for NetApp storage. | |
| | | | Name | string | Controller Name | | |
| | | | Ipv4Address | string | IPv4 Address | | |
| | | | Ipv6Address | string | IPv6 Address | | |
| | | | Model | string | Model Name | | |
| | | | Manufacture | string | Vendor Name | | |
| | | | SerialNumber | string | Serial Number | | |
| | | | NodeVersion | string | Version Number of OS for a Controller | | |
| | | | Partner | string | Information of Partners | | |
| | | | Uuid | string | UUID | | |
| | | DiskShelfList | | | array | Information of Internal Disk Shelves Displayed for 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 | | |
| | | ConnectionBladeList | | | array | Connection Blade Information | |
| | | | Name | string | Connection Blade Name | | |
| | | | ProductName | string | Product Name | | |
| | | | Manufacture | string | Vendor Name | | |
| | | | SerialNumber | string | Serial Number | | |

| Parameter | | | | Type | Description |
|-----------|------------|-------------------|------------------------|--------|------------------------------|
| | | | SlotNumber | string | Slot Number |
| | | | EkeyStatusPortOverview | string | EkeyStatusPort Information |
| | | NodeConfiguration | | object | Node Settings |
| | | | SnmpV3EngineID | string | SnmpV3 Engine ID Information |
| | UpdateDate | | | string | Update Time and Date |

4.6.3 Individual Retrieval of Detailed Node Information

[Overview]

Retrieves detailed information of the specified nodes.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| level | string | Retrieving Process Level Specify if VariableData should be obtained. Unless specified, it operates by All. - Top: No information on VariableData - All: VariableData available |
| target | string | Specifying Detailed Node Information Specify parameters in VariableData. Displays only specified information. Specify All for the retrieving process level. Example of specification) /nodes/{nodeid}/inventory?level=All&target=Firmware -> Only Firmware will be displayed in VariableData. |

[Response Parameter]

Refer to response parameters of "[4.6.2 List Retrieval for Detailed Node Information](#)."

4.6.4 Registration of OS Information

[Overview]

Registers the OS information on the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| Host | | object | OS Information |
| | OsType | string | OS Type <ul style="list-style-type: none"> - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - VMware: VMware ESXi - IPCOM OS: IPCOM OS |
| | OsVersion | string | OS Version Number <ul style="list-style-type: none"> - 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 - SUSELinuxEnterprise: 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3 - Windows: 2008R2/ 2012/ 2012R2/ 2016 - VMware: 5.5/ 6.0/ 6.5 - IPCOM OS: 1.x |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | IP Version of IP Address <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | OsDomain | string | Domain Name Specify a name of FQDN for a realm. E.g.) ISMDOMAIN.LOCAL |
| | OsAccount | string | Account Name Specify a account name excluding a realm. E.g.) ismadmin |
| | OsPassword | string | Password Encrypt the password with a method described in " 2.4 Encryption ." |
| | OsPortNum | integer | Port Number used Specify the Port number or null. When null specified, sets the standard port number for the protocol. Connecting protocols for respective OS are as follows: <ul style="list-style-type: none"> - RedHat, SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) - Windows: WinRM (No. 5986) - VMware: CIM (No. 443) |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|---------|--|
| Host | | object | OS Information |
| | NodeId | integer | Node ID |
| | OsType | string | OS Type <ul style="list-style-type: none"> - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - VMware: VMware ESXi - IPCOM OS: IPCOM OS |
| | OsVersion | string | OS Version Number |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | IP Version of IP Address <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | OsDomain | string | Domain Name |
| | OsAccount | string | Account Name |
| | OsPortNum | integer | Port Number used |
| | HostName | string | Host Name Automatically set after acquiring the node information. |
| | MemorySize | string | Memory Capacity as recognized by OS Automatically set after acquiring the node information. |
| | MemorySizeUnit | string | Unit of Memory Capacity as recognized by OS B/ KB/ MB/ GB/ TB Automatically set after acquiring the node information. |
| | IpAddress | array | IP Address Information Automatically set after acquiring the node information. |
| | DeviceName | string | Port Device Name Automatically set after acquiring the node information. |
| | MacAddress | string | Port MAC Address Automatically set after acquiring the node information. |
| | V4 | string | IP Address for IPv4 Automatically set after acquiring the node information. |
| | V4SubMask | string | Subnet Mask for IPv4 Automatically set after acquiring the node information. |
| | V6 | string | IP Address for IPv6 Automatically set after acquiring the node information. |
| | V6SubMask | string | Subnet Mask for IPv6 Automatically set after acquiring the node information. |
| DiskUnits | | array | Disk Information Automatically set after acquiring the node information. |

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

[Precautions]

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

4.6.5 List Retrieval for OSes

[Overview]

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

[Format]

```
GET /nodes/os
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| Hosts | | array | OS Information |
| | NodeId | integer | Node ID |
| | OsType | string | OS Type <ul style="list-style-type: none"> - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - VMware: VMware ESXi - IPCOM OS: IPCOM OS |
| | OsVersion | string | OS Version Number |
| | OsIpAddress | string | OS IP Address |
| | | | |

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| | OsIpVersion | string | IP Version of IP Address - V4: IPv4 - V6: IPv6 |
| | OsDomain | string | Domain Name |
| | OsAccount | string | Account Name |
| | OsPortNum | integer | Port Number used |
| | HostName | string | Host Name 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 Individual Retrieval of OS

[Overview]

Retrieves the OS information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| Host | | object | OS Information |
| | NodeId | integer | Node ID |
| | OsType | string | OS Type - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - VMware: VMware ESXi - IPCOM OS: IPCOM OS |
| | OsVersion | string | OS Version Number |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | IP Version of IP Address - V4: IPv4 - V6: IPv6 |
| | OsDomain | string | Domain Name |
| | OsAccount | string | Account Name |
| | OsPortNum | integer | Port Number used |

| Parameter | | Type | Description |
|-----------|----------------|---------|---|
| | HostName | string | Host Name Automatically set after acquiring the node information. |
| | MemorySize | string | Memory Capacity as recognized by OS Automatically set after acquiring the node information. |
| | MemorySizeUnit | string | Unit of Memory Capacity as recognized by OS B/ KB/ MB/ GB/ TB Automatically set after acquiring the node information. |
| | IpAddress | array | IP Address Information Automatically set after acquiring the node information. |
| | DeviceName | string | Port Device Name Automatically set after acquiring the node information. |
| | MacAddress | string | Port MAC Address Automatically set after acquiring the node information. |
| | V4 | string | IP Address for IPv4 Automatically set after acquiring the node information. |
| | V4SubMask | string | Subnet Mask for IPv4 Automatically set after acquiring the node information. |
| | V6 | string | IP Address for IPv6 Automatically set after acquiring the node information. |
| | V6SubMask | string | Subnet Mask for IPv6 Automatically set after acquiring the node information. |
| | DiskUnits | array | Information of Disk Automatically set after acquiring the node information. |
| | MountPosition | string | Volume Name Automatically set after acquiring the node information. |
| | UseSize | string | Volume in Use Automatically set after acquiring the node information. |
| | UseSizeUnit | string | Unit of Volume in Use B/ KB/ MB/ GB/ TB Automatically set after acquiring the node information. |
| | VolumeSize | string | Capacity of Volume Automatically set after acquiring the node information. |
| | VolumeSizeUnit | string | Capacity Unit of Volume created in OS B/ KB/ MB/ GB/ TB 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 the OS information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|--|
| Host | | object | OS Information |
| | OsType | string | OS Type <ul style="list-style-type: none">- RedHat: Red Hat Enterprise Linux- SUSELinuxEnterprise: SUSE Linux Enterprise Server- Windows: Microsoft Windows- VMware: VMware ESXi- IPCOM OS: IPCOM OS |
| | OsVersion | string | OS Version Number <ul style="list-style-type: none">- 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- SUSELinuxEnterprise: 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3- Windows: 2008R2/ 2012/ 2012R2/ 2016- VMware: 5.5/ 6.0/ 6.5- IPCOM OS: 1.x |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | IP Version of IP Address <ul style="list-style-type: none">- V4: IPv4- V6: IPv6 |
| | OsDomain | string | Domain Name Specify a name of FQDN for a realm. E.g.) ISMDOMAIN.LOCAL |
| | OsAccount | string | Account Name Specify a account name excluding a realm. E.g.) ismadmin |
| | OsPassword | string | Password Encrypt the password with a method described in " 2.4 Encryption ." Omit the key unless updating. |
| | OsPortNum | integer | Port Number used Specify the port number or null. |

| Parameter | | Type | Description |
|-----------|--|------|---|
| | | | <p>When null specified, sets the standard port number for the protocol.</p> <p>Connecting protocols for respective OS are as follows:</p> <ul style="list-style-type: none"> - RedHat, SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) - Windows: WinRM (No. 5986) - VMware: CIM (No. 443) |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|---------|---|
| Host | | object | OS Information |
| | NodeId | integer | Node ID |
| | OsType | string | <p>OS Type</p> <ul style="list-style-type: none"> - RedHat: Red Hat Enterprise Linux - SUSELinuxEnterprise: SUSE Linux Enterprise Server - Windows: Microsoft Windows - VMware: VMware ESXi - IPCOM OS: IPCOM OS |
| | OsVersion | string | OS Version Number |
| | OsIpAddress | string | OS IP Address |
| | OsIpVersion | string | <p>IP Version of IP Address</p> <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | OsDomain | string | Domain Name |
| | OsAccount | string | Account Name |
| | OsPortNum | integer | Port Number used |
| | HostName | string | <p>Host Name</p> <p>Automatically set after acquiring the node information.</p> |
| | MemorySize | string | <p>Memory Capacity as recognized by OS</p> <p>Automatically set after acquiring the node information.</p> |
| | MemorySizeUnit | string | <p>Unit of Memory Capacity as recognized by OS</p> <p>B/ KB/ MB/ GB/ TB</p> <p>Automatically set after acquiring the node information.</p> |
| | IpAddress | array | <p>IP Address Information</p> <p>Automatically set after acquiring the node information.</p> |
| | DeviceName | string | <p>Port Device Name</p> <p>Automatically set after acquiring the node information.</p> |
| | MacAddress | string | <p>Port MAC Address</p> <p>Automatically set after acquiring the node information.</p> |

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

[Precautions]

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

4.6.8 Deletion of OS Information

[Overview]

Deletes the OS information of the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.6.9 Instruction to Execute Retrieval of Virtualization Information

[Overview]

Retrieves information from the Cloud Management Software managed by the user group that the user belongs to.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

[Precautions]

- It takes time to obtain the virtual information. Outputs a message (10021503) in the operation log at completion. Check the operation log.
- If there is any Cloud Management Software that failed in acquiring virtual information, an error message will be displayed on the operation log.

4.6.10 List Retrieval for Virtual Machines

[Overview]

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

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

[Format]

```
GET /resources/virtualmachines
```

[Query Parameter]

| Parameter | Type | Description |
|-----------|---------|---------------------------|
| nodeid | integer | Narrowing down by Node ID |

[Response Parameter]

| Parameter | | Type | Description |
|---------------------------|-----------------------------|---------|--|
| VirtualMachines | | array | Virtual Machine Information |
| | VirtualMachineId | integer | Virtual Machine ID |
| | NodeId | integer | Node ID |
| | CmsId | integer | ID of Cloud Management Software |
| | CmsType | string | Type of Cloud Management Software <ul style="list-style-type: none"> - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server |
| | CmsVersion | string | Version Number of Cloud Management Software |
| | OperatingSystem | string | OS Information of Virtual Machine |
| | VirtualMachineInstanceId | string | Identification ID of Virtual Machine Displays IDs numbered by Cloud Management Software |
| | VirtualMachineName | string | Virtual Machine Name |
| | VirtualMachinePowerStatus | string | Startup Status of Virtual Machine <ul style="list-style-type: none"> - ON: Startup status - OFF: Other than startup status |
| | VirtualCpuCoreNum | integer | The number of virtual CPU cores |
| | VirtualMachineMemoryMax | integer | Setting of Maximum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both. |
| | VirtualMachineMemoryMaxUnit | string | Unit of Maximum Value of Memory Capacity B/ KB/ MB/ GB/ TB |
| | VirtualMachineMemoryMin | integer | Setting of Minimum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both. |
| | VirtualMachineMemoryMinUnit | string | Unit of Minimum Value of Memory Capacity B/ KB/ MB/ GB/ TB |
| | VirtualDiskTotal | integer | Disk Storage Capacity Displays a total value when allocating several disks |
| | VirtualDiskTotalUnit | string | Unit of Disk Storage Capacity B/ KB/ MB/ GB/ TB |
| | VirtualMachineOptionVCenter | object | Additional Information for vCenter |
| | ManagementObjectId | string | ID specified to each ManagementObjectReference |
| VirtualAdapterInformation | | array | Virtual Adapter Information |
| | VirtualAdapterName | string | Virtual Adapter Name |

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

[Precautions]

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

4.6.11 Individual Retrieval of Virtual Machine

[Overview]

Retrieves information of the specified virtual machine.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|----------------|------------------|---------|---|
| VirtualMachine | | object | Virtual Machine Information |
| | VirtualMachineId | integer | Virtual Machine ID |
| | NodeId | integer | Node ID |
| | CmsId | integer | ID of Cloud Management Software |
| | CmsType | string | Type of Cloud Management Software - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster |

| Parameter | | Type | Description |
|-----------|-----------------------------|---------|--|
| | | | <ul style="list-style-type: none"> - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server |
| | CmsVersion | string | Version Number of Cloud Management Software |
| | OperatingSystem | string | OS Information of Virtual Machine |
| | VirtualMachineInstanceId | string | Identification ID of Virtual Machine Displays IDs numbered by Cloud Management Software |
| | VirtualMachineName | string | Virtual Machine Name |
| | VirtualMachinePowerStatus | string | Startup Status of Virtual Machine <ul style="list-style-type: none"> - ON: Startup status - OFF: Other than startup status |
| | VirtualCpuCoreNum | integer | Number of Virtual CPU Cores |
| | VirtualMachineMemoryMax | integer | Setting of Maximum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both. |
| | VirtualMachineMemoryMaxUnit | string | Unit of Maximum Value of Memory Capacity B/ KB/ MB/ GB/ TB |
| | VirtualMachineMemoryMin | integer | Setting of Minimum Value of Memory Capacity With no setting of maximum and minimum values, the same value fills in for both. |
| | VirtualMachineMemoryMinUnit | string | Unit of Minimum Value of Memory Capacity B/ KB/ MB/ GB/ TB |
| | VirtualDiskTotal | integer | Disk Storage Capacity Displays a total value when allocating several disks |
| | VirtualDiskTotalUnit | string | Unit of Disk Storage Capacity B/ KB/ MB/ GB/ TB |
| | VirtualMachineOptionVCenter | object | Additional Information for vCenter |
| | ManagementObjectId | string | ID specified to each ManagementObjectReference |
| | VirtualAdapterInformation | array | Virtual Adapter Information |
| | VirtualAdapterName | string | Virtual Adapter Name |
| | VirtualAdapterNumber | string | Virtual Adapter Number |
| | MacAddress | string | MAC Address |
| | VlanInformation | array | VLAN Information |
| | VlanId | string | VLAN ID For values, it should be displayed by linking with comma (.). Continuous values of three or more should be displayed by linking with hyphen (-). E.g.) "1-10,21,22,30-45" |
| | VlanType | string | VLAN Type |

| Parameter | | | Type | Description |
|-----------|------------|--------------------------------|---------|---|
| | | | | VLAN/ Trunk/ Private-Primary |
| | | RemoteVirtualSwitchInformation | object | Information of Virtual Switch at the Destination of Connection |
| | | SwitchType | string | Virtual Switch Type at the Destination of Connection Standard/ Distributed |
| | | RemoteVirtualSwitchId | integer | Virtual Switch ID at the Destination of Connection |
| | | RemoteVirtualSwitchPortName | string | Virtual Switch Port Name at the Destination of Connection |
| | UpdateDate | | string | Update Time and Date |

[Precautions]

- For displaying the information on a virtual machine, it is required 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 the OS of the nodes managed by the user group that the users belong to.

[Format]

```
GET /resources/virtualswitches
```

[Query Parameter]

None

[Response Parameter]

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

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

[Precautions]

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

4.6.13 Individual Retrieval of Virtual Switch

[Overview]

Retrieves the specified virtual switch information.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|---------------|--------------------------------|---------|--|
| VirtualSwitch | | object | Virtual Switch Information |
| | VirtualSwitchId | integer | Virtual Switch ID |
| | VirtualSwitchType | string | Virtual Switch Type Standard/ Distributed |
| | VirtualSwitchInstanceId | string | Virtual Switch Identification ID Displays IDs numbered by Cloud Management Software |
| | VirtualSwitchName | string | Virtual Switch Name |
| | Nodes | array | Node Information Displays a node in which a virtual switch has been created |
| | NodeId | integer | Node ID |
| | CmsId | integer | ID of Cloud Management Software |
| | VirtualSwitchPortInformation | array | Virtual Switch Port Information |
| | VirtualSwitchPortName | string | Virtual Switch Port Name |
| | VirtualSwitchPortNumber | string | Virtual Switch Port Number |
| | VirtualMachineInformation | object | Virtual Machine Information It is displayed when a virtual switch port is connected with a virtual machine. |
| | VirtualMachineId | integer | Virtual Machine ID |
| | VirtualAdapterName | string | Virtual Adapter Name |
| | RemoteVirtualSwitchInformation | object | Information of Virtual Switch at the Destination of Connection Presently it is not supported. |
| | RemoteVirtualSwitchId | integer | Virtual Switch ID at the Destination of Connection Presently it is not supported. |
| | RemoteVirtualSwitchPortName | string | Virtual Switch Port Name at the Destination of Connection Presently it is not supported. |
| | RemoteVirtualRouterInformation | object | Virtual Router Information at the Destination of Connection Presently it is not supported. |
| | RemoteVirtualRouterId | integer | Virtual Router ID at the Destination of Connection Presently it is not supported. |
| | RemoteVirtualRouterPortName | string | Virtual Router Port Name at the Destination of Connection Presently it is not supported. |
| | PhysicalAdapterInformation | object | Physical Adapter Information It is displayed when a virtual switch port is connected with a physical adapter. |
| | NodeId | integer | Node ID |
| | PhysicalAdapterName | string | Physical Adapter Name |

| Parameter | | | Type | Description |
|-----------|------------|-----------------|--------|---|
| | | VlanInformation | array | VLAN Information |
| | | VlanId | string | VLAN ID For values, it should be displayed by linking with comma (.). Continuous values of three or more should be displayed by linking with hyphen (-). E.g.) "1-10,21,22,30-45" |
| | | VlanType | string | VLAN Type VLAN/ Trunk/ Private-Primary |
| | UpdateDate | | string | Last Update Time/Date |

[Precautions]

- For displaying the information on a virtual switch, it is required 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 the information for the items that can be monitored for the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

4.7.2 Registration of Monitoring Settings

[Overview]

Registers monitoring settings.

[Format]

POST /nodes/monitor/items

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------------------------|----------|---------|--|
| NodeId | | integer | Specify Node ID as target. |
| ItemName | | string | Specify Names of monitoring items. |
| IsActive | | string | Specify a status of performance monitoring. <ul style="list-style-type: none">- Enabled: Enabled- Disabled: Disabled |
| IsThresholdMonitoringActive | | string | Specify a Status of Threshold value monitoring. <ul style="list-style-type: none">- Enabled: Enabled- Disabled: Disabled <p>In order to enable threshold value monitoring, performance monitoring (IsActive) should be enabled.</p> <p>For a monitoring item with its value type is string, Enabled cannot be specified.</p> |
| UpperCritical | | object | Designates a threshold (Error in upper limit). |
| | Value | string | Specify the Upper Limit error threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Error) is assigned. Select one of the following. <ul style="list-style-type: none">- Error- Warning- Info- Normal |
| UpperWarning | | object | Designates Information on a threshold (Warning in upper limit). |
| | Value | string | Specify the Upper Limit warning threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Warning) is assigned. Select one of the following. <ul style="list-style-type: none">- Error |

| Parameter | | Type | Description |
|---------------|----------|--------|--|
| | | | <ul style="list-style-type: none"> - Warning - Info - Normal |
| LowerCritical | | object | Specify a threshold (Error in lower limit). |
| | Value | string | Specify the Lower Limit error threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Error) is assigned. Select one of the following. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerWarning | | object | Specify Information on a threshold (Warning in lower limit). |
| | Value | string | Specify the Lower Limit warning threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Warning) is assigned. Select one of the following. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

[Response Parameter]

| Parameter | | Type | Description |
|-----------------------------|----------|---------|---|
| ItemId | | string | Monitoring Item ID |
| NodeId | | integer | Node ID of the Object |
| ItemName | | string | Monitoring Item Name |
| IsActive | | string | Status of Performance Monitoring <ul style="list-style-type: none"> - Enabled: Enabled - Disabled: Disabled |
| IsThresholdMonitoringActive | | string | Status of Threshold Value Monitoring <ul style="list-style-type: none"> - Enabled: Enabled - Disabled: Disabled |
| UpperCritical | | object | Information on Threshold (Error in Upper Limit) |
| | Value | string | Upper Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error |

| Parameter | | Type | Description |
|---------------|----------|--------|---|
| | | | <ul style="list-style-type: none"> - Warning - Info - Normal |
| UpperWarning | | object | Information on Threshold (Warning in Upper Limit) |
| | Value | string | Upper Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerCritical | | object | Information on Threshold (Error in Lower Limit) |
| | Value | string | Lower Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerWarning | | object | Information on Threshold (Warning in Lower Limit) |
| | Value | string | Lower Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

4.7.3 Retrieval of Monitoring Settings

[Overview]

Retrieves monitoring settings.

[Format]

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

[Query Parameter]

| Parameter | Description |
|-----------|--|
| NodeId | Specify a Node ID. Retrieves all settings of monitoring as set in specified node IDs. Cannot be used with the ItemId parameter. |
| ItemId | Specify the monitoring setting ID. |

| Parameter | Description |
|-----------|--|
| | Retrieves monitoring setting ID specified. Cannot be used with the NodeId parameter. |

[Response Parameter]

| Parameter | | Type | Description |
|---------------|-----------------------------|---------|--|
| Items | | array | Monitoring Item Information (List) |
| | ItemId | string | Monitoring Item ID |
| | NodeId | integer | Node ID of the Object |
| | ItemName | string | Monitoring Item Name |
| | ValueType | string | Shows a Type of Values. It must be any of the following. <ul style="list-style-type: none"> - integer - real (decimal) - string |
| | Unit | string | Unit |
| | IsActive | string | Status of Performance Monitoring <ul style="list-style-type: none"> - Enabled: Enabled - Disabled: Disabled |
| | IsThresholdMonitoringActive | string | Status of Threshold Value Monitoring <ul style="list-style-type: none"> - Enabled: Enabled - Disabled: Disabled |
| | | | |
| UpperCritical | | object | Information on Threshold (Error in Upper Limit) |
| | Value | string | Upper Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| UpperWarning | | object | Information on Threshold (Warning in Upper Limit) |
| | Value | string | Upper Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerCritical | | object | Information on Threshold (Error in Lower Limit) |
| | Value | string | Lower Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning |

| Parameter | | Type | Description |
|--------------|----------|--------|---|
| | | | <ul style="list-style-type: none"> - Info - Normal |
| LowerWarning | | object | Information on Threshold (Warning in Lower Limit) |
| | Value | string | Lower Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

4.7.4 Updating of Monitoring Settings

[Overview]

Updates the specified monitoring settings.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------------------------|----------|--------|--|
| IsActive | | string | Specify a Status of Performance Monitoring. <ul style="list-style-type: none"> - Enable: Enabled - Disable: Disabled |
| IsThresholdMonitoringActive | | string | Specify a Status of Threshold value Monitoring. <ul style="list-style-type: none"> - Enable: Enabled - Disable: Disabled In order to enable threshold value monitoring, performance monitoring (IsActive) should be enabled. When a monitoring item with its value type is string, Enabled cannot be specified. |
| UpperCritical | | object | Specify a Threshold (Error in upper limit). |
| | Value | string | Specify the upper limit error threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Error) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info |

| Parameter | | Type | Description |
|---------------|----------|--------|---|
| | | | - Normal |
| UpperWarning | | object | Designates information on a threshold (Warning in upper limit). |
| | Value | string | Specify the upper limit warning threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Warning) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerCritical | | object | Designates a Threshold (Error in lower limit). |
| | Value | string | Specify the lower limit error threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Error) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerWarning | | object | Designates information on a threshold (Warning in lower limit). |
| | Value | string | Specify the lower limit warning threshold in either an integer or a decimal. |
| | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Warning) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

[Response Parameter]

| Parameter | Type | Description |
|-----------------------------|---------|--|
| ItemId | string | Monitoring Item ID |
| NodeId | integer | Node ID of the Object |
| ItemName | string | Monitoring Item Name |
| IsActive | string | Status of Performance Monitoring <ul style="list-style-type: none"> - Enabled: Enabled - Disabled: Disabled |
| IsThresholdMonitoringActive | string | Status of Threshold Value Monitoring |

| Parameter | | Type | Description |
|---------------|----------|--------|---|
| | | | <ul style="list-style-type: none"> - Enabled: Enabled - Disabled: Disabled |
| UpperCritical | | object | Information on Threshold (Error in Upper Limit) |
| | Value | string | Upper Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| UpperWarning | | object | Information on Threshold (Warning in Upper Limit). |
| | Value | string | Upper Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerCritical | | object | Information on Threshold (Error in Lower Limit) |
| | Value | string | Lower Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| LowerWarning | | object | Information on Threshold (Warning in Lower Limit) |
| | Value | string | Lower Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

4.7.5 Deletion of Monitoring Settings

[Overview]

Deletes the specified monitoring settings.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.7.6 Retrieval of Monitoring History

[Overview]

Retrieves monitoring history.

[Format]

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

[Query Parameter]

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

[Response Parameter]

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

4.7.7 Updating of Common Monitoring Settings of Nodes

[Overview]

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

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

4.7.8 Retrieval of Common Monitoring Settings of Nodes

[Overview]

Retrieves the monitoring settings of the specified nodes.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

4.7.9 Retrieval of Network Monitoring Settings

[Overview]

Retrieves the network performance monitoring settings of the specified nodes.

[Format]

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

[Query Parameter]

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

[Response Parameter]

| Parameter | | Type | Description |
|-------------------------------|-----------------|-----------------------------|---|
| NetworkMonitoringSettingsList | | array | Network Performance Monitoring Information (List) |
| | NodeId | string | Node ID |
| | OperationStatus | string | Displays a status of network monitoring. Default status is set to Disabled. For a node unsupported of its network performance monitoring, Unavailable is displayed. Both Off and Disabled means that the periodical retrieval of the network performance information is stopped, while Off holds a log history, Disabled does not. <ul style="list-style-type: none"> - Enable: On - Temporarily disabled: Off - Disable: Disabled - Unavailable: Unavailable |
| | Items | array | Monitoring Item Information (List) |
| | | ItemName | Monitoring Item Name |
| | | ValueType | Type of Value <ul style="list-style-type: none"> - integer - real (decimal) - string |
| | | Unit | Unit |
| | | IsThresholdMonitoringActive | Status of Threshold Value Monitoring <ul style="list-style-type: none"> - Enable: Enabled - Disable: Disabled |
| | | UpperCritical | Information on Threshold (Error in Upper Limit) |
| | | Value | Upper Limit Error Threshold |
| | | | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | | UpperWarning | Information on Threshold (Warning in Upper Limit) |
| | | Value | Upper Limit Warning Threshold |
| | | | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | | LowerCritical | Information on Threshold (Error in Lower Limit) |
| | | Value | Lower Limit Error Threshold |
| | | | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error |

| Parameter | | | | Type | Description |
|-----------|--|--|--------------|--------|---|
| | | | | | <ul style="list-style-type: none"> - Warning - Info - Normal |
| | | | LowerWarning | object | Information on Threshold (Warning in Lower Limit) |
| | | | Value | string | Lower Limit Warning Threshold |
| | | | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

4.7.10 Updating of Network Monitoring Settings

[Overview]

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | | | Type | Description |
|-------------------------------|--|--|-----------------------------|--------|--|
| NetworkMonitoringSettingsList | | | | array | Specify a network performance monitoring information. |
| | | | OperationStatus | string | Specify a status of network monitoring. To halt network performance monitoring, specify Off or Disabled. Further, while Off halts by preserving the history of monitoring, Disabled deletes the monitoring history as well. <ul style="list-style-type: none"> - Enable: On - Temporarily disabled: Off - Disable: Disabled |
| | | | Items | array | Specify the Information of a Monitoring Items. |
| | | | ItemName | string | Specify the Name of a Monitoring Items. |
| | | | IsThresholdMonitoringActive | string | Specify a status of threshold value monitoring. <ul style="list-style-type: none"> - Enable: Enabled - Disable: Disabled |
| | | | UpperCritical | object | Specify a Threshold (Error in upper limit). |
| | | | Value | string | Specify the upper limit error threshold in either an integer or a decimal. |
| | | | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Error) is assigned. |

| Parameter | | | | Type | Description |
|-----------|--|--|---------------|--------|--|
| | | | | | <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | | | UpperWarning | object | Specify information on a threshold (Warning in upper limit). |
| | | | Value | string | Specify the upper limit warning threshold in either an integer or a decimal. |
| | | | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Warning) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | | | LowerCritical | object | Specify a Threshold (Error in lower limit) in either an integer or a decimal. |
| | | | Value | string | Specify the lower limit error threshold in either an integer or a decimal. |
| | | | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Error) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | | | LowerWarning | object | Specify information on a threshold (Warning in lower limit). |
| | | | Value | string | Specify the lower limit warning threshold in either an integer or a decimal. |
| | | | Severity | string | Specify Severity of an event as it exceeds a threshold value. When specifying null, default value (Warning) is assigned. <ul style="list-style-type: none"> - Error - Warning - Info - Normal |

[Response Parameter]

| Parameter | | Type | Description |
|-------------------------------|-----------------|--------|---|
| NetworkMonitoringSettingsList | | array | Network Performance Monitoring Information (List) |
| | OperationStatus | string | Displays a Status of Network Monitoring. <ul style="list-style-type: none"> - On (available) - Off (Temporarily disabled) |

| Parameter | | Type | Description |
|-----------|-----------------------------|--------|---|
| | | | - Disabled: (invalid) |
| | Items | array | Monitoring Item Information (List) |
| | ItemName | string | Monitoring Item Name |
| | ValueType | string | Type of Value <ul style="list-style-type: none"> - integer - real (decimal) - string |
| | Unit | string | Unit |
| | IsThresholdMonitoringActive | string | Status of Threshold Value Monitoring <ul style="list-style-type: none"> - Enable: Enabled - Disable: Disabled |
| | UpperCritical | object | Information on Threshold (Error in upper limit) |
| | Value | string | Upper Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | UpperWarning | object | Information on Threshold (Warning in Upper Limit) |
| | Value | string | Upper Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | LowerCritical | object | Information on Threshold (Error in Lower Limit) |
| | Value | string | Lower Limit Error Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info - Normal |
| | LowerWarning | object | Information on a Threshold (Warning in Lower Limit) |
| | Value | string | Lower Limit Warning Threshold |
| | Severity | string | Severity of an Event as it exceeds a Threshold Value <ul style="list-style-type: none"> - Error - Warning - Info |

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

4.7.11 Retrieval of Network Monitoring History

[Overview]

Retrieves the performance monitoring settings of the specified nodes.

[Format]

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

[Query Parameter]

| Parameter | Description |
|-----------|--|
| ItemName | Specify the name of a monitoring items. More than one name can be specified for an monitoring item. |
| PortName | Specify the name of a port. Several choices for a port name can be specified. |
| StartTime | Specify when specifying output time. Returns records after the specified time and date. Specify its format as RFC3339. E.g.) 2016-04-02T12:34:45Z000 |
| EndTime | Specify when specifying output time. Returns records until the specified time and date. Specify its format as RFC3339. 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 Monitoring Information (List) |
| | NodeId | string | Node ID |
| | PortName | string | Port Name |
| | ItemName | string | Monitoring Item Name |
| | Records | array | List of Record Information |
| | Timestamp | string | Time Stamp The format is RFC3339. E.g.) 2016-04-01T12:34:45Z000 |
| | Value | string | Value |

4.8 Event /Alarm

4.8.1 Registration of Action Settings

[Overview]

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

[Format]

POST /event/actions

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|----------------|----------------|---------------|--|
| ActionName | | string | Specify an Action Name. |
| ActionType | | string | Specify a type of action. Select from the following. <ul style="list-style-type: none">- ExecuteCommand: Executing command- SendMail: Sending Mail- TrapForwarding: Forwarding Trap- SyslogForwarding: Forwarding System log |
| Command | | object | Specify a Configuration of Command Execution. It is required to be filled in when selecting ExecuteCommand as a type of action. |
| | FileName | string | Specify a file name of the execution target. |
| | ArgumentList | array(string) | Specify arguments at execution. Up to 25 arguments can be specified and each argument can be specified with 1024 characters at a maximum. |
| TrapForwarding | | object | Specify the settings of trap forwarding. It is required to be filled in when selecting TrapForwarding as a type of action. |
| | SNMPServerId | string | Specify SNMP Server ID at the destination of forwarding. |
| | ForwardingType | string | Specify a Forwarding Type. Select from the following. <ul style="list-style-type: none">- PassThrough: Forwards a trap assuming ISM as transmission source.- Transparent: Forward a received trap as it is. |
| Mail | | object | Specify the information of a mail. It is required to specify when selecting SendMail as a type of action. |
| | Destination | string | Specify a destination address. |
| | Sender | string | Specify a mail address at transmission source. |
| | Subject | string | Specify the name of a mail. |
| | Message | string | Specify the text of a mail. |
| | EncryptionFlag | integer | Specify if encryption is to be executed by S/MIME. |

| Parameter | | Type | Description |
|------------------|----------------|---------|---|
| | | | <ul style="list-style-type: none"> - To encrypt: 1 - Not to encrypt: 0 |
| SyslogForwarding | | object | Information of system log forwarding destination Specify the information of system log forwarding destination. It is required to specify when selecting SyslogForwarding as a type of action. |
| | ServerNameType | string | Type of Server Name Specify the type of server name. One of the following can be set. IPv4, IPv6, FQDN |
| | ServerName | string | Server Name Specify the server name. |
| | PortNumber | integer | Port Number Specify the port number or null. When keys omitted or null specified, the port number of 514 (TCP) will be set. |
| | Protocol | string | Protocol Select from the following. <ul style="list-style-type: none"> - TCP - UDP When keys omitted, the default value (TCP) is set. |

[Response Parameter]

| Parameter | | Type | Description |
|----------------|----------------|---------------|--|
| ActionId | | string | Action ID |
| ActionName | | string | Action Name |
| ActionType | | string | Action Type <ul style="list-style-type: none"> - ExecuteCommand - SendMail - TrapForwarding - SyslogForwarding |
| Command | | object | Configuration of Command Execution |
| | FileName | string | File Name of the Execution Target |
| | ArgumentList | array(string) | Arguments at Execution |
| TrapForwarding | | object | Settings of Trap forwarding |
| | SNMPServerId | string | SNMP Server ID at the destination of forwarding |
| | ForwardingType | string | Forwarding Type <ul style="list-style-type: none"> - PassThrough - 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 System Log Forwarding Destination |
| | ServerNameType | string | Type of Server Name IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | PortNumber | integer | Port Number |
| | Protocol | string | Protocol One of the following is set. - TCP - UDP |

4.8.2 List Retrieval for Action Settings

[Overview]

Retrieves a list of action settings.

[Format]

```
GET /event/actions
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|------------|--------|---|
| Actions | | array | List of Action Settings |
| | ActionId | string | Action ID |
| | ActionName | string | Action Name |
| | ActionType | string | Action Type Selected from the following. - ExecuteCommand - SendMail - TrapForwarding - SyslogForwarding |
| | Command | object | Settings for Command Execution |
| | FileName | string | Execution Target File Name |

| Parameter | | Type | Description |
|-----------|------------------|---------------|---|
| | ArgumentList | array(string) | Arguments at Execution |
| | TrapForwarding | object | Settings of Trap Forwarding |
| | SNMPServerId | string | SNMP Server ID at the Destination of Forwarding |
| | ForwardingType | string | Forwarding Type Selected from the following. - PassThrough - Transparent |
| | Mail | object | Mail Information |
| | Destination | string | Destination Address |
| | Sender | string | Address of the Origin of Transmission |
| | Subject | string | Mail Subject |
| | Message | string | Mail Text |
| | EncryptionFlag | integer | Mail Encryption Flag |
| | SyslogForwarding | object | Information of System Log Forwarding Destination |
| | ServerNameType | string | Type of Server Name IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | PortNumber | integer | Port Number |
| | Protocol | string | Protocol |

4.8.3 Updating of Action Settings

[Overview]

Updates the settings of the specified action.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|------------|--------------|---------------|--|
| ActionName | | string | Specify an Action Name. |
| Command | | object | Specify settings for Command Execution. It is required to be filled in when selecting ExecuteCommand as a type of action. |
| | FileName | string | Specify an execution target file name. |
| | ArgumentList | array(string) | Specify arguments at execution. Up to 25 arguments can be specified and each argument can be specified with 1024 characters at a maximum. |

| Parameter | | Type | Description |
|------------------|----------------|---------|---|
| TrapForwarding | | object | Specify the settings of trap forwarding. It is required to be filled in when selecting TrapForwarding as a type of action. |
| | SNMPServerId | string | Specify SNMP Server ID at the destination of forwarding. |
| | ForwardingType | string | Specify a Forwarding Type. Select from the following. <ul style="list-style-type: none"> - PassThrough: Forwards a trap assuming ISM as transmission source. - Transparent: Forward a received trap as it is. |
| Mail | | object | Specify the information of a mail. It is required to specify when selecting SendMail as a type of action. |
| | Destination | string | Specify a destination address. |
| | Sender | string | Specify a mail address at transmission source. |
| | Subject | string | Specify the name of a mail. |
| | Message | string | Specify the text of a mail. |
| | EncryptionFlag | integer | Specify if encryption is to be executed by S/MIME. Specify one of the following. <ul style="list-style-type: none"> - When do encrypt: 1 - When do not encrypt: 0 |
| SyslogForwarding | | object | Information of System Log Forwarding Destination Specify the information of the system log forwarding destination. It is required to specify when selecting SyslogForwarding as a type of action. |
| | ServerNameType | string | Type of Server Name Specify the type of server name. One of the following can be set. IPv4, IPv6, FQDN |
| | ServerName | string | Server Name Specify the server name. |
| | PortNumber | integer | Port Number Specify the port number or null. When keys omitted or null specified, the port number of 514 (TCP) will be set. |
| | Protocol | string | Protocol Select from the following. <ul style="list-style-type: none"> - TCP - UDP When keys omitted, the default value (TCP) is set. |

[Response Parameter]

| Parameter | | Type | Description |
|------------------|----------------|---------------|--|
| ActionId | | string | Action ID |
| ActionName | | string | Action Name |
| ActionType | | string | Action Type <ul style="list-style-type: none"> - ExecuteCommand - SendMail - TrapForwarding - SyslogForwarding |
| Command | | object | Configuration of Command Execution |
| | FileName | string | Execution Target File Name |
| | ArgumentList | array(string) | Arguments at Execution |
| TrapForwarding | | object | Settings of Trap forwarding |
| | SNMPServerId | string | SNMP Server ID at the Destination of Forwarding |
| | ForwardingType | string | Forwarding Type <ul style="list-style-type: none"> - PassThrough - Transparent |
| Mail | | object | Mail Information |
| | Destination | string | Destination Address |
| | Sender | string | Address of the Origin of Transmission |
| | Subject | string | Mail Subject |
| | Message | string | Mail Text |
| | EncryptionFlag | integer | Mail Encryption Flag |
| SyslogForwarding | | object | Information of System Log Forwarding Destination |
| | ServerNameType | string | Type of Server Name IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | PortNumber | integer | Port number |
| | Protocol | string | Protocol One of the following is set. <ul style="list-style-type: none"> - TCP - UDP |

4.8.4 Deletion of Action Settings

[Overview]

Deletes the settings of the specified action.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.8.5 Registration of Alarm Settings

[Overview]

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

[Format]

```
POST /event/alarms
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|--------------|----------------|---|
| AlarmName | | string | Specify an Alarm Name. |
| Resources | | object | Specify the Resource Information. |
| | ResourceType | string | Specify a type of resource. Select from the following. <ul style="list-style-type: none">- Node- System |
| | ResourceId | array(integer) | Specify the Resource ID. If they are of the identical resource type, it is possible to specify multiple IDs. When a resource type is "System", specify it with empty. |
| Events | | object | Specify the Event Information. Specify either trap information or the ISM event information: You cannot set two kinds of information for the same alarm settings. |
| | SNMPTrap | object | Specify the information of a trap. |
| | Severity | array(string) | Specify the severity of a trap. It is possible to specify multiple degrees of severity to the trap and to make the traps with the same severity specified the targets for alarm setting at once. Select severity from the following: <ul style="list-style-type: none">- Critical- Major |

| Parameter | | | Type | Description | |
|-----------|----------|-----------|---------------|---|--|
| | | | | <ul style="list-style-type: none">- Minor- Informational- Unknown | |
| | | OID | array(string) | Specify the OID. It is possible to specify multiple symbol names and they can be the targets for alarm settings by trap. | |
| | ISMEvent | | object | Specify the ISM event information. | |
| | | Severity | array(string) | Specify priority level of ISM event. It is possible to specify multiple degrees of severity to the ISM event and to make the events with the same severity specified the targets for alarm setting at once. Select severity from the following: <ul style="list-style-type: none">- Error- Warning- Info | |
| | | EventInfo | | array | Specify the ISM event information individually. |
| | | | EventId | string | Specify the ISM event ID. It is possible to specify multiple event IDs and they can be the targets for alarm settings by event. |
| Actions | | | array | Specify an Action Settings. It is possible to specify multiple action settings. | |
| | ActionId | | string | Specify an Action ID. The actions that can be set are determined according to the selected event, a trap or ISM event. <ul style="list-style-type: none">- Actions that can be set for trap All actions can be set.- Actions that can be set for ISM event Can be set only for the following.<ul style="list-style-type: none">- Script Execution- Mail Transmission | |
| IsActive | | | string | Specify a status of an Action Setting. Select from the following. <ul style="list-style-type: none">- Enable: Enabled- Disable: Disabled | |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|----------------------|
| AlarmId | string | Alarm Settings ID |
| AlarmName | string | Alarm Name |
| Resources | object | Resource Information |

| Parameter | | Type | Description |
|-----------|--------------|----------------|--|
| | ResourceType | string | Type of Resource Selected from the following. <ul style="list-style-type: none">- Node- System |
| | ResourceId | array(integer) | Resource ID |
| Events | | object | Event Information |
| | SNMPTrap | object | Trap Information |
| | Severity | array(string) | Severity of Trap Selected from the following. <ul style="list-style-type: none">- Critical- Major- Minor- Informational- Unknown |
| | OID | array(string) | OID |
| | ISMEvent | object | ISM Event Information |
| | Severity | array(string) | Severity of ISM Event Selected from the following. <ul style="list-style-type: none">- Error- Warning- Info |
| | EventInfo | array | ISM Event Information |
| | EventId | string | ISM Event ID |
| | Actions | array | Action Settings |
| | ActionId | string | Action ID |
| IsActive | | string | Status of Action Settings Selected from the following. <ul style="list-style-type: none">- Enable: Enabled- Disable: Disabled |

4.8.6 List Retrieval for Alarm Settings

[Overview]

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

[Format]

```
GET /event/alarms
```

[Query Parameter]

None

[Response Parameter]

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

4.8.7 Updating of Alarm Settings

[Overview]

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

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|--------------|----------------|---|
| AlarmName | | string | Specify an Alarm Name. |
| Resources | | object | Specify the Resource Information. |
| | ResourceType | string | Specify a Type of Resource. Select from the following. <ul style="list-style-type: none">- Node- System |
| | ResourceId | array(integer) | Specify the Resource ID. If they are of the identical resource type, it is possible to specify multiple IDs. When a resource type is "System", specify it with empty. |
| Events | | object | Specify the Event Information. Specify either trap information or the ISM event information: You cannot set two kinds of information for the same alarm settings. |
| | SNMPTrap | object | Specify the Information of a Trap. |
| | Severity | array(string) | Specify the Severity of a Trap. It is possible to specify multiple degrees of severity to the trap and to make the traps with the same severity specified the targets for alarm setting at once. Select severity from the following: <ul style="list-style-type: none">- Critical- Major- Minor- Informational- Unknown |
| | OID | array(string) | Specify the OID. It is possible to specify multiple symbol names and they can be the targets for alarm settings by trap. |
| | ISMEvent | object | Specify the ISM event information. |
| | Severity | array(string) | Specify the Severity level of ISM Event. |

| Parameter | | | Type | Description | |
|-----------|----------|-----------|---------|---|---|
| | | | | <p>It is possible to specify multiple degrees of severity to the ISM event and to make the events with the same severity specified the targets for alarm setting at once.</p> <p>Select severity from the following:</p> <ul style="list-style-type: none">- Error- Warning- Info | |
| | | EventInfo | | array | Specify the ISM event information individually. |
| | | | EventId | string | <p>Specify the ISM event ID.</p> <p>It is possible to specify multiple event IDs and they can be the targets for alarm settings by event.</p> |
| Actions | | | array | <p>Specify an Action Settings.</p> <p>It is possible to specify settings of action.</p> | |
| | ActionId | | string | <p>Specify an Action ID.</p> <p>The actions that can be set are determined according to the selected event, a trap or ISM event.</p> <ul style="list-style-type: none">- Actions that can be set for trap <p>All actions can be set.</p> <ul style="list-style-type: none">- Actions that can be set for ISM event <p>Can be set only for the following.</p> <ul style="list-style-type: none">- Script Execution- Mail Transmission | |
| IsActive | | | string | <p>Specify a status of an Action Setting.</p> <p>Select from the following.</p> <ul style="list-style-type: none">- Enable: Enabled- Disable: Disabled | |

[Response Parameter]

| Parameter | | | Type | Description |
|-----------|--------------|--|----------------|--|
| AlarmId | | | string | Alarm Settings ID |
| AlarmName | | | string | Alarm Name |
| Resources | | | object | Resource Information |
| | ResourceType | | string | <p>Type of Resource</p> <p>Selected from the following.</p> <ul style="list-style-type: none"> - Node - System |
| | ResourceId | | array(integer) | Resource ID |
| Events | | | object | Event Information |
| | SNMPTrap | | object | Trap Information |
| | Severity | | array(string) | Severity of Trap |

| Parameter | | | Type | Description | |
|-----------|----------|-----------|---------------|--|---|
| | | | | Selected from the following. - Critical - Major - Minor - Informational - Unknown | |
| | | OID | array(string) | OID | |
| | ISMEvent | | object | ISM Event Information | |
| | | Severity | | array(string) | Severity of ISM Event Selected from the following. - Error - Warning - Info |
| | | EventInfo | | array | ISM Event Information |
| | | | EventId | string | ISM Event ID |
| Actions | | | array | Action Settings | |
| | ActionId | | string | Action ID | |
| IsActive | | | string | Status of Action Settings Selected from the following. - Enable: Enabled - Disable: Disabled | |

4.8.8 Deletion of Alarm Settings

[Overview]

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

[Format]

```
DELETE /event/alarms/{alarmid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.8.9 Registration of SMTP Server Settings Information

[Overview]

Registers the settings for SMTP server that transmits during the mail notification action.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|------------|----------------|---------|--|
| SMTPServer | | object | Specify the Information of SMTP Server. |
| | ServerNameType | string | Specify a Type of Server Name. Selectable from the following. IPv4, IPv6, FQDN |
| | ServerName | string | Specify the Name of a Server. |
| | UserName | string | Specify a User Name for SMTP auth. Specify null if not using SMTP auth. |
| | Password | string | Specify a Password for SMTP auth. Specify null if not using SMTP auth. |
| | PortNumber | integer | Specify the Number of a Port. When specifying null, default value 25 is assigned. |

[Response Parameter]

| Parameter | | Type | Description |
|------------|----------------|---------|---|
| SMTPServer | | object | SMTP Server Information |
| | ServerNameType | string | Type of Server Name One of the following is set. IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | UserName | string | SMTP auth User Name |
| | PortNumber | integer | Port Number |

4.8.10 Retrieval of SMTP Server Settings Information

[Overview]

Retrieves the settings information for the SMTP server that transmits during the mail notification action.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------|----------------|---------|---|
| SMTPServer | | object | SMTP Server Information |
| | ServerNameType | string | Type of Server Name One of the following is set. IPv4, IPv6, FQDN |
| | ServerName | string | Server Name |
| | UserName | string | User Account at Authentication SMTP auth User Name |
| | PortNumber | integer | Port Number |

4.8.11 Registration of SNMP Server Settings Information**[Overview]**

Adds the settings of SNMP server that transmits during the SNMP event notification action.

[Format]

```
POST /event/snmpmanagers
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|----------------|---------|---|
| ServerNameType | string | Specify a Type of Server. Selectable from the following. IPv4, IPv6, FQDN |
| ServerName | string | Specify the Name of a Server. |
| PortNumber | integer | Specify receive Port Number to be used in SNMP communication. When specifying null, 162 is automatically set. |
| SNMPVersion | string | Specify the Version of SNMP. Selectable from the following. v1, v2, v3 |
| Community | string | Specify a Community Name. (Only when specifying v1 or v2 in SNMPVersion) |
| EngineId | string | Specify an Engine ID. (Only when specifying v3 in SNMPVersion) |
| Context | string | Specify a context name. (Only when specifying v3 in SNMPVersion) |
| SecurityLevel | string | Specify a Security Level. Selectable from the following. |

| Parameter | Type | Description |
|--------------|--------|---|
| | | noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | Specify the Name of a User. (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Specify Authentication Protocols. Selectable from the following. MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| AuthPassword | string | Specify a Password for Authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Specify an encrypted Protocol. Selectable from the following. DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| PrivPassword | string | Specify an encrypted password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) 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 One of the following is set. IPv4, IPv6, FQDN |
| ServerName | string | Server Name |
| PortNumber | integer | Receive Port Number to be used in SNMP Communication |
| SNMPVersion | string | Version of SNMP One of the following is set. v1, v2, v3 |
| Community | string | Community Name (Only when specifying v1 or v2 in SNMPVersion) |
| EngineId | string | Engine ID (Only when specifying v3 in SNMPVersion) |
| Context | string | Context Name |

| Parameter | Type | Description |
|---------------|--------|---|
| | | (Only when specifying v3 in SNMPVersion) |
| SecurityLevel | string | Security level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | User Name (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Authentication Protocol MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| PrivProtocol | string | Encrypted Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv by SecurityLevel) |

4.8.12 List Retrieval for SNMP Server Settings Information

[Overview]

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

[Format]

```
GET /event/snmpmanagers
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|----------------|---------|---|
| SNMPServers | array | SNMP Settings Information |
| SNMPServerId | string | SNMP Settings Management ID |
| ServerNameType | string | Type of Server Name One of the following is set. IPv4, IPv6, FQDN |
| ServerName | string | Server Name |
| PortNumber | integer | Receive Port Number to be used in SNMP Communication |
| SNMPVersion | string | Version of SNMP One of the following is set. v1, v2, v3 |
| Community | string | Community Name (Only when specifying v1 or v2 in SNMPVersion) |
| EngineId | string | Engine ID |

| Parameter | Type | Description |
|---------------|--------|---|
| | | (Only when specifying v3 in SNMPVersion) |
| Context | string | Context Name (Only when specifying v3 in SNMPVersion) |
| SecurityLevel | string | Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | User Name (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Authentication Protocol MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| PrivProtocol | string | Encrypted Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |

4.8.13 Updating of SNMP Server Settings Information

[Overview]

Updates the settings of the SNMP server that transmits during the SNMP event notification action.

[Format]

```
PATCH /event/snmpmanagers/{snmpserverid}
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|----------------|---------|---|
| ServerNameType | string | Specify a type of server name. Selectable from the following. IPv4, IPv6, FQDN |
| ServerName | string | Specify the name of a server. |
| PortNumber | integer | Specify receive port number to be used in SNMP communication. When specifying null, 162 is automatically set. |
| SNMPVersion | string | Specify the Version of SNMP. Selectable from the following. v1, v2, v3 |
| Community | string | Specify a community name. (Only when specifying v1 or v2 in SNMPVersion) |

| Parameter | Type | Description |
|---------------|--------|---|
| EngineId | string | Specify an Engine ID. (Only when specifying v3 in SNMPVersion) |
| Context | string | Specify a context name. (Only when specifying v3 in SNMPVersion) |
| SecurityLevel | string | Specify a security level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | Specify the name of a user. (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Specify authentication protocols. Selectable from the following. MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| AuthPassword | string | Specify a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Specify an encrypted protocol. Selectable from the following. DES, AES (Only when specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| PrivPassword | string | Specify an encrypted password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) 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 One of the following is set. IPv4, IPv6, FQDN |
| ServerName | string | Server Name |
| PortNumber | integer | Receive Port Number to be used in SNMP Communication |
| SNMPVersion | string | Version of SNMP One of the following is set. |

| Parameter | Type | Description |
|---------------|--------|---|
| | | v1, v2, v3 |
| Community | string | Community Name (Only when specifying v1 or v2 in SNMPVersion) |
| EngineId | string | Engine ID (Only when specifying v3 in SNMPVersion) |
| Context | string | Context Name (Only when specifying v3 in SNMPVersion) |
| SecurityLevel | string | Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | User Name (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Authentication Protocol MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| PrivProtocol | string | Encrypted Protocol DES, AES (Only when specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |

4.8.14 Deletion of SNMP Server Settings Information

[Overview]

Deletes the settings of the SNMP server that transmits during the SNMP event notification action.

[Format]

```
DELETE /event/snmpmanagers/{snmpserverid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.8.15 List Retrieval for Available SNMP Traps

[Overview]

Retrieves all the information of the available SNMP traps.

[Format]

```
GET /event/alarms/traplist
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|--------|---|
| SNMPTraps | | array | Trap Information List |
| | TrapType | string | Symbol Name of Trap |
| | OID | string | OID of Trap |
| | Description | string | Description of Trap |
| | MibName | string | MIB Name of Trap |
| | Severity | string | Severity of Trap Selected from the following: <ul style="list-style-type: none"> - Critical - Major - Minor - Informational - Unknown |

4.8.16 List Retrieval for Available ISM Event IDs

[Overview]

Retrieves a list of the available ISM event IDs.

[Format]

```
GET /event/alarms/eventlist
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------------|---------------|--|
| ISMEvents | | array | List of Event Information |
| | EventId | string | Event ID |
| | EventType | string | Event Type |
| | Description | string | Description of Event |
| | Severity | string | Severity of Event |
| | ResourceType | array(string) | Resource Type to be the Target of the Event Selected from the following. <ul style="list-style-type: none"> - Node |

| Parameter | Type | Description |
|-----------|------|---|
| | | <ul style="list-style-type: none"> - Facility - NodeGroup - System |

4.8.17 List Retrieval for Logs for Received SNMP Traps

[Overview]

Retrieves a list of the reception histories of the SNMP trap.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|--------------|--------|---|
| StartTime | string | Retrieves data after the specified date. The format is RFC3339. |
| EndTime | string | Retrieves data before the specified date. The format is RFC3339. |
| ResourceType | string | Retrieves data of specified resource types. Usable any of the following. <ul style="list-style-type: none"> - Node: Specific node - Unknown: ISM unregistered node |
| ResourceId | string | Can add and specify only when selecting Node in ResourceType. Retrieves all applicable nodes when specifying more than one. |

[Response Parameter]

| Parameter | Type | Description |
|--------------|---------|---|
| TrapLogs | array | Trap Log List |
| TrapLogId | string | Trap Log ID |
| TimeStamp | string | Time/Date of Receiving Trap |
| TrapType | string | Symbol Name of Trap |
| OID | string | OID |
| TrapMessage | string | Message of Trap |
| ResourceType | string | Type of Resource at the Origin of Transmission of the Trap. Selected from the following. <ul style="list-style-type: none"> - Node - Unknown |
| ResourceId | integer | Resource ID of Origin of Transmission of the Trap |
| Severity | string | Severity of the Trap Selected from the following. <ul style="list-style-type: none"> - Critical |

| Parameter | Type | Description |
|-----------|------|--|
| | | <ul style="list-style-type: none"> - Major - Minor - Informational - Unknown |

4.8.18 Registration of SNMP Traps To Be Excluded

[Overview]

Registers the traps to be excluded in a list.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------|---------|---|
| ResourceType | string | Specify a type of resource. Select from the following. <ul style="list-style-type: none"> - Node |
| ResourceId | integer | Specify the Resource ID. |
| OID | string | Specify the OID of a trap |

[Response Parameter]

| Parameter | Type | Description |
|--------------|---------|--|
| ResourceType | string | Type of Resource Selected from the following. <ul style="list-style-type: none"> - Node |
| ResourceId | integer | Resource ID |
| OID | string | OID of Trap |

4.8.19 List Retrieval for Information on Excluded SNMP Traps

[Overview]

Retrieves a list of the information of the excluded traps.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------------|--------------|---------|--|
| IgnoredSNMPTraps | | array | List of Traps for Exclusion |
| | ResourceType | string | Type of Resource Selected from the following. - Node |
| | ResourceId | integer | Resource ID |
| | OID | string | Symbol Name of Trap |

4.8.20 Deletion of Excluded SNMP Traps

[Overview]

Deletes excluded traps from the list.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

4.8.21 Registration of Common Alarm Settings

[Overview]

Registers information of the settings commonly used in the alarm settings.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------------|---------|--|
| InhibitionInterval | integer | Specifies the period for inhibiting trap reception. Inhibits reception of the same trap from the same resource in the period. |

[Response Parameter]

| Parameter | Type | Description |
|--------------------|---------|------------------------------------|
| InhibitionInterval | integer | Duration to Inhibit Trap Reception |

4.8.22 Retrieval of Common Alarm Settings

[Overview]

Retrieves the information of the settings commonly used in the alarm settings.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|--------------------|---------|------------------------------------|
| InhibitionInterval | integer | Duration to Inhibit Trap Reception |

4.8.23 Test Execution of Actions

[Overview]

Executes a test of the specified action.

[Format]

```
POST /event/actions/{actionid}/test
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------|--------|---|
| TestEvent | object | Specify event information as parameters at test run of an action. |
| ResourceType | string | Specify a type of resource. Select from the following. <ul style="list-style-type: none"> - System - Node When unspecified, it automatically will be substituted by System. |

| Parameter | | Type | Description |
|-----------|------------|---------|---|
| | ResourceId | integer | Specify the Resource ID. When a resource type is specified as Node, a specification is essential. |
| | EventType | string | Specify an Event Type. Select from the following. - ISMEvent - SNMPTrap When unspecified, it automatically will be substituted by SNMPTrap. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------------|---------|-------------------------------------|
| TestEvent | | object | Parameters at Test Run of an Action |
| | ResourceType | string | Resource Types |
| | ResourceId | integer | Resource ID |
| | EventType | string | Event Type |

4.8.24 Adding Information on SNMP Trap Reception Settings

[Overview]

Adds reception settings for the SNMP trap.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------|--------|---|
| SNMPVersion | string | Specify the Version of SNMP. Selectable from the following. v1/v2, v3 |
| Community | string | Specify a community name. (Only when specifying v1/v2 in SNMPVersion) |
| SecurityLevel | string | Specify a security level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | Specify the name of a user. (Only when specifying v3 in SNMPVersion) |

| Parameter | Type | Description |
|--------------|----------|---|
| AuthProtocol | string | Specify authentication protocols. Selectable from the following. MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| AuthPassword | string | Specify a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | string | Specify an encrypted protocol. Selectable from the following. DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| PrivPassword | string | Specify an encrypted password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) Length of a string before encryption should be 8 characters in minimum. |
| NodeList | array | Specify node information that uses the SNMP trap reception settings. When SNMPv3, a specification is essential. |
| | NodeId | integer |
| | EngineId | string |

[Response Parameter]

| Parameter | Type | Description |
|--------------------|--------|--|
| SNMPTrapSettingsId | string | SNMP Trap Settings ID |
| SNMPVersion | string | SNMP Version One of the following is set. v1/v2, v3 |
| Community | string | Community Name (Only when specifying v1/v2 in SNMPVersion) |
| SecurityLevel | string | Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | User Name (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Authentication Protocol MD5, SHA |

| Parameter | | Type | Description |
|--------------|----------|---------|--|
| | | | (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| PrivProtocol | | string | Encrypted Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| NodeList | | array | Node Information List (Only when specifying v3 in SNMPVersion) |
| | NodeId | integer | Node ID |
| | EngineId | string | Engine ID |

4.8.25 Retrieval for Information on SNMP Trap Reception Settings

[Overview]

Retrieves the SNMP trap reception settings.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-----------|---------|---|
| nodeid | integer | Specify a node ID. Retrieves all corresponding SNMP trap reception settings when specifying more than one. |

[Response Parameter]

| Parameter | | Type | Description |
|------------------|--------------------|--------|--|
| SNMPTrapSettings | | array | |
| | SNMPTrapSettingsId | string | SNMP Trap Settings ID |
| | SNMPVersion | string | SNMP Version One of the following is set. v1/v2, v3 |
| | Community | string | Community Name (Only when specifying v1/v2 in SNMPVersion) |
| | SecurityLevel | string | Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| | UserName | string | User Name (Only when specifying v3 in SNMPVersion) |
| | AuthProtocol | string | Authentication Protocol MD5, SHA |

| Parameter | | Type | Description |
|-----------|--------------|---------|--|
| | | | (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| | PrivProtocol | string | Encrypted Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| | NodeList | array | Node Information List |
| | NodeId | integer | Node ID |
| | EngineId | string | Engine ID |

4.8.26 Updating Information on SNMP Trap Reception Settings

[Overview]

Updates the SNMP trap reception settings.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------|--------|---|
| SNMPVersion | string | Specify the Version of SNMP. Selectable from the following. v1/v2, v3 |
| Community | string | Specify a community name. (Only when specifying v1/v2 in SNMPVersion) |
| SecurityLevel | string | Specify a security level. Selectable from the following. noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | string | Specify the name of a user. (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | string | Specifies authentication protocols. Selectable from the following. MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| AuthPassword | string | Specifies a password for authentication. (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |

| Parameter | | Type | Description |
|--------------|----------|---------|---|
| | | | Length of a string before encryption should be 8 characters in minimum. |
| PrivProtocol | | string | Specify an encrypted protocol. Selectable from the following. DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| PrivPassword | | string | Specify an encrypted password. (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) Length of a string before encryption should be 8 characters in minimum. |
| NodeList | | array | Specifies node information that uses the SNMP trap reception settings. When SNMPv3, a specification is essential. |
| | NodeId | integer | Specify the Node ID. |
| | EngineId | string | Specify the Engine ID. |

[Response Parameter]

| Parameter | | Type | Description |
|--------------------|--|--------|---|
| SNMPTrapSettingsId | | string | SNMP Trap Settings ID |
| SNMPVersion | | string | SNMP Version One of the following is set. v1/v2, v3 |
| Community | | string | Community Name (Only when specifying v1/v2 in SNMPVersion) |
| SecurityLevel | | string | Security Level noAuthNoPriv, authNoPriv, authPriv (Only when specifying v3 in SNMPVersion) |
| UserName | | string | User Name (Only when specifying v3 in SNMPVersion) |
| AuthProtocol | | string | Authentication Protocol MD5, SHA (Only when specifying v3 in SNMPVersion and specifying either authNoPriv or authPriv in SecurityLevel) |
| PrivProtocol | | string | Encrypted Protocol DES, AES (Only when of specifying v3 in SNMPVersion and specifying authPriv in SecurityLevel) |
| NodeList | | array | Node Information List (Only when specifying v3 in SNMPVersion) |

| Parameter | | Type | Description |
|-----------|----------|---------|-------------|
| | NodeId | integer | Node ID |
| | EngineId | string | Engine ID |

4.8.27 Deletion of Information on SNMP Trap Reception Settings

[Overview]

Deletes the SNMP trap reception settings.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.9 Event List Management

4.9.1 Output of Log Type

[Overview]

Retrieves the information on the type of logs that can be used.

[Format]

```
GET /event/history
```

[Query Parameter]

None

[Response Parameter]

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

4.9.2 List Retrieval for Operation Logs

[Overview]

Searches operation logs according to the specified requirements.

Query parameters can be used to narrow down the operation logs to retrieve.

[Format]

```
GET /event/history/event/show?
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 | Narrowing down by severity |
| logtype | string | Narrowing down by the Type of Operation Logs |
| start | string | Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| end | string | Narrowing down by the End of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| resourceidtype | string | Narrowing down by the Use of Resource ID Type In this narrowing, specifying of the resource ID is required. |
| resourceid | integer | Narrowing down by Resource ID Can specify more than one of resource IDs. In this narrowing, specifying of the resource ID is required. |
| messageid | string | Narrowing down by Message ID |
| extendedmessage | string | Narrowing down by Extended Message |
| operator | string | Narrowing down by Operator |
| continuekey | string | Continued Read Key |

[Response Parameter]

| Parameter | Type | Description |
|-----------|----------------|---|
| Logs | array | List of Log Information |
| Id | Id | Log ID Range: 1-999999 |
| | OccurrenceDate | Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | Level | Severity |
| | MessageId | Message ID |
| | Message | Message |
| | Type | Types of Operation Logs |
| | | |

| Parameter | | Type | Description |
|-------------|----------------|---------|----------------------|
| | TargetInfo | object | Target Information |
| | Name | string | Resource Name |
| | ResourceIdType | string | Type of Resource ID |
| | ResourceId | integer | Resource ID |
| | Operator | string | Operator |
| RowCounter | | integer | Total Search Queries |
| ContinueKey | | string | Continued Read Key |

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can retrieve the all log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the own log information and the log information of the members in the same group can be searched.
- When the same key has been specified several times in query parameters, the one specified lastly becomes valid.
- When omitting time/date of start and time/date of finish, all of log information are to become targets for narrowing.
- When omitting time/date of start, log information before the time/date of the finish is to become targets for narrowing. Also, when omitting time/date of termination, log information after the starting time/date becomes targets for narrowing.
- When there is no log information as target output, it outputs 0 log information.
- When information of log exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new log registration.
- Without changing conditions for narrowing down, the rest of log information can be output by specifying the value of response parameter, "ContinueKey" as a value of query parameter, "continuekey."
- When narrowing down, specify values of corresponding output results of ["4.9.2 List Retrieval for Operation Logs"](#) and ["4.9.4 Individual Retrieval of Operation Logs"](#) as specified values for query parameters.

4.9.3 List Retrieval for Audit Logs

[Overview]

Searches audit logs according to set requirements.

Query parameters can be used to narrow down the audit logs to retrieve.

[Format]

```
GET /event/history/audit/show?
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 | Narrowing down by Severity |
| logtype | string | Narrowing down by the Type of Audit Logs |
| start | string | Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| end | string | Narrowing down by the End of Date and Time of Occurrence |

| Parameter | Type | Description |
|-----------------|---------|--|
| | | YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| resourceidtype | string | Narrowing down by the Use of Resource ID Type In this narrowing, specifying of the resource ID is required. |
| resourceid | integer | Narrowing down by Resource ID Can specify more than one of resource IDs. In this narrowing, specifying of the resource ID is required. |
| messageid | string | Narrowing down by Message ID |
| extendedmessage | string | Narrowing down by Extended Message |
| operator | string | Narrowing down by Operator |
| continuekey | string | Continued Read Key |

[Response Parameter]

| Parameter | | Type | Description | |
|-------------|----------------|----------------|---|-----------------------------|
| Logs | | array | List of Log Information | |
| | Id | | Log ID Range: 1-999999 | |
| | OccurrenceDate | | Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) | |
| | Level | | Severity | |
| | MessageId | | Message ID | |
| | Message | | Message | |
| | Type | | Types of Audit Logs | |
| | TargetInfo | | Target Information | |
| | | Name | | Resource Name |
| | | ResourceIdType | | Type of Resource ID |
| | | ResourceId | | Resource ID |
| | UserInfo | | User Information | |
| | | IpAddress | | IP Address at Access Source |
| | | Operator | | Operator |
| | | UserId | | User ID |
| | | SessionId | | Session ID |
| RowCounter | | integer | Total Search Queries | |
| ContinueKey | | string | Continued Read Key | |

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can search log information.
- When the same key has been specified several times in query parameters, the one specified lastly becomes valid.

- When omitting time/date of start and time/date of finish, all of log information are to become targets for narrowing.
- When omitting time/date of start, log information before the time/date of the finish is to become targets for narrowing. Also, when omitting time/date of termination, log information after the starting time/date can become targets for narrowing.
- When there is no log information as target output, it outputs 0 log information.
- When information of log exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new log registration.
- Without changing conditions for narrowing down, the rest of log information can be output by specifying the value of response parameter, "ContinueKey" as a value of query parameter, "continuekey."
- When narrowing down, narrowing, specify values of corresponding output results of ["4.9.3 List Retrieval for Audit Logs"](#) and ["4.9.5 Individual Retrieval of Audit Logs"](#) as specified values for query parameters.

4.9.4 Individual Retrieval of Operation Logs

[Overview]

Retrieves detailed information of the specified operation log number.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|---------|---|
| Logs | | object | Log Information |
| | Id | string | Log ID Range: 1-999999 |
| | OccurrenceDate | string | Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | Level | string | Severity |
| | MessageId | string | Message ID |
| | Message | string | Message |
| | Type | string | Types of Operation Logs |
| | TargetInfo | object | Target Information |
| | Name | string | Resource Name |
| | | string | Type of Resource ID |
| | | integer | Resource ID |
| | UserGroupId | string | User Group Information |
| | Operator | string | Operator |

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can output all of the detailed log information.

- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the log information of the members in the same group can be retrieved.

4.9.5 Individual Retrieval of Audit Logs

[Overview]

Retrieves detailed information of the specified audit log number.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|---------|---|
| Logs | | object | Log Information |
| | Id | string | Log ID Range: 1-999999 |
| | OccurrenceDate | string | Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | Level | string | Severity |
| | MessageId | string | Message ID |
| | Message | string | Message |
| | Type | string | Types of Audit Logs |
| | TargetInfo | object | Target Information |
| | Name | string | Resource Name |
| | | string | Type of Resource ID |
| | | integer | Resource ID |
| | UserGroupId | string | User Group Information |
| | UserInfo | object | User Information |
| | IpAddress | string | IP Address at Access Source Presently it is not supported. |
| | | string | Operator |
| | | string | User ID |
| | | string | Session ID |

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can output the detailed log information.

4.9.6 Export of Operation Logs

[Overview]

Searches operation logs according to the set requirements and exports them in ZIP format.

[Format]

POST /event/history/event/export

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| StartTime | string | Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| EndTime | string | Narrowing down by the End of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |

[Response Parameter]

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

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can export all of the log information.
- When the executing user does not belong to the Administrator group or does not have an Administrator role, only the log information of the members in the same group can be retrieved.
- When omitting time/date of start and time/date of finish, all of log information are to become targets for narrowing.
- When omitting time/date of start, log information before the time/date of the finish is to become targets for narrowing. Also, when omitting time/date of termination, log information after the starting time/date can become targets for narrowing.

4.9.7 Export of Audit Logs

[Overview]

Searches audit logs according to the set requirements and exports them in ZIP format.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| StartTime | string | Narrowing down by the Start of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| EndTime | string | Narrowing down by the End of Date and Time of Occurrence YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |

[Response Parameter]

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

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can export log information.
- When omitting time/date of start and time/date of finish, all of log information is to become targets for narrowing.
- When omitting time/date of start, log information before the time/date of the finish is to become targets for narrowing. Also, when omitting time/date of termination, log information after the starting time/date can become targets for narrowing.

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 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 Setting range: 1-365 |

[Response Parameter]

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

[Precautions]

- Only the users that belong to the Administrator group and have an Administrator role can update.

4.10 Profile Management

4.10.1 List Retrieval for Profile Categories

[Overview]

Retrieves a profile category list.

[Format]

```
GET /profiles/categories
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------------|--------|---|
| Server | | array | Classification: Server |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category Name <ul style="list-style-type: none"> - Server-BX: FUJITSU Server PRIMERGY BX series - Server-RX: FUJITSU Server PRIMERGY RX series - Server-CX: FUJITSU Server PRIMERGY CX series - Server-PRIMEQUEST2000-Partition: FUJITSU Server PRIMEQUEST2000 series - Server-PRIMEQUEST3000B: FUJITSU Server PRIMEQUEST3000B series - Server-PRIMEQUEST3000E-Partition: FUJITSU Server PRIMEQUEST3000E series |
| Storage | | array | Classification: Storage |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category Name <ul style="list-style-type: none"> - Storage-DX: FUJITSU Storage ETERNUS DX series disk storage system |
| Switch | | array | Classification: Switch |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category Name <ul style="list-style-type: none"> - Switch-SRX: Server housing switch SR-X series - Switch-CFX: Converged fabric switch CFX series - Switch-VDX: Converged switch Brocade VDX series - Switch-PSWITCH: Ethernet switch PSWITCH series |
| Other | | array | Classification: Other |
| | CategoryId | string | Category ID |
| | CategoryName | string | Category Name <ul style="list-style-type: none"> - Other |

4.10.2 Conversion of Profile Categories

[Overview]

Converts profiles into the applicable categories of the profile by using the model name specified.

[Format]

```
POST /profiles/categories
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|-------------|
| Model | string | Model |

[Response Parameter]

| Parameter | Type | Description |
|--------------|--------|---|
| CategoryId | string | Category ID |
| CategoryName | string | Category Name <ul style="list-style-type: none"> - Server-BX: FUJITSU Server PRIMERGY BX series - Server-RX: FUJITSU Server PRIMERGY RX series - Server-CX: FUJITSU Server PRIMERGY CX series - Server-PRIMEQUEST2000-Partition: FUJITSU Server PRIMEQUEST2000 series - Server-PRIMEQUEST3000B: FUJITSU Server PRIMEQUEST3000B series - Server-PRIMEQUEST3000E-Partition: FUJITSU Server PRIMEQUEST3000E series - Storage-DX: FUJITSU Storage ETERNUS DX series disk storage system - Switch-SRX: server housing switch SR-X series - Switch-CFX: converged fabric switch CFX series - Switch-VDX: converged switch Brocade VDX series - Switch-PSWITCH: Ethernet switch PSWITCH series - Other |

4.10.3 Adding Profiles

[Overview]

Adds a profile.

[Format]

```
POST /profiles/profiles
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------------|--------|---|
| ProfileName | string | Profile name |
| Description | string | Description of Profile |
| CategoryId | string | Category ID |
| ProfileGroupId | string | Profile Group ID to save |
| ReferencePolicyList | array | Policy list used in the succession referenced |

| Parameter | | Type | Description |
|--------------------|---------------------------------|------------------|--|
| | | | The maximum value is 2000. |
| | PolicyId | string | Policy ID used in the succession referenced |
| OneTimePasswordKey | | string | One-time Encryption Key for Password Information Set the password encrypted with AES256+Base64 and assign the encryption key for all password information in ProfileData. |
| ProfileData | | object | Profile Settings |
| | Server-BX | | FUJITSU Server PRIMERGY BX series |
| | | BIOS | BIOS Settings For details, refer to "BIOS" in " C.1 Server-BX. " |
| | | iRMC | iRMC (Integrated Remote Management Controller) Settings For details, refer to "iRMC" in " C.1 Server-BX. " |
| | | IOVirtualization | Virtual IO Settings For details, refer to " D.3 IOVirtualization. " |
| | | OSInstallation | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-RX | | FUJITSU Server PRIMERGY BX series |
| | | BIOS | BIOS Settings For details, refer to " D.1 BIOS. " |
| | | iRMC | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| | | IOVirtualization | Virtual IO Settings For details, refer to " D.3 IOVirtualization. " |
| | | OSInstallation | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-CX | | FUJITSU Server PRIMERGY CX series |
| | | BIOS | BIOS Settings For details, refer to " D.1 BIOS. " |
| | | iRMC | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| | | IOVirtualization | Virtual IO Settings For details, refer to " D.3 IOVirtualization. " |
| | | OSInstallation | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-PRIMEQUEST2000-Partition | | FUJITSU Server PRIMEQUEST2000 series |
| | | MMB | MMB (Management Board) Partition Settings For details, refer to " D.5 MMB. " |
| | | OSInstallation | OS Installation Settings |

| Parameter | | Type | Description |
|-----------|----------------------------------|--------|--|
| | | | For details, refer to " D.4 OSInstallation. " |
| | Server-PRIMEQUEST3000B | object | FUJITSU Server PRIMEQUEST3000B series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-PRIMEQUEST3000E-Partition | object | FUJITSU Server PRIMEQUEST3000E series |
| | MMB | object | MMB (Management Board) partition settings For details, refer to " D.5 MMB. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Storage-DX | object | FUJITSU Storage ETERNUS DX series disk storage system |
| | StandRaid | object | Raid Settings For details, refer to "StandRaid" in " C.2 Storage-DX. " |
| | GHotSpare | object | Hot Spares Settings For details, refer to "GHotSpare" in " C.2 Storage-DX. " |
| | HostAffinity | object | Host Affinity Settings For details, refer to "HostAffinity" in " C.2 Storage-DX. " |
| | DetailSettings | object | Detail Settings of Profile For details, refer to "DetailSettings" in " C.2 Storage-DX. " |
| | Switch-SRX | object | Server Housing Switch SR-X series |
| | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.3 Switch-SRX. " |
| | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.3 Switch-SRX. " |
| | Account | object | Information on Password of the Administrator of the Device For details, refer to "Account" in " C.3 Switch-SRX. " |
| | Stp | object | STP For details, refer to "Stp" in " C.3 Switch-SRX. " |
| | Switch-CFX | object | Converged Fabric Switch CFX series |
| | Interface | array | Interface Information Setting available for up to a maximum of 256. For details, refer to "Interface" in " C.4 Switch-CFX. " |
| | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.4 Switch-CFX. " |
| | AutoTime | object | Automatic Time Setting Information |

| Parameter | | | Type | Description |
|-----------|----------------|----------|--------|--|
| | | | | For details, refer to "AutoTime" in " C.4 Switch-CFX ." |
| | | Account | object | Information on Password of the Administrator of the Device For details, refer to "Account" in " C.4 Switch-CFX ." |
| | | Aaa | object | AAA Information For details, refer to "Aaa" in " C.4 Switch-CFX ." |
| | Switch-VDX | | object | Converged switch Brocade VDX series |
| | | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.5 Switch-VDX ." |
| | | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.5 Switch-VDX ." |
| | | Account | object | Account Information For details, refer to "Account" in " C.5 Switch-VDX ." |
| | Switch-PSWITCH | | object | Ethernet Switch PSWITCH series |
| | | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.6 Switch-PSWITCH ." |
| | | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.6 Switch-PSWITCH ." |
| | | Account | object | Account Information 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]

Retrieves 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 Status <ul style="list-style-type: none"> - unassigned: unassigned - assigned: assignment complete |

| Parameter | Type | Description |
|-------------------|--------|--|
| | | <ul style="list-style-type: none"> - mismatch: an assigned profile is edited and takes on unassigned status (there is a finite difference between the profile and the device) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed <p>When 'assigned' is specified, a list of profiles assigned to the nodes is output.</p> |
| categoryid | string | <p>Category ID</p> <p>The profile list belonging to the specified category is output.</p> |
| profilegroupid | string | <p>Profile Group ID</p> <p>The profile list belonging to the specified profile group is output.</p> |
| referencepolicyid | string | <p>Policy ID using the succession referenced</p> <p>The profile list using the specified policy in the referential succession is output.</p> |

[Response Parameter]

| Parameter | Type | Description |
|---------------------|---------|--|
| ProfileList | array | <p>Profile List</p> <p>The maximum value is 2000.</p> |
| 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 | <p>Policy List used in the succession referenced</p> <p>The maximum value is 2000.</p> |
| PolicyId | string | Policy ID used in the succession referenced |
| AssignedNodeId | integer | <p>Node ID Assigned</p> <p>Null when unassigned.</p> |
| Status | string | <p>Displays assigned Status.</p> <ul style="list-style-type: none"> - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile is edited and takes on unassigned status (there is a finite difference between the profile and the device) |

| Parameter | | Type | Description |
|-----------|----------------|--------|---|
| | | | <ul style="list-style-type: none"> - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed |
| | InternalStatus | object | Internal Status |
| | BiosStatus | string | Displays the Assignment Status for BIOS Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process |
| | IrmcStatus | string | Displays the Assignment Status for iRMC Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process Output when the CategoryId is 1(Server-BX), 2(Server-CX), 3(Server-RX), or 5(Server-PRIMEQUEST3000B). |
| | MmbStatus | string | Displays the Assignment Status for MMB Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process Output when the CategoryId is 4(Server-PRIMEQUEST2000-Partition) or 6(Server-PRIMEQUEST3000E-Partition). |
| | IovStatus | string | Displays the Assignment Status for IOVirtualization profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process |
| | OsStatus | string | Displays the Assignment Status for OS Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned |

| Parameter | | | Type | Description |
|-----------|---------------|-----------|--------|--|
| | | | | <ul style="list-style-type: none"> - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process |
| | HistoryList | | array | When editing is carried out during assignment, the profile as it was before editing is returned. 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 Assignment |

4.10.5 Individual Retrieval of Profiles

[Overview]

Retrieves the individual information of the specified profiles.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-------------|--------|--|
| passwordkey | string | Encryption Key for Password Information For all password information in ProfileData, Specify the encryption key for passwords encrypted with AES256+Base64. |

[Response Parameter]

| Parameter | | Type | Description |
|---------------------|----------|---------|--|
| ProfileId | | string | Profile ID |
| ProfileName | | string | Profile Name |
| Description | | string | Description of Profile |
| CategoryId | | string | Category ID |
| ProfileGroupId | | string | Profile Group ID that it currently belongs to |
| PathName | | string | Path Name for this profile group Absolute path. Everything up to the group name is displayed. |
| ReferencePolicyList | | array | Policy List used in the succession referenced The maximum value is 2000. |
| | PolicyId | string | Policy ID used in the succession referenced |
| AssignedNodeId | | integer | Assigned Node ID |

| Parameter | | Type | Description |
|----------------|------------|--------|--|
| | | | Null when unassigned. |
| Status | | string | Displays Assigned Status. <ul style="list-style-type: none"> - unassigned: unassigned - assigned: assignment complete - mismatch: an assigned profile is edited and takes on unassigned status (there is a finite difference between the profile and the device) - processing: 'assigned/unassigned' processing in progress - canceling: cancellation of 'assigned/unassigned' is in progress - canceled: cancellation of 'assigned/unassigned' is complete - error: 'assigned/unassigned' has failed |
| InternalStatus | | object | Internal Status |
| | BiosStatus | string | Displays the Assignment Status for BIOS Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process |
| | IrmcStatus | string | Displays the Assignment Status for iRMC Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process Output when the CategoryId is 2(Server-CX), 3(Server-RX), or 5(Server-PRIMEQUEST3000B). |
| | MmbStatus | string | Displays the Assignment Status for MMB Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process Output when the CategoryId is 4(Server-PRIMEQUEST2000-Partition) or 6(Server-PRIMEQUEST3000E-Partition). |
| | IovStatus | string | Displays the Assignment Status for IOVirtualization Profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned |

| Parameter | | Type | Description |
|---------------|------------------|--------|---|
| | | | <ul style="list-style-type: none"> - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process |
| | OsStatus | string | Displays the Assignment Status for OS profiles. <ul style="list-style-type: none"> - invalid: profile unregistered - unassigned: profile not yet assigned - assigned: profile assignment complete - reassign: profile update available - processing: assignment in process |
| HistoryList | | array | When editing is carried out during assignment, the Profile ID as it was before editing is returned. 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 Assignment |
| ProfileData | | object | Profile Settings |
| | Server-BX | object | FUJITSU Server PRIMERGY BX series |
| | BIOS | object | BIOS Settings For details, refer to "BIOS" in " C.1 Server-BX. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to "iRMC" in " C.1 Server-BX. " |
| | IOVirtualization | object | Virtual IO Settings For details, refer to " D.3 IOVirtualization. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-RX | object | FUJITSU Server PRIMERGY RX series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| | IOVirtualization | object | Virtual IO Settings For details, refer to " D.3 IOVirtualization. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-CX | object | FUJITSU Server PRIMERGY CX series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |

| Parameter | | Type | Description |
|-----------|----------------------------------|--------|---|
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| | IOVirtualization | object | Virtual IO Settings For details, refer to " D.3 IOVirtualization. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-PRIMEQUEST2000-Partition | object | FUJITSU Server PRIMEQUEST2000 series |
| | MMB | object | MMB (Management Board) Partition Settings For details, refer to " D.5 MMB. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-PRIMEQUEST3000B | object | FUJITSU Server PRIMEQUEST3000B series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Server-PRIMEQUEST3000E-Partition | object | FUJITSU Server PRIMEQUEST3000E series |
| | MMB | object | MMB (Management Board) Partition Settings For details, refer to " D.5 MMB. " |
| | OSInstallation | object | OS Installation Settings For details, refer to " D.4 OSInstallation. " |
| | Storage-DX | object | FUJITSU Storage ETERNUS DX series disk storage system |
| | StandRaid | object | Raid Settings For details, refer to "StandRaid" in " C.2 Storage-DX. " |
| | GHotSpare | object | Hot Spares Settings For details, refer to "GHotSpare" in " C.2 Storage-DX. " |
| | HostAffinity | object | Host Affinity Settings For details, refer to "HostAffinity" in " C.2 Storage-DX. " |
| | DetailSettings | object | Detail Settings of Profile For details, refer to "DetailSettings" in " C.2 Storage-DX. " |
| | Switch-SRX | object | Server Housing Switch SR-X series |
| | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.3 Switch-SRX. " |
| | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.3 Switch-SRX. " |
| | Account | object | Device Administrator Password Information For details, refer to "Account" in " C.3 Switch-SRX. " |

| Parameter | | Type | Description |
|-----------|----------------|--------|--|
| | Stp | object | STP For details, refer to "Stp" in " C.3 Switch-SRX. " |
| | Switch-CFX | object | Converged Fabric Switch CFX series |
| | Interface | array | Interface Information The maximum value is 256. For details, refer to "Interface" in " C.4 Switch-CFX. " |
| | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.4 Switch-CFX. " |
| | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.4 Switch-CFX. " |
| | Account | object | Device Administrator Password Information For details, refer to "Account" in " C.4 Switch-CFX. " |
| | Aaa | object | AAA Information For details, refer to "Aaa" in " C.4 Switch-CFX. " |
| | Switch-VDX | object | Converged Switch Brocade VDX series |
| | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.5 Switch-VDX. " |
| | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.5 Switch-VDX. " |
| | Account | object | Account Information For details, refer to "Account" in " C.5 Switch-VDX. " |
| | Switch-PSWITCH | object | Ethernet Switch PSWITCH series |
| | Snmp | object | SNMP Function Information For details, refer to "Snmp" in " C.6 Switch-PSWITCH. " |
| | AutoTime | object | Automatic Time Setting Information For details, refer to "AutoTime" in " C.6 Switch-PSWITCH. " |
| | Account | object | Account Information For details, refer to "Account" in " C.6 Switch-PSWITCH. " |

4.10.6 Updating Profiles

[Overview]

Updates the specified profiles.

[Format]

```
PATCH /profiles/profiles/{profileid}
```

[Query Parameter]

None

[Request Parameter]

Refer to "[4.10.3 Adding Profiles](#)."

[Response Parameter]

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

4.10.7 Deleting Profiles

[Overview]

Deletes the specified profiles.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.8 Assigning Profiles to Nodes

[Overview]

Assigns the specified profiles to the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|------------|--------|--|
| ProfileId | string | Profile ID to be assigned Can be omitted when a profile has been assigned to the node. |
| AssignMode | string | Specifies Assign Mode. <ul style="list-style-type: none">- Normal: Normal assignment- Advanced: Advanced assignment When this setting is omitted or null, operations will be carried out as Normal. |

| Parameter | Type | Description |
|----------------|--------|--|
| AdvancedKind | string | <p>Specifies Type of Advanced Assignment.</p> <p>To be specified when the AssignMode is 'Advanced'.</p> <ul style="list-style-type: none"> - ForcedAssign: Forced assignment - WithoutHardwareAccess: Assignment without hardware access - OnlineAssign: Online assignment <p>ForcedAssign cannot be used in the first-time assignment.</p> <p>When IOVirtualization or OSInstallation is included in the AssignRange, OnlineAssign cannot be used.</p> |
| AssignRange | array | <p>Records Types of Profile for Assignment.</p> <p>If the AssignMode is Advanced, "BIOS," "iRMC," "MMB," "IOVirtualization" and/or "OSInstallation" can be specified either individually or together.</p> <p>E.g.) ["BIOS", "iRMC"]</p> <p>When this setting is omitted or null, all types of profile in ProfileData are assigned.</p> |
| FirmwareUpdate | string | <p>Updates the Target Node for Profile Assignment to the latest firmware before assignment.</p> <ul style="list-style-type: none"> - Disable: Disabled |

[Response Parameter]

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

4.10.9 Cancellation of Assigning Profile to Nodes

[Overview]

Cancels the assignment of a profile to a node by using the specified task ID.

[Format]

```
POST /nodes/profiles/assign/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

4.10.10 Releasing Profile Assignment to Nodes

[Overview]

Releases the profile assigned to a node by using the specified node ID.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

4.10.11 Cancellation of Releasing Profile Assignment to Nodes

[Overview]

Cancels the release of a profile assignment to a node by using the specified task ID.

[Format]

```
POST /nodes/profiles/unassign/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

4.10.12 Adding Profile Groups

[Overview]

Adds profile groups.

[Format]

```
POST /profiles/profiles/groups
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|----------------------|--------|---------------------------|
| ProfileGroupName | string | Profile Group Name |
| Description | string | Profile Group Description |
| ParentProfileGroupId | string | Parent Profile Group ID |

[Response Parameter]

| Parameter | Type | Description |
|------------------|--------|--------------------|
| ProfileGroupId | string | Profile Group ID |
| ProfileGroupName | string | Profile Group Name |

4.10.13 List Retrieval for Profile Groups

[Overview]

Retrieves a list of profile groups.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------------|------------------|--------|---|
| ProfileGroupList | | array | Profile Group List There is no upper limit. |
| | ProfileGroupId | string | Profile Group ID |
| | ProfileGroupName | string | Profile Group Name |
| | Description | string | Profile Group Description |
| | PathName | string | Path Name (absolute path) for this Profile Group |
| | ProfileGroupList | array | Subordinate Profile Group ID List There is no upper limit. |
| | ProfileGroupId | string | Profile Group ID |
| | ProfileList | array | Subordinate Profile ID List The maximum value is 2000. |
| | ProfileId | string | Profile ID |
| | TimeStampInfo | object | Time Stamp Information |
| | Register | string | Registration Time |
| | Update | string | Update Time |

4.10.14 Individual Retrieval of Profile Groups

[Overview]

Retrieves individual information of the specified profile groups.

[Format]

```
GET /profiles/profiles/groups/{groupid}
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------------|----------------|--------|---|
| ProfileGroupId | | string | Profile Group ID |
| ProfileGroupName | | string | Profile Group Name |
| Description | | string | Profile Group Description |
| PathName | | string | Path Name (absolute path) for this Profile Group |
| ProfileGroupList | | array | Subordinate Profile Group ID list There is no upper limit. |
| | ProfileGroupId | string | Subordinate Profile Group ID |
| ProfileList | | array | Subordinate Profile ID List The maximum value is 2000. |
| | ProfileId | string | Subordinate Profile ID |
| TimeStampInfo | | object | Time Stamp Information |
| | Register | string | Registration Time |
| | Update | string | Update Time |

4.10.15 Updating Profile Groups

[Overview]

Updates the specified profile groups.

[Format]

```
PATCH /profiles/profiles/groups/{groupid}
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|----------------------|--------|---------------------------|
| ProfileGroupName | string | Profile Group Name |
| Description | string | Profile Group Description |
| ParentProfileGroupId | string | Parent Profile Group ID |

[Response Parameter]

| Parameter | Type | Description |
|------------------|--------|--------------------|
| ProfileGroupId | string | Profile Group ID |
| ProfileGroupName | string | Profile Group Name |

4.10.16 Deleting Profile Groups

[Overview]

Deletes the specified profile groups.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.17 Adding Policies

[Overview]

Adds policies.

[Format]

```
POST /profiles/policies
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------------|--------|--|
| PolicyName | string | Policy Name |
| Description | string | Description of Policy |
| CategoryId | string | Category ID |
| PolicyGroupId | string | Policy Group ID to be saved |
| OneTimePasswordKey | string | One-time Encryption Key for Password Information Set the password encrypted with AES256+Base64 and assign the encryption key for all password information in ProfileData. |
| ProfileData | object | Policy Setting Details |
| Server-BX | object | FUJITSU Server PRIMERGY BX series |
| BIOS | object | BIOS Settings |

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

Retrieves 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 A list of definitions for the policies belonging to the specified category is output. |
| policygroupid | string | Policy Group ID A list of definitions for the policies belonging to the specified policy group is output. |
| policytype | string | Policy Type Specify "BIOS", "iRMC" or "MMB." |

[Response Parameter]

| Parameter | Type | Description |
|------------|---------------|--|
| PolicyList | array | Policy List The maximum value is 2000. |
| | PolicyId | Policy ID |
| | PolicyName | Policy Name |
| | Description | Description of Policy |
| | CategoryId | Category ID |
| | PolicyType | Policy Type Output "BIOS", "iRMC" or "MMB." |
| | PolicyGroupId | Policy Group ID that it belongs to |
| | TimeStampInfo | Time Stamp Information |
| | | |
| | Register | Registration Time |
| | Update | Update Time |

4.10.19 Individual Retrieval of Policies

[Overview]

Retrieves the individual information of the 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 |

| Parameter | | Type | Description |
|----------------------------------|----------|--------|---|
| PolicyType | | string | Policy Type Outputs "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 For details, refer to " C.1 Server-BX. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " C.1 Server-BX. " |
| Server-RX | | object | FUJITSU Server PRIMERGY RX series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| Server-CX | | object | FUJITSU Server PRIMERGY CX series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| Server-PRIMEQUEST2000-Partition | | object | FUJITSU Server PRIMEQUEST2000 series |
| | MMB | object | MMB (Management Board) Partition Settings For details, refer to " D.5 MMB. " |
| Server-PRIMEQUEST3000B | | object | FUJITSU Server PRIMEQUEST3000B series |
| | BIOS | object | BIOS Settings For details, refer to " D.1 BIOS. " |
| | iRMC | object | iRMC (Integrated Remote Management Controller) Settings For details, refer to " D.2 iRMC. " |
| Server-PRIMEQUEST3000E-Partition | | object | FUJITSU Server PRIMEQUEST3000E series |
| | MMB | object | MMB (Management Board) Partition Settings For details, refer to " D.5 MMB. " |

4.10.20 Updating Policies

[Overview]

Renews the specified policies.

[Format]

```
PATCH /profiles/policies/{policyid}
```

[Query Parameter]

None

[Request Parameter]

Refer to "[4.10.17 Adding Policies](#)."

[Response Parameter]

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

4.10.21 Deleting Policies

[Overview]

Deletes the specified policies.

[Format]

```
DELETE /profiles/policies/{policyid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.22 Adding Policy Groups

[Overview]

Adds policy groups.

[Format]

```
POST /profiles/policies/groups
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------------|--------|--------------------------|
| PolicyGroupName | string | Policy Group Name |
| Description | string | Policy Group Description |
| ParentPolicyGroupId | string | Parent Policy Group ID |

[Response Parameter]

| Parameter | Type | Description |
|-----------------|--------|-------------------|
| PolicyGroupId | string | Policy Group ID |
| PolicyGroupName | string | Policy Group Name |

4.10.23 List Retrieval for Policy Groups

[Overview]

Retrieves a list of policy groups.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|-----------------|-----------------|--|
| PolicyGroupList | array | Policy Group list There is no maximum value. |
| | PolicyGroupId | Policy Group ID |
| | PolicyGroupName | Policy Group Name |
| | Description | Policy Group description |
| | PathName | Path Name (absolute path) for this policy Group |
| | PolicyGroupList | Subordinate Policy Group ID List There is no maximum value. |
| | PolicyGroupId | Policy Group ID |
| | PolicyList | Subordinate Policy ID List The maximum number of lists is 1000. |
| | PolicyId | Policy ID |
| | TimeStampInfo | Time Stamp Information |
| | Register | Registration Time |
| | Update | Update Time |

4.10.24 Individual Retrieval of Policy Groups

[Overview]

Retrieves individual information of the specified policy groups.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|-----------------|--------|--|
| PolicyGroupId | string | Policy Group ID |
| PolicyGroupName | string | Policy Group Name |
| Description | string | Policy Group Description |
| PathName | string | Path Name (absolute path) for this Policy Group |
| PolicyGroupList | array | Subordinate Policy Group ID List There is no maximum value. |
| PolicyGroupId | string | Subordinate Policy Group ID |
| PolicyList | array | Subordinate Policy ID list The maximum value is 2000. |
| PolicyId | string | Subordinate Policy ID |
| TimeStampInfo | object | Time Stamp Information |
| Register | string | Registration Time |
| Update | string | Update Time |

4.10.25 Updating Policy Groups

[Overview]

Updates the specified policy groups.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------------|--------|--------------------------|
| PolicyGroupName | string | Policy Group Name |
| Description | string | Policy Group Description |
| ParentPolicyGroupId | string | Parent Policy Group ID |

[Response Parameter]

| Parameter | Type | Description |
|---------------|--------|-----------------|
| PolicyGroupId | string | Policy Group ID |

| Parameter | Type | Description |
|-----------------|--------|-------------------|
| PolicyGroupName | string | Policy Group Name |

4.10.26 Deleting Policy Groups

[Overview]

Deletes the specified policy groups.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.27 Importing Profiles

[Overview]

Imports the specified profiles.

[Format]

```
POST /profiles/import
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|--------------------|--------|---|
| FilePath | string | File Name, including the relative path from "</User group name>/ftp/" where the profiles are stored. |
| ProfileType | string | Profile Type Specify either Profile or Policy. |
| ProfileGroupId | string | Profile Group ID |
| OneTimePasswordKey | string | Password Encryption Key Set the password encrypted with AES256+Base64 and specify its encryption key for all of password information in profile to import. |

[Response Parameter]

| Parameter | Type | Description |
|-------------|--------|----------------------------|
| ProfileId | string | Profile ID |
| ProfileName | string | Profile Name (policy name) |

4.10.28 Exporting Profiles

[Overview]

Exports the specified profiles.

[Format]

```
POST /profiles/export
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-------------|--------|--|
| ProfileId | string | Profile ID |
| PasswordKey | string | Password Encryption Key Encrypts (AES256+Base64) information of all passwords of profile to export by specified encryption key. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| FilePath | string | File Name, including the relative path from "<User group name>/ftp/" where the profiles are stored. |

4.10.29 DVD Import

[Overview]

Imports from a specified DVD.

[Format]

```
POST /system/settings/repositories/profiles/dvd/import
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| MediaType | string | DVD Media Type Specifies the DVD media type. <ul style="list-style-type: none"> - ServerView Suite DVD - Windows Server 2016 Datacenter (Fujitsu Media) |

| Parameter | Type | Description |
|-----------|------|--|
| | | <ul style="list-style-type: none"> - Windows Server 2016 Standard (Fujitsu Media) - Windows Server 2016 (Microsoft Media) - Windows Server 2016 (Microsoft VL Media) - Windows Server 2012 R2 Datacenter (Fujitsu Media) - Windows Server 2012 R2 Standard (Fujitsu Media) - Windows Server 2012 R2 (Microsoft Media) - Windows Server 2012 R2 (Microsoft VL Media) - Windows Server 2012 Datacenter (Fujitsu Media) - Windows Server 2012 Standard (Fujitsu Media) - Windows Server 2012 (Microsoft Media) - Windows Server 2012 (Microsoft VL Media) - Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media) - Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media) - Windows Server 2008 R2 Standard + SP1 (Fujitsu Media) - Windows Server 2008 R2 + SP1 (Microsoft Media) - Windows Server 2008 R2 + SP1 (Microsoft VL Media) - Red Hat Enterprise Linux 7.4 (x86_64) - Red Hat Enterprise Linux 7.3 (x86_64) - Red Hat Enterprise Linux 7.2 (x86_64) - Red Hat Enterprise Linux 7.1 (x86_64) - Red Hat Enterprise Linux 6.9 (x86_64) - Red Hat Enterprise Linux 6.9 (x86) - Red Hat Enterprise Linux 6.8 (x86_64) - Red Hat Enterprise Linux 6.8 (x86) - Red Hat Enterprise Linux 6.7 (x86_64) - Red Hat Enterprise Linux 6.7 (x86) - Red Hat Enterprise Linux 6.6 (x86_64) - Red Hat Enterprise Linux 6.6 (x86) - SUSE Linux Enterprise Server 12 SP3 (x86_64) - SUSE Linux Enterprise Server 12 SP2 (x86_64) - SUSE Linux Enterprise Server 12 SP1 (x86_64) - SUSE Linux Enterprise Server 12 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86) - VMware ESXi 6.5 Update 1 (Fujitsu Media) |

| Parameter | Type | Description |
|-------------------|---------|---|
| | | <ul style="list-style-type: none"> - VMware ESXi 6.5 (Fujitsu Media) - VMware ESXi 6.0 Update 3 (Fujitsu Media) - VMware ESXi 6.0 Update 2 (Fujitsu Media) - VMware ESXi 6.0 Update 1 (Fujitsu Media) - VMware ESXi 5.5 Update 3 (Fujitsu Media) |
| FilePath | string | File Name including the relative path from "/<User group name>/ftp/" where the DVD media are stored. |
| DeleteFtpResource | boolean | <p>For specifying ftp Resource Deletion</p> <p>When "true", it deletes the file specified in FilePath following the normal termination of the DVD import.</p> <p>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.</p> |
| UnMountResource | boolean | <p>When "true", the shared directory used in the import is unmounted following normal termination of the DVD import.</p> <p>When "false" or when keys have been missed out, the shared directory used in the import is not unmounted.</p> |
| MountId | string | <p>Shared Directory of Mounting ID</p> <p>Specify when an ISM external shared directory is used in an import.</p> |

[Response Parameter]

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

4.10.30 Canceling DVD Import

[Overview]

Cancels the DVD import using the assigned Task ID.

[Format]

```
POST /system/settings/repositories/profiles/dvd/import/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

4.10.31 List Retrieval for Registered Repositories

[Overview]

Retrieves a list of registered repositories.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|----------------|--------------|--------|--|
| RepositoryList | | array | Repository List There is no maximum value. (Up to the disc's maximum storage capacity) |
| | RepositoryId | string | Repository ID |
| | FileName | string | DVD Media File Name |
| | MediaType | string | DVD media type Outputs the DVD media type. <ul style="list-style-type: none">- ServerView Suite DVD- Windows Server 2016 Datacenter (Fujitsu Media)- Windows Server 2016 Standard (Fujitsu Media)- Windows Server 2016 (Microsoft Media)- Windows Server 2016 (Microsoft VL Media)- Windows Server 2012 R2 Datacenter (Fujitsu Media)- Windows Server 2012 R2 Standard (Fujitsu Media)- Windows Server 2012 R2 (Microsoft Media)- Windows Server 2012 R2 (Microsoft VL Media)- Windows Server 2012 Datacenter (Fujitsu Media)- Windows Server 2012 Standard (Fujitsu Media)- Windows Server 2012 (Microsoft Media)- Windows Server 2012 (Microsoft VL Media)- Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media)- Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media)- Windows Server 2008 R2 Standard + SP1 (Fujitsu Media)- Windows Server 2008 R2 + SP1 (Microsoft Media)- Windows Server 2008 R2 + SP1 (Microsoft VL Media)- Red Hat Enterprise Linux 7.4 (x86_64) |

| Parameter | Type | Description |
|--------------|---------|---|
| | | <ul style="list-style-type: none"> - Red Hat Enterprise Linux 7.3 (x86_64) - Red Hat Enterprise Linux 7.2 (x86_64) - Red Hat Enterprise Linux 7.1 (x86_64) - Red Hat Enterprise Linux 6.9 (x86) - Red Hat Enterprise Linux 6.9 (x86_64) - Red Hat Enterprise Linux 6.8 (x86_64) - Red Hat Enterprise Linux 6.8 (x86) - Red Hat Enterprise Linux 6.7 (x86_64) - Red Hat Enterprise Linux 6.7 (x86) - Red Hat Enterprise Linux 6.6 (x86_64) - Red Hat Enterprise Linux 6.6 (x86) - SUSE Linux Enterprise Server 12 SP3 (x86_64) - SUSE Linux Enterprise Server 12 SP2 (x86_64) - SUSE Linux Enterprise Server 12 SP1 (x86_64) - SUSE Linux Enterprise Server 12 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86) - VMware ESXi 6.5 Update 1 (Fujitsu Media) - VMware ESXi 6.5 (Fujitsu Media) - VMware ESXi 6.0 Update 3 (Fujitsu Media) - VMware ESXi 6.0 Update 2 (Fujitsu Media) - VMware ESXi 6.0 Update 1 (Fujitsu Media) - VMware ESXi 5.5 Update 3 (Fujitsu Media) |
| RegisterTime | string | Time/Date of Registration |
| FileSize | integer | File Size of DVD Media |
| Version | string | DVD Media Edition Number Outputs when the DVD media type is ServerView Suite DVD. |

4.10.32 Deleting Registered Repositories

[Overview]

Deletes the specified registered repositories.

[Format]

```
DELETE /system/settings/repositories/profiles/{repositoryid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.33 List Retrieval for Packages and Applications

[Overview]

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

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| ostype | string | OS Type Outputs the type of the specified Linux OS. <ul style="list-style-type: none">- Red Hat Enterprise Linux 7.4 (x86_64)- Red Hat Enterprise Linux 7.3 (x86_64)- Red Hat Enterprise Linux 7.2 (x86_64)- Red Hat Enterprise Linux 7.1 (x86_64)- Red Hat Enterprise Linux 6.9 (x86_64)- Red Hat Enterprise Linux 6.9 (x86)- Red Hat Enterprise Linux 6.8 (x86_64)- Red Hat Enterprise Linux 6.8 (x86)- Red Hat Enterprise Linux 6.7 (x86_64)- Red Hat Enterprise Linux 6.7 (x86)- Red Hat Enterprise Linux 6.6 (x86_64)- Red Hat Enterprise Linux 6.6 (x86)- SUSE Linux Enterprise Server 12 SP3 (x86_64)- SUSE Linux Enterprise Server 12 SP2 (x86_64)- SUSE Linux Enterprise Server 12 SP1 (x86_64)- SUSE Linux Enterprise Server 12 (x86_64)- SUSE Linux Enterprise Server 11 SP4 (x86_64)- SUSE Linux Enterprise Server 11 SP4 (x86) |
| language | string | OS Language Outputs the language of the specified OS <ul style="list-style-type: none">- English- German |

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

[Response Parameter]

| Parameter | Type | Description |
|---|---------------|---|
| Package | object | A list of Package Groups available for installation on the specified OS |
| <div> <div></div> <ul style="list-style-type: none"> DefaultList MinimumList FullList </div> | array(string) | A list of Default Installation Packages |
| | array(string) | A list of Minimum Installation Packages |
| | array(string) | A list of Full Installation Packages |
| ApplicationList | array | A list of Applications available for installation on the specified OS |
| <div> <div></div> <ul style="list-style-type: none"> Name PackageDependencyList </div> | string | Application Name |
| | array(string) | A list of Packages Dependent on Applications |

4.10.34 Backing Up Hardware Settings

[Overview]

Backs up hardware settings of the specified nodes.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-------------|--------|--|
| BackupType | array | Specifies the Type of Backup. Specify "BIOS" or "iRMC" individually or together. E.g.) ["BIOS","iRMC"] When this setting is omitted or null, all types that can be backed up are backed up. |
| Description | string | Description of Backups |

[Response Parameter]

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

4.10.35 Canceling of Backup Hardware Settings

[Overview]

Cancels backup hardware settings using the assigned task ID.

[Format]

```
POST /nodes/profiles/backup/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

4.10.36 List Retrieval for Registered Backups

[Overview]

Retrieves a list of registered backups.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|---------------|---------|--|
| nodeid | integer | The Node ID that has been backed-up Outputs a list of backups for the specified node ID. |
| backuptype | string | Backup Type Outputs a list of backups for the specified backup type ("BIOS" or "iRMC"). |
| backupstatus | string | Backup Status Outputs a list of backups for the specified backup status. <ul style="list-style-type: none">- Running: Backup in progress- Complete: Backup complete- Cancel-Running: Canceling in progress- Cancel-Complete: Canceling complete- Error: Error |
| restorestatus | string | Restoring Status Outputs a list of backups in the specified restoring status. <ul style="list-style-type: none">- Running: Restoring in progress- Complete: Restoring complete- Cancel-Running: Canceling in progress- Cancel-Complete: Canceling complete |

| Parameter | Type | Description |
|-----------|------|--|
| | | <ul style="list-style-type: none"> - Error: Error When restoring is not executed, outputs null. |

[Response Parameter]

| Parameter | Type | Description |
|---------------|---------|---|
| BackupList | array | Backup List The maximum value is 10000. |
| BackupId | string | Backup ID |
| NodeId | integer | The Node ID that has been backed-up |
| BackupType | string | Backup Type Output either "BIOS" or "iRMC." |
| RegisterTime | string | Time/Date of Registration If BackupStatus is 'Complete', 'Cancel-Complete', or 'Error', the date and time is output. Null is output if BackupStatus is 'Running' or 'Cancel-Running'. |
| BackupStatus | string | Backup Status <ul style="list-style-type: none"> - Running: Backup in progress - Complete: Backup complete - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete - Error: Error |
| TaskId | string | Task ID Task ID is output when BackupStatus or RestoreStatus is "Running" or "Cancel-Running." Other than the above, " " is output. |
| RestoreStatus | string | Restoring Status <ul style="list-style-type: none"> - Running: Restoring in progress - Complete: Restoring complete - Cancel-Running: Canceling in progress - Cancel-Complete: Canceling complete - Error: Error When restoring is not executed, outputs null. |
| RestoredTime | string | Last Restoring Date and Time Date and time are output when RestoreStatus is "Complete", "Cancel-Complete" or "Error." When RestoreStatus is "Running" or "Cancel-Running", outputs null. |
| Description | string | Description of Backups |

4.10.37 Deleting Registered Backups

[Overview]

Deletes the specified registered backup.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.10.38 Exporting Registered Backups

[Overview]

Exports the specified registered backups.

[Format]

```
POST /profiles/backups/export
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|-------------|
| BackupId | string | Backup ID |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| FilePath | string | File Name, including the relative path from "<User group name>/ftp/" where the backups are stored. |

4.10.39 Adding Profiles from Registered Backups

[Overview]

Converts and add the registered backups specified to profiles.

[Format]

```
POST /profiles/backups/profile
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|----------------|--------|---|
| BackupList | array | Backup List for converting/adding to profiles Specify BackupId with one of BIOS or iRMC, or with the combination of BIOS and iRMC for each at a maximum. |
| BackupId | string | Backup ID |
| ProfileName | string | Profile Name |
| Description | string | Profile Description |
| ProfileGroupId | string | Profile Group ID |

[Response Parameter]

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

4.10.40 Adding Policies from Registered Backups

[Overview]

Converts and adds the registered backups to policies.

[Format]

POST /profiles/backups/policy

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------|--------|---|
| BackupList | array | Backup List for converting/adding to policies Specify BackupId with either BIOS or iRMC. |
| BackupId | string | Backup ID |
| PolicyName | string | Policy Name |
| Description | string | Policy Description |
| PolicyGroupId | string | Policy Group ID |

[Response Parameter]

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

4.10.41 Import of Backups

[Overview]

Imports the specified backups.

[Format]

```
POST /profiles/backups/import
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-------------|---------|--|
| FilePath | string | File Name including a relative path from "/<User group name>/ftp/" where backups are stored. |
| BackupType | string | Backup Type Specify either BIOS or iRMC. |
| Description | string | Backup Descriptions |
| NodeId | integer | Backuper Node Id |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|-------------|
| BackupId | string | Backup ID |

4.10.42 Restoring Hardware Settings

[Overview]

Restores hardware settings to the specified node.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|------------|--------|--|
| BackupList | array | Backup List for restoring Specify BackupId with either BIOS or iRMC , or with the combination of BIOS and iRMC for each at a maximum. |
| BackupId | string | Backup ID |

[Response Parameter]

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

4.10.43 Cancellation of Restoring Hardware Settings

[Overview]

Cancels restoring of the hardware settings with the specified task ID.

[Format]

```
POST /nodes/profiles/restore/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

4.11 Firmware Management

4.11.1 Starting Update Firmware

[Overview]

Starts the firmware update process.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description | | | | | | | | | | | | | | | |
|---|---------|--|---------|--------------|--------|---------------|----------------|--------|-----------------|-----------------|--------|------------------|---------------|--------|--|--|--|
| UpdateRequest | array | Update Firmware Request List | | | | | | | | | | | | | | | |
| <table> <tr> <td>NodeId</td><td>integer</td><td>Node ID</td></tr> <tr> <td>FirmwareName</td><td>string</td><td>Firmware Name</td></tr> <tr> <td>RepositoryName</td><td>string</td><td>Repository Name</td></tr> <tr> <td>FirmwareVersion</td><td>string</td><td>Firmware Version</td></tr> <tr> <td>OperationMode</td><td>string</td><td>Supported Modes <ul style="list-style-type: none"> - Online: Online update - Offline: Offline update </td></tr> </table> | NodeId | integer | Node ID | FirmwareName | string | Firmware Name | RepositoryName | string | Repository Name | FirmwareVersion | string | Firmware Version | OperationMode | string | Supported Modes <ul style="list-style-type: none"> - Online: Online update - Offline: Offline update | | |
| NodeId | integer | Node ID | | | | | | | | | | | | | | | |
| FirmwareName | string | Firmware Name | | | | | | | | | | | | | | | |
| RepositoryName | string | Repository Name | | | | | | | | | | | | | | | |
| FirmwareVersion | string | Firmware Version | | | | | | | | | | | | | | | |
| OperationMode | string | Supported Modes <ul style="list-style-type: none"> - Online: Online update - Offline: Offline update | | | | | | | | | | | | | | | |

| Parameter | | Type | Description |
|-----------|-----------------|---------|--|
| | AfterPowerOn | boolean | When true and OperationMode is Offline, powers on the target node after updating the firmware. When false and the keys are omitted, powers off the target node after updating the firmware. This setting is valid only when OperationMode is Offline. |
| | ExecutionDate | string | Execution Time (UTC time) Setting example: 2017-09-23T11:10:00 AM.000Z The update should be started immediately when omitting this setting. |
| | AutoMaintenance | boolean | When true, sets the maintenance mode at updating of the firmware and release maintenance mode after completing the firmware updates. When false and keys are omitted, it does not set and release maintenance mode. |

[Response Parameter]

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

4.11.2 Canceling Update Firmware

[Overview]

Cancels the firmware update processing.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

[Precautions]

- Updating of the firmware cannot be canceled depending on the state of progress of updating process. In that case, the task moves to the status of canceling but the subtasks are not canceled. Moreover, an error of failing to cancel is registered to the operation log.

- If not a Update Firmware task, or if the user is not the user who started the task, it will result in an error.

4.11.3 List Retrieval for Firmware Documents

[Overview]

Retrieves a list of firmware documents.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

| Parameter | | Type | Description |
|-----------------|----------------|---------|--|
| Lang | | string | Language used - Ja: Japanese - En: English |
| ReleaseNoteList | | array | Firmware Document |
| | NodeId | integer | Node ID |
| | FirmwareType | string | Firmware Type |
| | RepositoryName | string | Repository Name |
| | ReleaseNoteUrl | string | Document Display URL |
| | FileName | string | File Name of Document |

4.11.4 List Retrieval for Registered Repositories

[Overview]

Retrieves a list of repositories registered in individual firmware and DVD import.

[Format]

```
GET /system/settings/firmware/repositories
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|----------------|--------------|---------|--|
| RepositoryList | | array | Repository List |
| | RepositoryId | integer | Repository ID |
| | Name | string | Repository Name |
| | MediaType | string | Type of Media <ul style="list-style-type: none"> - Update DVD: ServerView Suite Update DVD - Update Supplement: Update Supplement - Dedicated: Repository for individual import use |
| | ImportDate | string | Date of Registration |
| | DiskUsage | string | Disk Capacity used by the repositories (MB) |
| | ImportStatus | string | Import Status <ul style="list-style-type: none"> - Running: Execution in progress - Complete: Finished - Cancel-Running: Termination in progress |
| | TaskId | string | Task ID |

4.11.5 List Retrieval for Firmware

[Overview]

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

[Format]

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

```
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 |

| Parameter | Type | Description |
|--------------|---------|---------------|
| 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 the firmware (MB) |
| RegisterDate | string | Time/Date of Firmware Registration |

[Precautions]

- You can specify the keys "nodeid", "modelname", "firmwarename" and "repositoryid" as queries. Specifying a key means creating an exclusive connection; only one type of key can be specified each time.
The same key can be specified multiple times.
- When nodeid is specified, a list of firmware applicable to the devices with NodeId specified from among the firmware managed by the user is output.
- When modelname is specified, a list of firmware applicable to devices corresponding to the ModelName specified from among the firmware managed by the user is output.
- When firmwarename is specified, a list of firmware applicable to devices corresponding to the FirmwareName specified from among the firmware managed by the user is output.
- When repositoryid is specified, a list of firmware stored in repositories with the RepositoryId specified from among the firmware managed by the user is output.
- If the query parameters are omitted, the information of all of the firmware managed by the user is displayed.

4.11.6 Retrieval of Version Number Template Information

[Overview]

Retrieves input method template information for the "Version" to be input when carrying out individual firmware import.

[Format]

```
GET /system/settings/firmware/template
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|---------------------|-----------------|--------|---|
| VersionTemplateList | | array | Version Information Template List |
| | FirmwareType | string | Firmware Type |
| | ModelList | array | Model List |
| | Model | string | Model Name |
| | VersionTemplate | string | Input method template for the "Version" to be input at the time of carrying out individual import firmware. |
| | VersionExample | string | Example of Version Number Input |

[Precautions]

- In a response parameter "VersionTemplate", output of * means any value while % means any alphabet and the value none means any string characters.

4.11.7 DVD Import

[Overview]

Imports the Update DVD and Update Supplement that are used during Update Firmware.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-------------------|---------|--|
| Path | string | Relative path from the "<User group name>/ftp/" of the directory that contains the ISO image of the DVD being imported, or the files on the DVD |
| Type | string | Type of the DVD being imported Type of Media <ul style="list-style-type: none"> - Update DVD: ServerView Suite Update DVD - Update Supplement: Update Supplement |
| DeleteFtpResource | boolean | For Specifying ftp Resource Deletion When "true", it deletes the file specified in Path following normal termination of the DVD import. When "false", when keys have been missed out, or when the DVD import terminates due to error, the file specified in Path is not deleted. |
| UnMountResource | boolean | When "true", the shared directory used in the import is unmounted following normal termination of the DVD import. When "false" or when keys have been missed out, the shared directory used in the import is not unmounted. |
| MountId | string | Shared Directory of Mounting ID |

| Parameter | Type | Description |
|-----------|------|--|
| | | Specify 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 "/<User group name>/ftp/" of the firmware directory |
| FirmwareType | string | Firmware Type |
| Model | string | Firmware Model |
| 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 Repositories

[Overview]

Deletes repositories.

[Format]

```
DELETE /system/settings/firmware/dvd/{repositoryid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {repositoryid}, enter the repository ID to be deleted.
Acquire the repository ID from "[4.11.4 List Retrieval for Registered Repositories](#)."

4.11.12 Deleting Individual Firmware

[Overview]

Deletes the firmware imported by individual firmware import.

[Format]

```
DELETE /system/settings/firmware/{firmwareid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {firmwareid}, enter the firmware ID to be deleted.
Acquire the firmware ID from "[4.11.5 List Retrieval for Firmware](#)."

4.11.13 List Output of Update Firmware Jobs

[Overview]

Displays a list of scheduled Update Firmware jobs.

[Format]

```
GET /system/settings/job/firmwareupdate
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------------|---------------|---------|--|
| FirmwareJobList | | array | |
| | JobId | integer | A Notification containing the Job ID is given. |
| | JobName | string | A Notification containing the Job Name is given. |
| | TaskId | string | A Notification containing the Task ID is given. |
| | 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 Update Firmware Jobs

[Overview]

Deletes scheduled Update Firmware jobs.

[Format]

```
DELETE /system/settings/job/firmwareupdate/{JobId}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- For the URI {JobId}, enter the ID of the Update Firmware job to be deleted.
Acquire the Update Firmware Job ID from "[4.11.13 List Output of Update Firmware 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 managed by the user group that the users belong to become a target for acquisition.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-----------|---------|---------------------------|
| nodeid | integer | Narrowing down by Node ID |

[Response Parameter]

| Parameter | | Type | Description |
|------------|----------|----------------|--|
| LogCollect | | object | Log Collection Settings Information |
| | Nodes | | List of Node Information |
| | NodeId | | Node ID |
| | Schedule | | Scheduling Information |
| | | ScheduleEnable | integer Schedule (enable/disable) - 0: Disable - 1: Enable |
| | | ScheduleMethod | string How to Specify Scheduling - Days: Specifies date - Weeks: Specifies day of the week |
| | Days | | array List of Date Specification Information |
| | | Day | integer Date - 0: Every day - 1-31: 1st to the 31st - 32: End of the month |
| | | Time | string Time (HHmm: hour and minutes) Setting Range: 0000-2359 |
| | Weeks | | array List of Day-of-the-week Specification Information |
| | | Week | string Day of the Week - Mon: Monday - Tue: Tuesday - Wed: Wednesday - Thu: Thursday - Fri: Friday - Sat: Saturday - Sun: Sunday |
| | | WeekNum | integer Numbers for Days of the week - 0: Every week - 1-5: The first - The fifth - 6: Final |

| Parameter | | | | Type | Description |
|-----------|--|------------------------|-------------------|---------|---|
| | | | Time | string | Time (HHmm: hour and minutes) Setting Range: 0000-2359 |
| | | | NextExecutionDate | string | Next Execution Time and Date YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hour-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | | ArchivedLogGeneration | | integer | The Number of Generations saved Logs Setting Range: 0-366 |
| | | SecurityLogGeneration | | integer | Number of Generations of Node Log (security log) saved Setting range: 0-1830 |
| | | OperationLogGeneration | | integer | Number of Generations of Node Log (operation log) saved Setting range: 0-1830 |
| | | EventLogGeneration | | integer | Number of Generations of Node Log (event log) saved Setting range: 0-1830 |
| | | HWLogEnable | | integer | Subject Hardware Log (enable/disable) - 0: Disable - 1: Enable |
| | | OSLogEnable | | integer | Subject Operating System Log (enable/disable) - 0: Disable - 1: Enable |
| | | SVSLogEnable | | integer | Subject ServerView Suite Log (enable/disable) - 0: Disable - 1: Enable |
| | | RAIDLogEnable | | integer | Subject RAID Log (enable/disable) - 0: Disable - 1: Enable |
| | | HWLogPossible | | integer | Collection Availability Hardware Log (possible/impossible) - 0: Impossible - 1: Possible |
| | | OSLogPossible | | integer | Collection Availability Operating System Log (possible/impossible) - 0: Impossible - 1: Possible |
| | | SVSLogPossible | | integer | Collection Availability |

| Parameter | | | Type | Description |
|-----------|--|-----------------|---------|---|
| | | | | ServerView Suite Log (possible/impossible) - 0: Impossible - 1: Possible |
| | | RAIDLogPossible | integer | Collection Availability RAID Log (possible/impossible) - 0: Impossible - 1: Possible |

[Precautions]

- Collection availability (HWLogPossible) becomes 1 (possible) for hardware that ISM supports for log collection.
- Collection availability (OSLogPossible) becomes 1 (possible) when the OS information is registered to the target node and detailed node information is retrieved, and the OS is such that ISM supports log collection for it.
- Collection availability (SVSLogPossible) becomes 1 (possible) when ServerView Agents or ServerView Agentless Service is installed to the OS of the target node.
- Collection availability (RAIDLogPossible) becomes 1 (possible) when ServerView RAID Manager is installed to the OS of the target node.

4.12.2 Changing Log Collection Settings

[Overview]

Changes log collection settings for the specified node ID.

Can accept multiple node IDs.

[Format]

```
PATCH /nodes/logs/collection/settings
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | | Type | Description |
|------------|-------|----------------|---------|---|
| LogCollect | | | object | Log Collection Settings Information |
| | Nodes | | array | List of Node Information |
| | | NodeId | integer | Node ID |
| | | Schedule | object | Scheduling Information |
| | | ScheduleEnable | integer | Schedule (enable/disable) - 0: Disable - 1: Enable |
| | | ScheduleMethod | string | How to Specify Scheduling - Days: Specifies date - Weeks: Specifies day of the week |

| Parameter | | | Type | Description |
|-----------|--|------------------------|---------|---|
| | | Days | array | List of Date Specification Information |
| | | | integer | Date <ul style="list-style-type: none"> - 0: Every day - 1-31: 1st to the 31st - 32: End of the month |
| | | | string | Time (HHmm: hour and minutes) Setting range: 0000-2359 |
| | | Weeks | | List of Day-of-the-week Specification Information |
| | | Week | string | Day of the week <ul style="list-style-type: none"> - Mon: Monday - Tue: Tuesday - Wed: Wednesday - Thu: Thursday - Fri: Friday - Sat: Saturday - Sun: Sunday |
| | | | integer | Numbers for Days of the week <ul style="list-style-type: none"> - 0: Every week - 1-5: The first - The fifth - 6: Final |
| | | | string | Time (HHmm: hour and minutes) Setting range: 0000-2359 |
| | | ArchivedLogGeneration | | Number of Generations of archived logs <ul style="list-style-type: none"> - Setting range: 0-366 - 0: Archived log not saved |
| | | SecurityLogGeneration | | The number of Generation of node logs (security log) saved <ul style="list-style-type: none"> - Setting range: 0-1830 - 0: Node logs (security log) not saved |
| | | OperationLogGeneration | | Number of Generations of node logs (operation log) saved <ul style="list-style-type: none"> - Setting range: 0-1830 - 0: Node log (operation log) not saved |
| | | EventLogGeneration | | Number of Generations of Node logs (event log) saved <ul style="list-style-type: none"> - Setting range: 0-1830 - 0: Node log (event log) not saved |
| | | HWLogEnable | | Target Hardware Log (enable/disable) <ul style="list-style-type: none"> - 0: Disable - 1: Enable |

| Parameter | | Type | Description |
|-----------|---------------|---------|--|
| | OSLogEnable | integer | Target Operating System Log (enable/disable) - 0: Disable - 1: Enable |
| | SVSLogEnable | integer | Target ServerView Suite Log (enable/disable) - 0: Disable - 1: Enable |
| | RAIDLogEnable | integer | Target RAID Log (available/unavailable) - 0: Disable - 1: Enable |

[Response Parameter]

| Parameter | | Type | Description |
|------------|-------|----------------|---|
| LogCollect | | object | Log Collection Settings Information |
| | Nodes | array | List of Node Information |
| | | NodeId | Node ID |
| | | Schedule | Scheduling Information |
| | | ScheduleEnable | Schedule (enable/disable) - 0: Disable - 1: Enable |
| | | ScheduleMethod | How to Specify Scheduling - Days: Specifies date - Weeks: Specifies day of the week |
| | | Days | List of Date Specification Information |
| | | Day | Date - 0: Every day - 1-31: 1st to the 31st - 32: End of the month |
| | | | Time (HHmm: hour and minutes) Setting range: 0000-2359 |
| | | Weeks | List of day-of-the-week specification information |
| | | Week | Day of the week - Mon: Monday - Tue: Tuesday - Wed: Wednesday - Thu: Thursday |

| Parameter | | | | Type | Description |
|-----------|--|--|------------------------|---------|--|
| | | | | | <ul style="list-style-type: none"> - Fri: Friday - Sat: Saturday - Sun: Sunday |
| | | | | WeekNum | Numbers for Days of the week <ul style="list-style-type: none"> - 0: Every week - 1-5: The first - The fifth - 6: Final |
| | | | | Time | Time (HHmm: hour and minutes) Setting range: 0000-2359 |
| | | | NextExecutionDate | | Next Execution Time and Date YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | | | ArchivedLogGeneration | | Number of Generations of Archived Logs Setting range: 0-366 |
| | | | SecurityLogGeneration | | Number of Generation of Node Logs (security log) saved Setting range: 0-1830 |
| | | | OperationLogGeneration | | Number of Generations of Node Logs (operation log) saved Setting range: 0-1830 |
| | | | EventLogGeneration | | Number of Generations of Node Logs (event log) saved Setting range: 0-1830 |
| | | | HWLogEnable | | Target Hardware Log (enable/disable) <ul style="list-style-type: none"> - 0: Disable - 1: Enable |
| | | | OSLogEnable | | Target Operating System Log (enable/disable) <ul style="list-style-type: none"> - 0: Disable - 1: Enable |
| | | | SVSLogEnable | | Target ServerView Suite Log (enable/disable) <ul style="list-style-type: none"> - 0: Disable - 1: Enable |
| | | | RAIDLogEnable | | Target RAID Log (enable/disable) <ul style="list-style-type: none"> - 0: Disable - 1: Enable |
| | | | HWLogPossible | | Collection Availability Hardware Log (possible/impossible) <ul style="list-style-type: none"> - 0: Impossible |

| Parameter | | Type | Description |
|-----------|-----------------|---------|---|
| | | | - 1: Possible |
| | OSLogPossible | integer | Collection Availability Operating System Log (possible/impossible) - 0: Impossible - 1: Possible |
| | SVSLogPossible | integer | Collection Availability ServerView Suite Log (possible/impossible) - 0: Impossible - 1: Possible |
| | RAIDLogPossible | integer | Collection Availability RAID Log (possible/impossible) - 0: Impossible - 1: Possible |

[Precautions]

- Setup is required for any request parameter other than Days (array) or Weeks (array).
- 'Days' (array) is required to be set if it was specified in ScheduleMethod, or if ScheduleEnable is set to 1.
- 'Weeks' (array) is required to be set if it was specified in ScheduleMethod, or if ScheduleEnable is set to 1.
- When Days (array) and/or Weeks (array) are omitted, their respective schedule settings will not be displayed.
- All settings (both Days (array) and Weeks (array)) should always be performed for the required scheduling settings.
- For Time (string), set it in accordance with the standard time of the environment (local time) where ISM runs.
- Even if specifying 1 (enabled) for the subject of the request parameter (HWLogEnable/OSLogEnable/SVSLogEnable/RAIDLogEnable), if collection availability (HWLogPossible/OSLogPossible/SVSLogPossible/RAIDLogPossible) is 0 (impossible), the subject will automatically be set as 0 (disabled).
- Collection availability (HWLogPossible) becomes 1 (possible) for the hardware that ISM supports for log collection.
- Collection availability (OSLogPossible) becomes 1 (possible) when the OS information is registered to the target node and detailed node information is retrieved, and the OS is such that ISM supports log collection for it.
- Collection availability (SVSLogPossible) becomes 1 (possible) when ServerView Agents or ServerView Agentless Service is installed to the OS of the target node.
- Collection availability (RAIDLogPossible) becomes 1 (possible) when ServerView RAID Manager is installed to the OS of the target node.

4.12.3 Retrieving Log File Information

[Overview]

Retrieves log file information for the specified node ID.

It is possible to specify multiple node IDs in the query parameters.

When no node ID is specified, all node IDs managed by the user group that the users belong to become a target for retrieval.

When no log type is specified, all log types become a target for retrieval.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|------------|---------|--|
| nodeid | integer | Narrowing down by node ID |
| logtype | string | Narrowing down by Type of Audit Logs <ul style="list-style-type: none"> - ArchivedLog: Archived Log - Event: Node Log (event log) - Security Node Log (security log) - Operation: Node Log (operation log) |
| excludekey | string | Displays all information except for items related to specified keys <ul style="list-style-type: none"> - Files: Omits file information - Size: Omits service information |

[Response Parameter]

| Parameter | Type | Description |
|-------------|---------|--|
| LogCollect | object | Log Collection Information |
| Nodes | array | List of Node IDs |
| NodeId | integer | Node ID |
| ArchivedLog | object | Archived Log Information |
| Generation | integer | Number of Generations saved |
| Files | array | File List |
| FileName | string | File Name |
| Size | integer | Total Size Unit: MB |
| Security | object | Node Log (security log) Information |
| Period | object | Duration of Storage |
| From | string | Start Date (YYYY-MM-DD; Year-Month-Date) |
| To | string | End Date (YYYY-MM-DD; Year-Month-Date) |
| Size | integer | Total Size Unit: MB |
| Operation | object | Node Log (operation log) Information |
| Period | object | Duration of Storage |
| From | string | Start Date (YYYY-MM-DD; Year-Month-Date) |
| To | string | End Date (YYYY-MM-DD; Year-Month-Date) |
| Size | integer | Total Size Unit: MB |
| Event | object | Node Log (event log) Information |

| Parameter | | | | Type | Description |
|-----------|--|--|--------|---------|--|
| | | | Period | object | Duration of Storage |
| | | | From | string | Start Date (YYYY-MM-DD; Year-Month-Date) |
| | | | To | string | End Date (YYYY-MM-DD; Year-Month-Date) |
| | | | Size | integer | Total Size Unit: MB |

4.12.4 Retrieving Node Statuses

[Overview]

Retrieves node status for the specified node ID.

It is possible to specify multiple node IDs in the query parameters.

When no node ID is specified, all node IDs managed by the user group that the users belong to become a target for retrieval.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-----------|---------|---------------------------|
| nodeid | integer | Narrowing down by Node ID |

[Response Parameter]

| Parameter | | | | Type | Description |
|------------|--|--------|--|---------|---|
| StatusInfo | | | | object | Node Status Information |
| | | Nodes | | array | Node ID List |
| | | NodeId | | integer | Node ID |
| | | Status | | string | Status <ul style="list-style-type: none"> - Idle: Idle (log collection enabled) - LogCollect: Log collection in progress - LogDelete: Log deletion in progress - Prepare: Under Preparation - Exempt: Out of scope (log collection not possible) |

4.12.5 Collecting Logs

[Overview]

Compile log of specified node ID.

Multiple node IDs can be specified.

[Format]

```
POST /nodes/logs/collection/collect
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|---------------|---------|---|
| Nodes | | array | List of Node IDs |
| | NodeId | integer | Node ID |
| | HWLogEnable | integer | Subject Hardware Log (enable/disable) <ul style="list-style-type: none">- 0: Disable- 1: Enable This item can be omitted. When omitted, log collection is performed as it is set. |
| | OSLogEnable | integer | Subject Operating System Log (enable/disable) <ul style="list-style-type: none">- 0: Disable- 1: Enable This item can be omitted. When omitted, log collection is performed as it is set. |
| | SVSLogEnable | integer | Subject ServerView Suite Log (enable/disable) <ul style="list-style-type: none">- 0: Disable- 1: Enable This item can be omitted. When omitted, log collection is performed as it is set. |
| | RAIDLogEnable | integer | Subject RAID Log (enable/disable) <ul style="list-style-type: none">- 0: Disable- 1: Enable This item can be omitted. When omitted, log collection is performed as it is set. |

[Response Parameter]

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

4.12.6 Canceling Log Collection

[Overview]

Cancels the log collection process.

[Format]

```
POST /nodes/logs/collection/collect/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

[Precautions]

- Log collection cannot be canceled depending on the state of progress of the log collection.
- If not a log collection task, or if executed by a user without cancellation 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 <ul style="list-style-type: none"> - HW: Hardware log - OS: Operating system log |
| LogType | array(string) | Log Type <ul style="list-style-type: none"> - Event: Node log (event log) - Security: Node log (security log) - Operation: Node log (operation log) |
| PasswordEnable | integer | Password Setting to Download File |

| Parameter | Type | Description |
|-----------|------|---|
| | | <ul style="list-style-type: none"> - 0: Do not set password - 1: Set password |

| | | |
|----------|--------|--|
| Password | string | Password for the Downloaded File Set an encrypted password when specifying 1 for PasswordEnable. Refer to " 2.4 Encryption " for the encryption method. |
|----------|--------|--|

[Response Parameter]

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

[Precautions]

- When PasswordEnable is 1 (Set password), if the password is not specified or null then it will result in an error.
- For 'Period', specify a date within the Period (duration of storing) range in the response parameter shown in "[4.12.3 Retrieving Log File Information](#)."

4.12.8 Canceling Creation of Node Log Download Files

[Overview]

Cancels the creation processing of the node log download files.

[Format]

```
POST /nodes/logs/nodelog/downloadfiles/create/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

[Precautions]

- File creation cannot be canceled depending on the state of progress of the file creation.
- If not a node log download file creation task, or if executed by a user without cancellation 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 Setting range: 1-366 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 - 0: Do not set password - 1: Set password |
| Password | | string | Password for the Downloaded File Set an encrypted password when specifying 1 for PasswordEnable. Refer to " 2.4 Encryption " for the encryption method. |

[Response Parameter]

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

[Precautions]

- Specifying the Generation (object) and File (array) request parameters at the same will result in an error. Specify one of them.
- For FileName, set the response parameter FileName (file name) in "[4.12.3 Retrieving Log File Information](#)."
- For the number of generations, specify the number you want to download from the log with the newest time and date. For example, by specifying 1, one latest stored log will be downloaded.
- When PasswordEnable is 1 (Set password), if the password is not specified or null, it will result in an error.

4.12.10 Canceling Creation of Archived Log Download Files

[Overview]

Cancels the creation processing of the archived log download files.

[Format]

```
POST /nodes/logs/archivedlog/downloadfiles/create/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

[Precautions]

- Archived log download file creation cannot be canceled depending on the state of progress of the file creation.
- If not an archived log download file creation task, or if executed by a user without cancellation 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 <ul style="list-style-type: none">- Created: Creation complete- Creating: Currently being created- Uncreated: Not created yet- Error: Creation error- Canceled: Creation canceled |
| | TaskId | string | Task ID during and after creation |
| | FileUrl | string | URL of the download File |
| | FileCreated | string | Time Stamp of the Download File YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent UTC in ISO8601 format.) |
| | FileSize | string | Size of the Download File |

| Parameter | | Type | Description |
|-----------|--------------|--------|-----------------------------------|
| | FileSizeUnit | string | Unit of Download File Size MiB |

[Precautions]

- TaskId is output except when the FileCreateStatus is Uncreated (not yet created).
- FileUrl/FileCreated/FileSize/FileSizeUnit is output only when the FileCreateStatus is Created (creation complete).

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 <ul style="list-style-type: none"> - Created: Creation complete - Creating: Currently being created - Uncreated: Not created yet - Error: Creation error - Canceled: Creation canceled |
| | TaskId | string | Task ID during and after creation |
| | FileUrl | string | URL of the download File |
| | FileCreated | string | Time Stamp of the Download File YYYY-MM-DDThh:mm:ss.xxxZ (date:year-month-day, time:hours-minute-second-millisecond. T and Z represent both separator characters and UTC in ISO8601 format.) |
| | FileSize | string | Size of the Download File |
| | FileSizeUnit | string | Unit of the Download File Size MiB |

[Precautions]

- TaskId is output except when the FileCreateStatus is Uncreated (not yet created).
- FileUrl/FileCreated/FileSize/FileSizeUnit is output only when the FileCreateStatus is Created (creation complete).

4.12.13 Deleting Log Files

[Overview]

Deletes node log and archived log files corresponding to specified conditions.

To delete only node logs, specify only NodeLog (object).

To delete only archived logs, specify only ArchivedLog (object).

Both Generation (object) and File (array) can be specified at the same time for the ArchivedLog (object).

[Format]

```
POST /nodes/logs/files/delete
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-------------|------------|---------------|--|
| NodeLog | | object | Information on the Node Logs of the Deletion Target |
| | Nodes | array | List of Node IDs |
| | NodeId | integer | Node ID |
| | Period | string | Date (YYYY-MM-DD; Year-Month-Date) Deletes node logs from before the specified time and date. |
| | LogType | array(string) | Log Type - Security: Node log (security log) - Operation: Node log (operation log) - Event: Node log (event log) |
| ArchivedLog | | object | Information on the Archived Logs of the deletion target |
| | Generation | object | Deletion request at specification of the Number of Generations |
| | Nodes | array | List of Node IDs |
| | NodeId | integer | Node ID |
| | Generation | integer | Number of Generations Deletes all generations following that specified. Setting range: 0-366 For 0 and 1, all archived logs for the specified node IDs are deleted. |
| | File | array | List of the File Information on the Deletion Target |
| | NodeId | integer | Node ID |
| | Files | array | List of File Names |
| | FileName | string | File Name |

[Response Parameter]

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

[Precautions]

- For 'Period', specify a date within the Period (duration of storing) range in the response parameter shown in "[4.12.3 Retrieving Log File Information](#)."
- In the FileName, set the FileName in the response parameter shown in "[4.12.3 Retrieving Log File Information](#)."

4.12.14 Canceling Deletion of Log Files

[Overview]

Cancels the deletion processing of the log files.

[Format]

```
POST /nodes/logs/files/delete/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

[Precautions]

- Log file deletion cannot be canceled depending on the state of deleting process.
- If not a log file deletion task, or if executed by a user without cancellation permissions, it will result in an error.

4.12.15 Searching Node Logs

[Overview]

Searches for node logs according to the 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 As for input data, it should be specified with a request body of search API in Elasticsearch. |

| Parameter | Type | Description |
|-----------|------|--|
| | | Refer to the following URL for information regarding the search API of Elasticsearch. https://www.elastic.co/guide/en/elasticsearch/reference/current/search.html |

[Response Parameter]

| Parameter | Type | Description |
|----------------|--------|---|
| SearchResponse | object | Output Data of Result of Log search Output data is the output results of Elasticsearch search API. Refer to the following URL for information regarding the search API of Elasticsearch. 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.

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

| ISM GUI Item Name | Elasticsearch title name | Type | Description |
|-------------------|--------------------------|--------|---|
| Severity | level | string | Severity of Message <ul style="list-style-type: none"> - Critical - Major - Minor - Information - Unknown |
| Date and Time | @timestamp | date | Time/Date of Message 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 <ul style="list-style-type: none"> - hardware: Hardware log - OS: Operating system log |
| Type | type | string | Type of Message <ul style="list-style-type: none"> - event: Event |

| ISM GUI Item Name | Elasticsearch title name | Type | Description |
|-------------------|--------------------------|--------|--|
| | | | <ul style="list-style-type: none"> - Security: Security - operation: Operation |
| Host Name | hostname | string | Host Name of Message |
| Source | source | string | Sender of Message |
| 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 Output: LAN, FC, FCoE, iSCSI, IB, CNA, Unknown |
| | SubCategory | string | Port Subcategory Output: Ether, FC, IB, LAN, SAS, LinkAggregation, Mirror, Backup, Backup LA, Peerlink |
| | LinkStatus | string | Port Link Status Output: Up, Down, Unknown |
| | DetailedInformation | object | Port Detail Information |
| | IpAddress | object | Port IP Address Information |

| Parameter | | | | Type | Description |
|-----------|--|--|--------------------|---------|--|
| | | | Ipv4Address | string | IPv4 Address |
| | | | | string | IPv6 Address |
| | | | PortMacAddress | string | Port MAC Address |
| | | | Speed | object | Information of Port Communication Speed |
| | | | Value | string | Value of Port Communication Speed |
| | | | | 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 |
| | | | | integer | Virtual Switch ID at the Destination of Connection |
| | | | PinGroups | array | Pin Group Information |
| | | | PinGroupName | string | Pin Group Name |
| | | | PortList | array | Pin Group Configuration Port List |
| | | | PortName | string | Port Name |

4.13.2 Retrieving Virtual Switch Connection Information from All Nodes

[Overview]

Retrieves virtual switch connection information of all nodes.

[Format]

```
GET /networks/virtualswitches
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | | | Type | Description |
|-----------------|--|--|--------------------------|---------|--|
| NodeInformation | | | | array | Node Information |
| | | | NodeId | integer | Node ID |
| | | | VirtualSwitchInformation | array | Virtual Switch Information |
| | | | VirtualSwitchId | integer | Virtual Switch ID |
| | | | ConnectionInformation | array | Connection Information |
| | | | 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 |

| Parameter | | | | Type | Description |
|-----------|--|--|------------------------|---------|---|
| | | | 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 definitions for the manual connection. Definition of manual connection is information of the connection to be defined by the ISM administrator.

[Format]

```
GET /networks/connections
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------------------|-----------------------|---------|---|
| ConnectionInformation | | array | Information of Definitions for Manual Connection |
| | ConnectionType | integer | Type of Definition for Manual Connection |
| | PortInformation | object | Port Information at the Source of Connection |
| | NodeId | integer | Node ID at the Source of Connection |
| | | | |
| | PortName | string | Port Name at the Source of Connection |
| | RemotePortInformation | object | Port Information at the Destination of Connection |
| | RemoteNodeId | integer | Node ID at the Destination of Connection |
| | | | |
| | RemotePortName | string | Port Name at the Destination of Connection |

4.13.5 Changing Definitions for Manual Connection**[Overview]**

Changes the definitions of manual connection. ISM administrator can change the manual connection definitions.

[Format]

```
PATCH /networks/connections
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------------------|-----------------------|---------|---|
| ConnectionInformation | | array | Information of Definitions for Manual Connection |
| | ConnectionType | integer | Type of Definition for Manual Connection For the purpose of distinguishing types of communication to define, a type of manual connection definition has been prepared. It is possible to specify 0-9 label or null. |
| | PortInformation | object | Port Information at the source of connection |
| | NodeId | integer | Node ID at the Source of Connection Node ID can be acquired by Node Management. Always needs to set a node ID at the connection source. |
| | | | |
| | PortName | string | Port Name at the Source of Connection A port name can be acquired by API for retrieval for detailed node information of Detailed Node Information Management. Always needs to set a port name at the connection destination. |
| | RemotePortInformation | object | Port Information at the Destination of Connection |
| | RemoteNodeId | integer | Node ID at the Destination of Connection Node ID can be acquired by Node Management. Always needs to set a node ID at the destination of connection. |
| | | | |
| | RemotePortName | string | Port Name at the Destination of Connection A port name can be acquired by API for retrieval for detailed node information of Detailed Node Information Management. |

| Parameter | | | Type | Description |
|-----------|--|--|------|---|
| | | | | Always needs to set a port name at the destination of connection. |

[Response Parameter]

| Parameter | | | Type | Description |
|-----------------------|-----------------------|----------------|---------|---|
| ConnectionInformation | | | array | Information of Definitions for Manual Connection |
| | ConnectionType | | integer | Type of Definition for Manual Connection |
| | PortInformation | | object | Port Information at the Source of Connection |
| | | NodeId | integer | Node ID at the Source of Connection |
| | | PortName | string | Port Name at the Source of Connection |
| | RemotePortInformation | | object | Port Information at the Destination of Connection |
| | | RemoteNodeId | integer | Node ID at the Destination of Connection |
| | | RemotePortName | string | Port Name at the Destination of Connection |

4.13.6 Retrieving Information on Changes in Network Connections

[Overview]

Retrieves change information from the standard position of the network connection information. As for the types of changes, there are "add" and "delete" where "add" refers to an added connection between ports while "delete" means a deleted connection between ports.

[Format]

```
GET /networks/differences
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | | Type | Description |
|-----------------------|-----------------------|----------------|---------|--|
| ReferenceTime | | | string | Completion Time for Setting of a Standard for Information on changes in network connections Output in UTC hours. Example of Output) 2016-06-22T09:09:41.741Z |
| DifferenceInformation | | | array | Information on Changes in Network Connections |
| | Kind | | string | Classification of Changes Output: add, delete |
| | PortInformation | | object | Port Information at the Source of Connection |
| | | NodeId | integer | Node ID at the Source of Connection |
| | | PortName | string | Port Name at the Source of Connection |
| | RemotePortInformation | | object | Port Information at the Destination of Connection |
| | | RemoteNodeId | integer | Node ID at the Destination of Connection |
| | | RemotePortName | string | Port Name at the Destination of Connection |

4.13.7 Reference Settings for Information on Changes in Network Connections

[Overview]

Sets reference values for information on changes in network connections. Records information on changes (added or deleted connections) from the set reference values. Reference values can only be set by ISM administrators.

[Format]

```
POST /networks/differences
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.13.8 Retrieving Information on Implemented Updates of Network Management Information

[Overview]

Retrieves execution information of "[4.13.9 Updating Network Management Information](#)." Outputs start time, end time and results of the immediate "[4.13.9 Updating Network Management Information](#)", a mutual reference.

[Format]

```
GET /networks/refresh
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|--------------------|------------------|--------|--|
| RefreshInformation | | object | |
| | RefreshStartTime | string | Start Time of Updating of the Network Management Information Output in UTC hours. Example of Output) 2016-06-22T09:09:41.741Z |
| | RefreshEndTime | string | Completion Time of Updating of the Network Management Information Output in UTC hours. Example of Output) 2016-06-22T09:09:41.741Z |
| | UpdatedTime | string | Final Updating Time of Updating of the Network Management Information Output in UTC hours. |

| Parameter | | Type | Description |
|-----------|--------|--------|---|
| | | | Example of Output) 2016-06-22T09:09:41.741Z |
| | Status | string | Results of Updating of the Network Management Information Output: success, failure |

4.13.9 Updating Network Management Information

[Overview]

Instructs updates network management information. Termination of the update of the network management information can be confirmed by acquiring the operation log of the Event List Management. In order to re-evolve network management information, execute an instruction to obtain node information of Detailed Node Information Management before updating. Cannot execute respective API for Network Management during the updating.

[Format]

```
POST /networks/refresh
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.13.10 List Retrieval for VLAN Settings

[Overview]

Retrieves all VLAN Settings of the specified nodes. Specify a node ID in {nodeid}. The node ID can be acquired with Node Management. The node to deal with acquirement of all VLAN settings is network switch.

[Format]

```
GET /networks/nodes/{nodeid}/vlans
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------------|----------------|--------|-----------------------|
| VlanInformation | | array | VLAN Information |
| | PortName | string | Port Name |
| | TaggedVlanId | string | Tag VLAN Information |
| | UntaggedVlanId | string | Port VLAN Information |

4.13.11 Batch Modification of VLAN Settings on Multiple Nodes

[Overview]

Changes the VLAN settings of the specified ports of the specified nodes. Specify Node ID and Port name to the NodeId and the PortName, which are respectively the key names of the request parameter. The port name can be acquired with the API for retrieval of node detailed information of Node Detailed Information Management.

The node that deals with batch changes of VLAN settings is network switch. In case you are specifying both for a machine that is unable to configure tag VLAN and port VLAN onto the same port, the settings of tag VLAN are prioritized.

Not specified nodes and ports cannot be changed.

Settings of VLAN for a device will be implemented in an async manner.

[Format]

```
POST /networks/vlans
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------------|-----------------|---------|---|
| NodeInformation | | array | Node Information |
| | NodeId | integer | Node ID |
| | VlanInformation | array | VLAN Information |
| | PortName | string | Port Name |
| | TaggedVlanId | string | Tag VLAN Information Can change settings of multiple tag VLAN IDs. Several VLAN IDs can be specified with "," (comma) or "-" (hyphen). |
| | UntaggedVlanId | string | Port VLAN Information Only single VLAN ID can be specified as a port VLAN ID. Cannot specify multiple VLAN IDs. |

[Response Parameter]

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

4.13.12 Canceling Batch Modification of VLAN Settings on Multiple Nodes

[Overview]

Cancels batch modification processing of VLAN settings of nodes.

[Format]

```
POST /networks/vlans/cancel
```

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

None

[Precautions]

- As a batch change process of settings of VLAN for nodes cannot be canceled, it always results in an error reply.

4.13.13 Retrieving of Settings for Link Aggregation

[Overview]

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

The node that deals with the whole acquirement of VLAN settings is the network switch.

[Format]

```
GET /networks/nodes/{nodeid}/lags
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|-----------------|--------|---|
| LagInformation | array | Information of Link Aggregation |
| LagName | string | Name of Link Aggregation |
| LagMode | string | Operating Mode of Link Aggregation Output: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent |
| LagType | string | Type of Link Aggregation Output: ISL, peerlink, MLAG |
| MlagId | string | MLAG ID(vPC ID) |
| CfabricPortType | string | Port Type of C-Fabric Output: endpoint, cir |
| PortInformation | array | Port Information of Link Aggregation |
| PortName | string | Port Name |

4.13.14 Changing Settings for Link Aggregation

[Overview]

Changes the link aggregation settings of the specified nodes. Specify a node ID in {nodeid}. The node ID can be acquired by Node Management.

The node that deals with the whole acquirement of VLAN settings is the network switch.

[Format]

```
PATCH /networks/nodes/{nodeid}/lags
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|----------------|-----------------|--------|--|
| LagInformation | | array | Information of Link Aggregation |
| | LagName | string | Name of Link Aggregation Be careful as names of link aggregation assignable are different by node. |
| | LagMode | string | Operating Mode of Link Aggregation It is possible to specify Static, LACP algorithm (Active and Passive) or PAgP algorithm (Auto, Desirable, Auto non-silent and Desirable non-silent). Some algorithms cannot be set depending on the node. Alternatives: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent |
| | LagType | string | Type of Link Aggregation For typical link aggregation, specify null or empty character (""). For MLAG(vPC), specify MLAG, and set MALG ID(vPC ID) for "MlagId" for next parameter if required. Settings cannot be changed for the ISL as well as the Peer-link. Alternatives: ISL, peerlink, MLAG |
| | MlagId | string | MLAG ID Specifies when LagType is MLAG. Set null when MLAG ID(vPC ID) does not exist. |
| | CfabricPortType | string | Port Type of C-Fabric Specifies when specified node is C-Fabric. For all cases other than that, set null. Alternatives: endpoint, cir |
| | PortInformation | array | Port Information of Link Aggregation |
| | PortName | string | Port Name |
| | | | Specify a port name that forms a link aggregation |

[Response Parameter]

| Parameter | | Type | Description |
|----------------|---------|--------|---|
| LagInformation | | array | Information of Link Aggregation |
| | LagName | string | Name of Link Aggregation |
| | LagMode | string | Operating Mode of Link Aggregation Output: Static, Active, Passive, Auto, Desirable, Auto non-silent, Desirable non-silent |

| Parameter | | Type | Description |
|-----------|-----------------|--------|---|
| | LagType | string | Type of Link Aggregation Output: ISL, peerlink, MLAG |
| | MlagId | string | MLAG ID |
| | CfabricPortType | string | Port Type of C-Fabric Output: endpoint, cir |
| | PortInformation | array | Port Information of Link Aggregation |
| | PortName | string | Port Name |

4.13.15 List Retrieval for VFAB Settings

[Overview]

Retrieves all of VFAB Settings of the specified nodes. Specify a node ID in {nodeid}. Node ID can be retrieved with Node Management.

[Format]

```
GET /networks/nodes/{nodeid}/vfabs
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | | Type | Description | |
|-----------------|-------------------------|-----------------|-----------------|---|---------------------------------------|
| VfabInformation | | | array | VFAB Information | |
| | VfabId | | string | VFAB ID | |
| | VfabStatus | | string | VFAB Status Output: on, off | |
| | VfabMode | | string | VFAB Mode Output: host, network, san | |
| | EndPointPortInformation | | array | End Point Port Information | |
| | | IfGroupId | | integer | ID of Interface Group |
| | | VlanInformation | | array | VLAN Information |
| | | | VlanId | integer | VLAN ID |
| | | | VlanType | string | VLAN Type Output: tagged, untagged |
| | | | TranslateVlanId | | integer |
| | CirPortInformation | | array | CIR Port Information | |
| | | IfGroupId | | integer | ID of Interface Group |
| | | VlanInformation | | array | VLAN Information |
| | | | VlanId | integer | VLAN ID |
| | | | VlanType | string | VLAN Type Output: tagged, untagged |
| | | | TranslateVlanId | | integer |

| Parameter | | Type | Description |
|-----------|---------------------|---------|-----------------------|
| | AmppAreaInformation | array | AMPP Area Information |
| | IfGroupId | integer | ID of Interface Group |

4.13.16 List Retrieval for Information on Interface Groups

[Overview]

Retrieves all of Information of the interface group of the specified nodes. Specify a node ID in {nodeid}. Node ID can be acquired with Node Management.

[Format]

```
GET /networks/nodes/{nodeid}/ifgroups
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|---------------------------|-----------------|---------|--|
| InterfaceGroupInformation | | array | Information of Interface Group |
| | IfGroupId | integer | ID of Interface Group |
| | PortInformation | array | Port Information |
| | PortName | string | Port Name |
| | LagInformation | array | Information of Link Aggregation |
| | LagName | string | Name of Link Aggregation It is set in the format of "domain ID/group ID." |

4.14 Power Capping

4.14.1 Adding Definitions to the Settings for Power Capping

[Overview]

Adds a definition of the settings for Power Capping.

[Format]

```
POST /nodes/powercapping
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|------|--------|--|
| Defines | | array | Information of Definitions Only one element can be specified. |
| | Name | string | Name of Definition Body |

| Parameter | | Type | Description |
|-----------|----------------|---------|---|
| | ResourceIdType | string | Category of Targets for Definition (Rack) Specify a Rack. |
| | ResourceId | integer | ID by Category of the Targets for Definition |
| | Catalog | array | Catalog Information |
| | NodeId | integer | Configuration Node ID When specifying a node ID that doesn't belong to the target definition, its catalog information will be neglected. |
| | MaxWat | integer | Maximum Power Consumption Specify the maximum power consumption in watts. Tolerance: 0-999,999 Can specify 0 only when fixed power value specification is on. Specify 1 or higher when fixed power value specification is off. |
| | FixedValue | string | Specifying Fixed Power Value "On", "Off" By turning it "On", a value specified by the maximum power consumption is set as the power consumption value. |
| | Priority | string | Priority <ul style="list-style-type: none"> - Critical: Specify when the task is high priority or to ensure adequate performance. - High: Specify when decline in performance is more permitted than "Critical." - Middle: Specify when a lower performance is permitted than "High" but is not as accepted as for "Low." - Low: Specify when trying to make power saving control on the target actively while watching the overall status of the rack. |
| | Policies | array | Policies Always specify the following four: Custom1, Custom2, Schedule and Minimum. |
| | Policy | object | Policy Information |
| | Name | string | Policy Name <ul style="list-style-type: none"> - Custom1: "Custom1" - Custom2: "Custom2" - For Scheduling: "Schedule" - Fixed as minimum: "Minimum" |
| | MaxWat | integer | Upper Limit Value for power consumption of the devices mounted in racks under power saving controlling 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 upper limit value to be set for power saving controlling (total power consumption of the devices in racks). Tolerance: 1-999,999 |

| Parameter | | | | Type | Description |
|-----------|--|----------|--------------|----------------|---|
| | | | | | When a policy name is Minimum (fixed as minimum), specify null. |
| | | | Activate | string | Enable or Disable the Settings - Enable: "True" - Disable: "False" |
| | | Schedule | | object | Information on Scheduling When a port name is either Custom1, Custom2 or Minimum, it permits null. |
| | | | StartTime | string | Start Time of Power Saving Controlling Specifies 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 the key when Schedule is null. |
| | | | EndTime | string | End time of power saving controlling Specifies in the form of HH:MM. Do not specify 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 Specify more than one day of week to perform power saving control (Values "0" to "6") - Sunday: "0" - Monday: "1" - Tuesday: "2" - Wednesday: "3" - Thursday: "4" - Friday: "5" - Saturday: "6" Can omit the 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 the Settings for Power Capping

[Overview]

Retrieves a list of definitions of the settings for Power Capping.

[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 |
| | Name | string | Name of Definition Body |
| | ResourceIdType | string | Category of Targets for Definition (Rack) |
| | ResourceId | integer | ID by Category of Targets for Definition |
| | Status | string | Status of Processing for the Target Definition <ul style="list-style-type: none"> - Initializing: Adding definitions - Processing: Definition being changed or deleted - Complete: Processing completed (other REST handling is possible) |

4.14.3 Individual Retrieval of Definitions in the Settings for Power Capping**[Overview]**

Retrieves a definition of the specified settings for Power Capping.

[Format]

GET /nodes/powercapping/{cappingid}

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|----------------|------------|---------|--|
| CappingId | | integer | Definition ID for Setting of Power Capping |
| 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 | Configuration Node ID |
| | MaxWat | integer | Maximum Power Consumption |
| | FixedValue | string | Specifying Fixed Power Value |
| | CurrentWat | integer | Current Power Consumption The latest value for a node that can be measured for power consumption. For a case other than that, it returns null. When "FixedValue" is set On, it returns null. |
| | Priority | string | Priority |
| Policies | | array | Policies |

| Parameter | | Type | Description |
|-----------|--------------|----------------|--|
| | Policy | object | Policy Information |
| | Name | string | Policy Name <ul style="list-style-type: none"> - Custom1: "Custom1" - Custom2: "Custom2" - For Scheduling: "Schedule" - Fixed as minimum: "Minimum" |
| | MaxWat | integer | Upper Limit value for power consumption of the devices mounted in racks under power saving controlling When being minimum, it returns null. |
| | Activate | string | Enable or Disable the Settings <ul style="list-style-type: none"> - Enable: "True" - Disable: "False" |
| | Schedule | object | Information on Scheduling |
| | StartTime | string | Start Time of Power Saving Controlling Returns in the form of HH:MM. In a whole day, return null. |
| | EndTime | string | End time of Power Saving Controlling Returns in the form of HH:MM. In a whole day, return null. |
| | DayOfTheWeek | array(integer) | Validated Days of week Days of week to perform power saving control (Values "0" to "6") <ul style="list-style-type: none"> - Sunday: "0" - Monday: "1" - Tuesday: "2" - Wednesday: "3" - Thursday: "4" - Friday: "5" - Saturday: "6" |

4.14.4 Changing Definitions in the Settings for the Power Capping

[Overview]

Changes a definition of the settings for Power Capping.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|----------------|------------|---------|--|
| Name | | string | Name of Definition Body |
| ResourceIdType | | string | Category of the Targets for Definition (Rack) Specifies a Rack. |
| ResourceId | | integer | ID by Category of the Targets for Definition |
| Catalog | | array | Catalog Information |
| | NodeId | integer | Configuration Node ID When specifying a node ID that doesn't belong to the target definition, its catalog information will be neglected. |
| | MaxWat | integer | Maximum Power Consumption Specifies the maximum power consumption in watts. Tolerance: 0-999,999 Can specify 0 only when fixed power value specification is on. Specify 1 or higher when fixed power value specification is off. |
| | FixedValue | string | Specifying Fixed Power Value "On", "Off" By turning it "On", a value specified by the maximum power consumption is set as power consumption value. |
| | Priority | string | Priority <ul style="list-style-type: none"> - Critical: Specify when the task is high priority or to ensure adequate performance. - High: Specify when decline in performance is more permitted than "Critical." - Middle: Specify when a lower performance is permitted than "High" but is not as accepted as for "Low." - Low: Specify when trying to make power saving control on the target actively while watching the overall status of the rack. |
| Policies | | array | Policies Always specify the following four: Custom1, Custom2, Schedule and Minimum. |
| | Policy | object | Policy Information |
| | Name | string | Policy Name <ul style="list-style-type: none"> - Custom1: "Custom1" - Custom2: "Custom2" - For Scheduling: "Schedule" - Fixed as minimum: "Minimum" |
| | MaxWat | integer | Upper Limit value for power consumption of the devices mounted in racks under power saving controlling 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 upper limit value to be set for power saving controlling (total power consumption of the devices in racks). |

| Parameter | | Type | Description |
|-----------|--------------|----------------|--|
| | | | Tolerance: 1-999,999 When a policy name is Minimum (fixed as minimum), it should specify null. |
| | Activate | string | Enable or Disable the Settings - Enable: "True" - Disable: "False" |
| | Schedule | object | Information on Scheduling When a port name is either Custom1, Custom2 or Minimum, it permits null. |
| | StartTime | string | Start Time of Power Saving Controlling Specify 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 the key when Schedule is null. |
| | EndTime | string | End Time of Power Saving Controlling Specify in the form of HH:MM. Do not specify the same values as StartTime. If done in a whole day, specify null (That is, specify StartTime and null). Can omit the key when Schedule is null. |
| | DayOfTheWeek | array(integer) | Validated Days of week Specify more than one day of week to perform power saving control (Values "0" to "6"). - Sunday: "0" - Monday: "1" - Tuesday: "2" - Wednesday: "3" - Thursday: "4" - Friday: "5" - Saturday: "6" Can omit the 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 the Settings for Power Capping

[Overview]

Deletes a definition of the settings for Power Capping.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.14.6 Enabling and Disabling Policies in the Settings for Power Capping

[Overview]

Switches enabling/disabling policy in the settings for Power Capping.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|----------|--------|---|
| Policy | | object | Policy Information |
| | Name | string | Policy Name <ul style="list-style-type: none"> - Custom1: "Custom1" - Custom2: "Custom2" - For Scheduling: "Schedule" - Fixed as minimum: "Minimum" |
| | Activate | string | Enable or Disable the Settings <ul style="list-style-type: none"> - Enable: "True" - Disable: "False" |

[Response Parameter]

| Parameter | | Type | Description |
|----------------|------|---------|--|
| CappingId | | integer | Definition ID for Setting of Power Capping |
| 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 |

| Parameter | | Type | Description |
|-----------|----------|--------|---|
| | | | <ul style="list-style-type: none"> - Custom1: "Custom1" - Custom2: "Custom2" - For Scheduling: "Schedule" - Fixed as minimum: "Minimum" |
| | Activate | string | Enable or Disable the Settings <ul style="list-style-type: none"> - Enable: "True" - Disable: "False" |

4.14.7 Releasing Power Capping Settings

[Overview]

Releases the settings for Power Capping.

[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 cannot be aborted in the current edition.

4.15 Virtual Resource Management

4.15.1 List Retrieval for Storage Pools

[Overview]

Retrieves a list of storage pools managed with ISM.

[Format]

```
GET /resources/storagepools
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|----------------------|----------------------|--------|---|
| BasicStoragePoolInfo | | array | Basic Information of Storage Pools |
| | PoolId | long | Storage Pool ID |
| | CmsId | long | IDs of Cloud Management Software (CMS: Cloud Management Software) that the cluster belongs to Output for vSAN, Storage Spaces Direct. |
| | NodeId | long | Node ID Output for ETERNUS RAID group. |
| | PoolStatus | string | Status of Storage Pool <ul style="list-style-type: none"> - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal |
| | PoolName | string | Name of Storage Pool |
| | PoolType | string | Type of Storage Pool <ul style="list-style-type: none"> - VSAN: "VMware Virtual SAN" - S2D: "Microsoft Storage Spaces Direct" - ETERNUS DX: "ETERNUS DX" |
| | TotalCapacity | long | Total Capacity of Storage Pool |
| | FreeCapacity | long | Free Capacity of Storage Pool |
| | NotAllocatedCapacity | long | Not Allocated Capacity of Storage Pool Only displays Storage Spaces Direct |
| | UsedCapacity | long | Used Capacity of Storage Pool |
| | UsedRate | short | Used Rate of Storage Pool |
| | LatestUpdate | string | Time/Date of Latest Acquisition of Information |

4.15.2 Individual Retrieval of Storage Pool

[Overview]

Retrieves detailed information of the specified storage pool {storagepoolid}.

[Format]

```
GET /resources/storagepools/{storagepoolid}
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|----------------------|--------|--------|------------------------------------|
| BasicStoragePoolInfo | | object | Basic Information of Storage Pools |
| | PoolId | long | Storage Pool ID |

| Parameter | | Type | Description |
|-----------|----------------------|-----------------|---|
| | CmsId | long | IDs of the Cloud Management Software (CMS: Cloud Management Software) that the cluster belongs to Output for vSAN, Storage Spaces Direct. |
| | NodeId | long | Node ID Output for ETERNUS RAID group. |
| | PoolStatus | string | Status of Storage Pool <ul style="list-style-type: none"> - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal |
| | PoolName | string | Name of Storage Pool |
| | PoolType | string | Type of Storage Pool <ul style="list-style-type: none"> - VSAN: "VMware Virtual SAN" - S2D: "Microsoft Storage Spaces Direct" - ETERNUS DX: "ETERNUS DX" |
| | TotalCapacity | long | Total Capacity of Storage Pool |
| | FreeCapacity | long | Free Capacity of Storage Pool |
| | NotAllocatedCapacity | long | Not Allocated Capacity of Storage Pool Output for Storage Spaces Direct. |
| | UsedCapacity | long | Used Capacity of Storage Pool |
| | UsedRate | short | Used Rate of Storage Pool |
| | LatestUpdate | string | Time/Date of Latest Acquisition of Information |
| | VariableData | object | Specific Information by Type of Storage Pools |
| | VSAN | object | Specific Information of vSAN |
| | Url | string | URL of Data Store |
| | | ManagedObjectId | A managed number specified with Cloud Management Software (VMware Managed Object ID) |
| | | Version | Version of vSAN |
| | | ClusterId | ID of Cluster that the Storage Pool belongs to |
| | S2D | object | Specific Information of Storage Spaces Direct |
| | UniqueId | string | ID to show Unique Storage Pool |
| | | Version | Version |
| | | Availability | Availability |
| | | Iops | IOPS Presently it is not supported. |
| | | Throughput | Throughput Presently it is not supported. |
| | | Response | Response Presently it is not supported. |

| Parameter | | | Type | Description |
|---------------|--|-----------------|---------|--|
| | | Deduplication | boolean | Deduplication |
| | | ClusterId | long | ID to show Unique Cluster that the Storage Pool belongs to |
| | | ETERNUS | object | Specific Information of ETERNUS RAID Group |
| | | Availability | string | Availability |
| EquipmentInfo | | | array | Information of the Node that constitutes the Storage Pool |
| | | NodeId | long | Node ID |
| | | NodeGroupId | long | Node Group ID |
| | | NodeStatus | string | Node Status |
| | | AlarmStatus | string | Alarm Status |
| | | NodeName | string | Node Name |
| | | 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 <ul style="list-style-type: none"> - 0: Disable - 1: Manual maintenance mode - 2: Automatic maintenance mode - 3: Manual and automatic maintenance mode |
| | | HDD | integer | Number of HDDs Presently it is not supported. |
| | | SSD | integer | Number of SSDs Presently it is not supported. |
| | | Description | string | Nodes Description |
| Firmware | | | array | Firmware Information |
| | | Name | string | Firmware Name |
| | | SlotId | string | Slot ID |
| | | Model | string | Firmware Model |
| | | Type | string | Firmware Type (Card type/iRMC/BIOS) |
| | | FirmwareVersion | string | Firmware Version Number |
| | | Slot | string | PCI Bus Slot Number |
| | | Segment | string | PCI Bus Segment Number |
| | | Bus | string | PCI Bus Bus Number |
| | | Device | string | PCI Bus Device Number |
| | | Function | string | PCI Bus Function Number |
| | | Version | string | Version of iRMC |
| | | ParentName | string | Name of Parent Device |

| Parameter | | Type | Description |
|-----------------|---------------|--------|---|
| | Unified | string | Unified Model |
| VirtualDiskInfo | | array | Information of Virtual Disk |
| | UniqueId | string | Virtual Disk ID |
| | HealthStatus | string | Status of Virtual Disk <ul style="list-style-type: none"> - Healthy: Healthy - Warning: Caution - Unhealthy: Not healthy - Unknown: Not known |
| | FriendlyName | string | Virtual Disk Name |
| | TotalCapacity | long | Total Capacity of Virtual Disk |
| | FreeCapacity | long | Free Capacity of Virtual Disk |
| | UsedCapacity | long | Capacity Used of Virtual Disk |
| | UsedRate | short | Capacity Used Rate of Virtual Disk |
| | FormatType | string | Type of File System |

4.15.3 Updating Storage Pool Information

[Overview]

Updates the storage pool information.

[Format]

```
POST /resources/storagepools/refresh
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

4.15.4 List Retrieval for Clusters

[Overview]

Retrieves a list of the cluster information managed with ISM.

[Format]

```
GET /resources/clusters
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------------|--------------|--------|--|
| BasicClusterInfo | | array | Basic Information of Clusters |
| | ClusterId | long | Cluster ID |
| | CmsId | long | IDs of the Cloud Management Software (CMS: Cloud Management Software) that the cluster belongs to Output for vSAN, Storage Spaces Direct. |
| | ClusterType | string | Type of Hypervisor where the Cluster runs - VMware: For VMware vSAN Cluster - Hyper-V: For Microsoft Failover Cluster |
| | ClusterName | string | Name of Cluster |
| | LatestUpdate | string | Time/Date of Last Update of Information |
| | Status | string | Status of the Cluster - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal |
| | PoolId | array | List of Storage Pool IDs that belong to the cluster |
| | Id | long | ID of the Storage Pool it belongs to |
| | NodeId | array | List of Node IDs that belong to the cluster |
| | Id | long | IDs of Nodes that belong to the cluster |

4.15.5 Individual Retrieval of Cluster

[Overview]

Retrieves cluster information of the specified {clusterid}.

[Format]

```
GET /resources/clusters/{clusterid}
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|------------------|-------------|--------|--|
| BasicClusterInfo | | object | Basic Information of Clusters |
| | ClusterId | long | Cluster ID |
| | CmsId | long | IDs of the Cloud Management Software (CMS: Cloud Management Software) that the cluster belongs to Output for vSAN, Storage Spaces Direct. |
| | ClusterType | string | Type of Hypervisor where the Cluster runs - VMware: VMware vSAN Cluster |

| Parameter | | Type | Description |
|-----------|----------------------|---------|---|
| | | | - Hyper-V: Microsoft Failover Cluster |
| | ClusterName | string | Name of Cluster |
| | LatestUpdate | string | Time/Date of Last Update of Information |
| | Status | string | Status of the Cluster - RED: Error - YELLOW: Warning - GRAY: Unknown - GREEN: Normal |
| | PoolId | lsit | List of Storage Pool IDs that belong to the cluster |
| | Id | long | IDs of the Storage Pool that belong to the cluster |
| | NodeId | array | List of Node IDs that belong to the cluster |
| | Id | long | IDs of Nodes that belong to the cluster |
| | VariableData | object | Information by Type of Clusters |
| | vCenter | object | Cluster Management Information by VMware vCenter. (vCenter: Cloud Management Software for controlling vSAN) |
| | ManagedObjectId | string | Cluster Management ID of the Cloud Management Software (VMware Managed Object ID) |
| | Drs | boolean | VMware DRS Function - true: enabled - false: disabled |
| | ClusterMode | boolean | Operation Mode of the vSAN Cluster - true: enabled - false: disabled |
| | Deduplication | boolean | Status of Deduplication - true: enabled - false: disabled |
| | Compression | boolean | Status of Compression - true: enabled - false: disabled |
| | TotalDiskGroupNumber | long | Total Number of Disk Groups in vSAN Cluster |
| | Windows | object | Cluster Management Information for Microsoft Windows OS |
| | Id | string | Windows Cluster Management ID |
| | Compression | boolean | Status of Compression - true: enabled - false: disabled |
| | CmsType | string | CMS Type that the Cluster belongs to - Cluster principal IP: MicrosoftFailoverCluster - System Center: SystemCenter |
| | OwnerNode | string | Name of the Owner (primary) Node of the Cluster |

| Parameter | | | Type | Description |
|---------------|-----------------|-------------|---------|---|
| | | GroupStatus | string | Status of a Cluster Group <ul style="list-style-type: none"> - Online: Group is operative - Offline: Group is not operative - Pending: Group in action During switching a primary node, it turns to Pending. Returns Offline when unable to communicate. |
| 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 the computer set on OS) |
| | Model | | string | Model Name of a Node |
| | IpAddress | | string | Node IP Address |
| | IpVersion | | string | IP Address Version of a Node "V4" or "V6" |
| | OS | | string | Type of OS for Nodes |
| | MaintenanceMode | | integer | Maintenance Mode <ul style="list-style-type: none"> - 0: Disable - 1: Manual maintenance mode - 2: Automatic maintenance mode - 3: Manual and automatic maintenance mode |
| | HDD | | integer | Number of HDDs Presently it is not supported. |
| | SSD | | integer | Number of SSDs Presently it is not supported. |
| | Condition | | string | Status of Nodes [When cluster's type is VMware vSAN] <ul style="list-style-type: none"> - Status of Connection: "CONNECTED" - Not connected: "DISCONNECTED" - No Response: "NOTRESPONDING" [When cluster's type is MS Failover Cluster] <ul style="list-style-type: none"> - Unknown: "Unknown" - Non-operating/Abnormality: "Down" - Normal: "Up" - Part of functions disabled: "Paused" |

| Parameter | | Type | Description |
|-----------|-------------------|--------|---|
| | | | - 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) |
| | FirmwareVersion | string | Firmware Version Number |
| | Slot | string | PCI Bus Slot Number |
| | Segment | string | PCI Bus Segment Number |
| | Bus | string | PCI Bus Bus Number |
| | Device | string | PCI Bus Device Number |
| | Function | string | PCI Bus Function Number |
| | Version | string | Version of iRMC |
| | ParentName | string | Name of Parent Device |
| | Unified | string | Unified Model |
| | DatacenterName | string | Datacenter Name that has been located |
| | DatacenterId | string | Datacenter ID that has been located |
| | FloorName | string | Floor Name that has been located |
| | FloorId | string | Floor ID that has been located |
| | RackName | string | Rack Name that has been mounted |
| | RackId | string | Rack ID that has been mounted |
| | RackPosition | string | Position in 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 a task and it is possible to check the completed results by status of "[4.16.1 Individual Retrieval of Task](#)" as well as the completion report.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|---------|---|
| To | integer | Node ID of host at a migration destination of a virtual machine |
| Mode | integer | <p>Specifies an Operation Mode of a virtual machine when it was migrated (Applicable only for a case of Microsoft Storage Spaces Direct)</p> <ul style="list-style-type: none"> - 1: Live - 2: Quick - 3: Shutdown - 4: ShutdownForce - 5: TurnOff <p>When the key is omitted, it is executed with the setting of "1: Live."</p> |

[Response Parameter]

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

[Precautions]

- Migration of a VMware virtual machine requires the following conditions.
 - CPUs of node at the migration source and node at the migration destination must be identical.
 - It should be a VM migration within the same data centers.

4.15.7 Turning On Power of Virtual Machines

[Overview]

Connect the power of the specified virtual machine.

The process results are managed by a task and it is possible to check the completed results by status of "[4.16.1 Individual Retrieval of Task](#)" as well as the completion report.

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

4.15.8 Turning Off Power of Virtual Machines

[Overview]

Disconnect the power of the specified virtual machine. The process results are managed by a task and it is possible to check the completed results by status of "[4.16.1 Individual Retrieval of Task](#)" as well as the completion report.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------|---------|--|
| OperationType | integer | Specifies how to shut off the power of a virtual machine. <ul style="list-style-type: none">- Shutdown: Shutdown- PowerOff: Power is shut off When the key is omitted, it is executed with the setting of "Shutdown." |

[Response Parameter]

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

4.15.9 Restarting Nodes

[Overview]

Specify a node that constitutes a storage pool to restart it.

The process results are confirmed according to the completed results of the status of "[4.16.1 Individual Retrieval of Task](#)."

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

[Precautions]

- The node to be specified is required to be in the Maintenance mode.

4.15.10 Setting Maintenance Mode on Nodes

[Overview]

Specify a node that constitutes a storage pool to set into maintenance mode.

The process results are managed by a task and it is possible to check the completed results by the status of "[4.16.1 Individual Retrieval of Task](#)" as well as the completion report.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|---------|--|
| Mode | integer | Settings of Maintenance Mode operation [For VMware vSAN] <ul style="list-style-type: none">- 1: Accessibility security- 2: Migration of all data- 3: No data migration [For Microsoft Storage Spaces Direct] <ul style="list-style-type: none">- 1: Migrate all virtual machines to a different host within the cluster.- 2: Ensure all running virtual machines are in a saved state. When a key is omitted, it runs assuming that 1 has been selected. |

[Response Parameter]

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

4.15.11 Releasing Maintenance Mode on Nodes

[Overview]

Specify a node that constitutes a storage pool to release the maintenance mode.

Confirm the processing results by referring to the status and the results in "[4.16.1 Individual Retrieval of Task](#)."

[Format]

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

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

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

4.16 Task Management

4.16.1 Individual Retrieval of Task

[Overview]

Retrieves detailed information of tasks.

[Format]

GET /tasks/{taskid}

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|---------------------|----------|---------|---|
| TaskId | | string | Task ID |
| ServiceName | | string | Service Name at issuer |
| TaskType | | string | Task Type |
| TimeStampInfo | | object | Timestamp Information |
| | Register | string | Time/Date of Task Registration |
| | Update | string | Update Time/Date of task |
| ProgressNumerator | | integer | Numerator of the Progress of a task |
| ProgressDenominator | | integer | Denominator of the Progress of a task |
| Status | | string | Status of Task <ul style="list-style-type: none">- Wait: Already received- Running: Execution in progress- Complete: Finished- Cancel-Running: Canceling in Process- Cancel-Complete: Cancelling complete |
| Result | | string | Completion Result of Task <ul style="list-style-type: none">- Undecided: Running- Success: Success- Error: Failed |
| CancelUri | | string | URI at the Time of Abortion |
| UserName | | string | User Name |

| Parameter | | Type | Description |
|-----------------|---------------------|---------|--|
| 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 |
| | ProgressDenominator | integer | Denominator of the Progress of a subtask |
| | Status | string | Status of Sub-task <ul style="list-style-type: none"> - Running: Execution in progress - Complete: Finished - Cancel-Running: Canceling in Process - Cancel-Complete: Canceling complete |
| | Result | string | Completion Result of Sub-task <ul style="list-style-type: none"> - Undecided: Running - Success: Success - Error: Failed |
| | TargetNode | string | Sub-task Target String |
| | Message | string | Message |
| | Action | string | Contents of Countermeasures |
| | ResourceIdType | string | Type of Resource ID |
| | ResourceId | integer | Resource ID |

4.16.2 List Retrieval for Tasks

[Overview]

Retrieves a list of tasks.

[Format]

```
GET /tasks?
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 down by the use of Service Name at issuer |
| tasktype | string | Narrowing down by Task Type |
| start | string | Narrowing down by Start Time/Date of the Task registration |
| end | string | Narrowing down by End Time/Date of the Task registration |
| taskstatus | string | Narrowing down by Task Status |
| taskresult | string | Narrowing down by Completion Result of the Task |
| continuekey | string | Continued Read Key |

| Parameter | Type | Description |
|----------------|---------|---|
| resourceidtype | string | Narrowing down by the Type of Resource ID |
| resourceid | integer | Narrowing down by Resource ID |

[Response Parameter]

| Parameter | Type | Description |
|---------------------|---------|--|
| TaskInfoList | array | List of Task Information |
| TaskId | string | Task ID |
| ServiceName | string | Service name at issuer |
| TaskType | string | Task Type |
| TimeStampInfo | object | Timestamp Information |
| Register | string | Time/Date of Task Registration |
| Update | string | Update Time/Date of the Task |
| ProgressNumerator | integer | Numerator of the progress of a Task |
| ProgressDenominator | integer | Denominator of the progress of a Task |
| Status | string | Status of Task <ul style="list-style-type: none"> - Wait: Already received - Running: Execution in progress - Complete: Finished - Cancel-Running: Canceling in Process - Cancel-Complete: Canceling complete |
| Result | string | Completion Result of Task <ul style="list-style-type: none"> - Undecided: Running - Success: Success - Error: Failed |
| UserName | string | User Name |
| ContinueKey | string | Continued Read Key |
| RowCounter | integer | Total Search Queries |

[Precautions]

- When omitting all query parameters, all information of tasks that a user executes become subject for.
- When the same key has been specified several times in query parameters, the one specified lastly becomes valid.
When narrowing down, specify values of corresponding output results of ["4.16.2 List Retrieval for Tasks"](#) and ["4.16.1 Individual Retrieval of Task"](#) as specified values for query parameters.
- When there is no task information as a target, it outputs 0 task information.
- When information of task exceeds 1,000, it outputs up to 1,000 records in the order of time and date of new task registration.
- Without changing conditions for narrowing down, the rest of log information can be output by specifying the value of response parameter, "ContinueKey" as a value of query parameter, "continuekey."

4.17 ISM-VA Management

ISM-VA Management includes the following functions:

- The function executes ismadm command from API

4.17.1 Obtaining and Releasing Privileges for VA Operation

[Overview]

Obtains and releases privileges for VA operation.

[Format]

POST /ismva/privilege

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| Mode | string | VA Operation Privilege Mode Specifies obtain/release of VA operation privilege. <ul style="list-style-type: none">- Get: Obtains VA operating privilege.- Release: Releases VA Operation Privilege. |
| Password | string | Password Specify an encrypted password. Refer to " 2.4 Encryption " for encryption method. In addition, specify an encrypted character string whose decrypted result is 32 characters or less. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| Result | string | Process Results <ul style="list-style-type: none">- OK:- NG: |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- The following API should retrieve VA operation privilege by this API in advance. Unless retrieving VA operation privilege, it becomes a privilege error.
 - [4.2.1 Setting Licenses](#)
 - [4.2.3 Deleting Licenses](#)
 - [4.2.4 Replacing Licenses](#)
 - [4.17.5 Setting 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 up ISM-VA Internal DHCP Server](#)
- [4.17.33 Initializing Domain Settings](#)
- [4.17.34 Adding Domain Settings](#)
- [4.17.35 Going Back to Previous Domain Setting](#)
- [4.17.37 Restarting ISM-VA](#)
- [4.17.38 Stopping ISM-VA](#)

- The password specified in the VA operation privilege is identical with the log in password for each user.

4.17.2 Changing Password for the Privilege for VA Operation

[Overview]

Changes the password of the VA operation privilege.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|----------------|--------|---|
| User | | object | User Information |
| | UserName | string | User Name When a user name is set empty, the following value is set to all users who belong to Administrator group and having Administrator roles. |
| | PasswordPolicy | string | VA Operation Privilege Mode Specify if VA operation privilege is given to a user at all times. <ul style="list-style-type: none"> - Disable: Permanently allow VA operation privilege. - Enable: Release permanently set operating privileges. |
| | Password | string | Password |

| Parameter | | Type | Description |
|-----------|--|------|---|
| | | | Specify an encrypted password. Refer to " 2.4 Encryption " for encryption method. Specify an encrypted character string whose decrypted result is 32 characters or less. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|--------|-----------------------------|
| User | | object | User Information |
| | UserName | string | User Name |
| | PasswordPolicy | string | VA Operation Privilege Mode |
| | Password | string | Password |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Precautions of request parameters are as follows:
 - Omitting a parameter means there is no change in the contents of that parameter.
 - Specifying null to the parameter means to delete all contents of that parameter.
- The output data contains all of the contents including the data relevant to the omitted request parameters.

4.17.3 Display of Information on Privilege for VA Operation

[Overview]

Displays the information of VA operation privilege.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| UserName | string | User Name If no specification, the information of all users in the Administrator group will be displayed. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|------------|--------|--|
| Users | | object | User Information |
| | UserName | string | User Name |
| | LastAccess | string | Time and date of the last access Time and date of the latest access are output. |
| | Modified | string | Update Time/Date Time and date of update are output. |
| | Status | string | Status |

| Parameter | Type | Description |
|-----------|------|---|
| | | <p>The settings of VA operation privilege information is output.</p> <ul style="list-style-type: none"> - InternalValid: VA operating privileges are always allowed. - PasswordValid: A password for VA operation privilege is set. - PasswordInvalid: A password for VA operation privilege is not set. |

[Precautions]

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

4.17.4 Display of ISM-VA Information

[Overview]

Displays the ISM-VA information.

[Format]

```
GET /ismva/settings
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|------------------|---------------|---|
| System | object | System Information |
| ISM Version | string | Version Information |
| GUIPortNumber | string | GUI Port Number |
| HostName | string | Host Name for ISM-VA |
| Log Level | string | <p>Log Level</p> <ul style="list-style-type: none"> - small - medium - large |
| PluginList | object | Plug-in Information |
| Name | string | Plug-in Name |
| VL | string | VL |
| DebugMode | string | <p>Debugging Mode</p> <ul style="list-style-type: none"> - Enable: Sets debug mode - Disable: Cancels debug mode (Default value) |
| DebugServiceList | array(string) | <p>Debugging Services</p> <p>Names of services that turn to debug mode are output in array.</p> <p>This key will be omitted unless it is in the debug mode.</p> |

[Precautions]

- This API executes the ismadm command below.
- Display of System Information: 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 <ul style="list-style-type: none">- small- medium- large |
| | PluginList | object | Plug-in Information |
| | Name | string | Plug-in Name |
| | VL | string | VL |
| | DebugMode | string | Debugging Mode <ul style="list-style-type: none">- Enable: Sets debug mode- Disable: Cancels debug mode |
| | DebugServiceList | array(string) | Debugging Services Specifies names of services that turn to debugging mode in array. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|---------------|--------|---|
| System | | object | System Information |
| | ISM Version | string | Version information |
| | GUIPortNumber | string | GUI Port Number |
| | HostName | string | Host Name for ISM-VA |
| | Log Level | string | Log Level <ul style="list-style-type: none">- small |

| Parameter | | Type | Description |
|-----------|------------------|---------------|--|
| | | | <ul style="list-style-type: none"> - medium - large |
| | PluginList | object | Plug-in Information |
| | Name | string | Plug-in Name |
| | VL | string | VL |
| | DebugMode | string | Debugging Mode <ul style="list-style-type: none"> - Enable: Sets debug mode - Disable: Cancels debug mode |
| | DebugServiceList | array(string) | Debugging Services Names of services that turn to debug mode in array. This key will be omitted unless it is in the debug mode. |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. <ul style="list-style-type: none"> - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service - null: No need for restarting It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
 - Modification of destination port number of ISM: ismadm service modify
 - Modification of Host Names: ismadm system modify
 - Switch of Troubleshooting Logs: ismadm system set-debug-flag
 - Switch of Troubleshooting log levels: ismadm system change-log-level
- To execute this API, it is required to obtain VA operation privilege 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 | Specify a Destination Directory Specify a destination of output from the "ftp" directory of the "Administrator" directory. When the key is omitted, "" and null, /Administrator/ftp becomes a destination of output. |
| | Mode | string | Mode Specify one of the following. <ul style="list-style-type: none"> - "Part": (Default value) - "Full": Outputs detail information For null and "", it assumes that the default value was specified. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------------|------|--------|---|
| MaintenanceData | | object | Maintenance Data |
| | Path | string | Output File Path Password will be output for the files saved on the specified directory. /specified directory/ismsnap-YYYYMMDDHHMMSS.tar.gz |
| | Mode | string | Mode The Specified mode will be output. |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. null: No need for restarting |

[Precautions]

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

4.17.7 Applying Plug-Ins

[Overview]

Applies a plug-in.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|----------|--------|---|
| Plugin | | object | Plug-in Information |
| | File | string | Specify a File of plug-in to apply Specify a file path from the "ftp" directory of "Administrator" directory. |
| | ExecFile | string | Executes an optional program within a plug-in file. When null, " " and keys are omitted, no program is executed. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------|--------|--|
| Plugin | | object | Plug-in Information |
| | Result | string | Process Results |
| | Output | string | Output of the Result of an executed file Outputs the name of path for the result of execution by applied plug-in. /vareult/vareultXXXX XXXX: Time/Date Omits the key when there are no output results. |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. Auto: Will automatically restart after this API is executed. |

[Precautions]

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

4.17.8 Applying Patches

[Overview]

Applies patches to ISM-VA.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

| Parameter | | Type | Description |
|-----------|----------|--------|--|
| | File | string | Specify the File of the patches to apply Specify a file path from the "ftp" directory of "Administrator" directory. |
| | ExecFile | string | Executes an optional program within a file When null, " " and keys are omitted, no program is executed. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------|--------|--|
| Patch | | object | Information of Patch |
| | Result | string | Process results |
| | Output | string | Output of the Result of an executed file Outputs the name of the path for the result of the execution by the applied patches. /vareult/vareultXXXX XXXX: Time/Date Omits the key when there are no output results. |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. Auto: Will automatically restart after this API is executed. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Application of Patches: ismadm system patch-add
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.9 Displaying Plug-Ins

[Overview]

Displays information of a plug-in.

[Format]

```
GET /ismva/settings/plugin
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|------------|--------|---------------------------|
| Output | string | Output Results to display |
| PluginList | object | Plug-in Information |

| Parameter | | Type | Description |
|-----------|------|--------|--------------|
| | Name | string | Plug-in Name |
| | VL | string | VL |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Display of Plug-in: ismadm system plugin-show

4.17.10 Deleting Plug-Ins

[Overview]

Deletes a plug-in.

[Format]

```
POST /ismva/settings/plugin/delete
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Name | string | Plug-in Name Specify the Name of plug-in to delete. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Output | string | Output Results to display |
| Restart | string | Restart Outputs if a restart is required as the result of this API. <ul style="list-style-type: none"> - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting. |

[Precautions]

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

4.17.11 Displaying ISM-VA Login Statuses

[Overview]

Retrieves the login status of the ISM-VA system.

[Format]

```
GET /ismva/loginstatus
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|---------------|-----------|--------|-----------------------|
| ISMLoginUsers | | array | ISM Login Information |
| | User | string | User Name |
| SSHLoginUsers | | array | ISM Login Information |
| | User | string | User Name |
| | IpAddress | string | IP Address |
| FTPLoginUsers | | array | ISM Login Information |
| | User | string | User Name |
| | IpAddress | string | IP Address |

[Precautions]

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

4.17.12 Displaying Results of Operation Before Rebooting

[Overview]

Displays the result of the operation before the restart.

[Format]

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

[Query Parameter]

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

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|-----------------|
| Output | string | Process Results |

| Parameter | Type | Description |
|-----------|------|--|
| | | Contents of the results of the following execution are to be output as follows: /vareult/vareultXXXX XXXX: Time/Date |

[Precautions]

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

4.17.13 Output of Web Server logs

[Overview]

Outputs the https communication log of the Web server log.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Directory | string | Destination Directory Specify a path from the "ftp" directory of "Administrator" directory. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| LogData | object | Log Information |
| Path | string | Output File Path The path to the stored files in the specified directory will be output. /specified directory/weblogYYYYMMDDHHMMSS.tar.gz |
| Restart | string | Restart Outputs if a restart is required as the result of this API. null: No need for restarting |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- Outputs the logs of the last five weeks.

4.17.14 Displaying Locales and Keymaps

[Overview]

Displays locales/keymaps that are set.

[Format]

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

[Query Parameter]

None

[Response Parameter]

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

[Precautions]

- This API executes the ismadm command below.
- Display of locales and keymaps: ismadm locale show

4.17.15 Setting Locales and Keymaps

[Overview]

Sets a locale/keymap.

[Format]

```
PATCH /ismva/settings/locale
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|---------------|--------|--------|--|
| LocaleSetting | | object | Locale Information |
| | Locale | string | Specifies a Locale Specifies a locale to be set. Specifies output results of a list of locale. |
| | Keymap | string | Specifies Keymap Specifies a Keymap to be set. Specifies output results of a list of keymap. |

[Response Parameter]

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

| Parameter | | Type | Description |
|-----------|--------|--------|--|
| | Locale | string | Locale |
| | Keymap | string | Keymap |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- It is required that either Locale parameter or Keymap parameter is specified.
- This API executes the ismadm commands below.
 - Locale Setting: ismadm locale set-locale
 - Keymap Setting: ismadm locale set-keymap
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.16 Displaying Available Locale Settings

[Overview]

Displays a list of locales that are available for setting.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|------------|---------------|---------------------------|
| LocaleList | array(string) | Outputs Locales in array. |

[Precautions]

- This API executes the ismadm command below.
 - Display of available locales: ismadm locale list-locales

4.17.17 Displaying Available Keymap Settings

[Overview]

Displays a list of keymaps that are available to be set.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|------------|---------------|---------------------------|
| KeymapList | array(string) | Outputs Keymaps in array. |

[Precautions]

- This API executes the ismadm command below.
- Display of available keymaps: ismadm locale list-keymaps

4.17.18 Displaying Time Information

[Overview]

Displays the ISM time information.

[Format]

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

[Query Parameter]

| Parameter | Type | Description |
|------------|--------|---|
| OutputMode | string | Output Mode Specifies an output mode. <ul style="list-style-type: none">- ALL: Outputs all- VA: Outputs only the current time in a format which includes the day of the week- API (Default value): Output only the current time in a format which excludes the day of the week |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Time | object | Time Information |
| LocalTime | string | Local Time Output takes in the following forms. <ul style="list-style-type: none">- When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds Time Zone E.g.) Wed 2017-02-01 15:19:50 JST- When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnn Time difference with UTC E.g.) 2017-02-01T15:19:50.000+09:00 |

| Parameter | | Type | Description |
|-----------|-----------------|--------|--|
| | UniversalTime | string | Time in UTC Outputs time in UTC. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds UTC E.g.) Wed 2017-02-01 06:19:50 UTC - When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnnZ E.g.) 2017-02-01T06:19:50.000Z |
| | Timezone | string | Time Zone E.g.) Asia/Tokyo (JST, +0900) UTC (UTC, +0000) |
| NTP | | object | NTP Information Output only when OutputMode is All. |
| | NTPenabled | string | To enable or disable NTP Server Outputs to enable or disable NTP server. - Disabled: Disable NTP server - Enabled: Enable NTP server |
| | NTPsynchronized | string | Availability or Unavailability of Synchronization with NTP Server Outputs availability or unavailability of synchronization with NTP server. - no: No synchronization - yes: Synchronization enabled |
| | RTCinlocalTZ | string | Time zone settings of real time clock |
| | DSTactive | string | Setting of Daylight Saving Time - yes: Period of daylight saving time - no: Other than the period of daylight saving time - n/a: Time zones without settings of daylight saving time |
| | LastDSTChange | string | Latest Information of Daylight Saving Time change - When DSTactive: yes, it is the time information of when the latest daylight saving time started. E.g.) DST began at Sun 2017-03-12 01:59:59 CST Sun 2017-03-12 03:00:00 CDT - When DSTactive: no, it is the time information of when the last daylight saving time ended. E.g.) |

| Parameter | | Type | Description |
|-----------|---------------|--------|--|
| | | | DST ended at Sun 2016-11-06 01:59:59 EDT Sun 2016-11-06 01:00:00 EST |
| | NextDSTChange | string | Update Information of the Next Daylight Saving Time - When DSTactive: yes, it is the time information of when the next daylight saving time will end. E.g.) DST ends (the clock jumps one hour backwards) at Sun 2017-11-05 01:59:59 CDT Sun 2017-11-05 01:00:00 CST - When DSTactive: no, it is the time information of when the next daylight saving time starts. E.g.) DST begins (the clock jumps one hour forward) at Sun 2017-03-12 01:59:59 EST Sun 2017-03-12 03:00:00 EDT |
| | NTPStatus | string | Status of NTP Server Outputs the following. - When NTP Server is not specified 506 Cannot talk to daemon - When NTP Server is specified 210 Number of sources = n (number of registered servers) |
| | NTPServerList | array | NTP Server |
| | Type | string | Category The following are output as NTP types. - Server: Server |
| | Status | string | Status Announces the current status. - *: Synchronization target - +: Synchronization target candidates - -: Out of the target for synchronization - ?: Verifying targets |
| | Name | string | Host Name Host Name or IP address |
| | Stratum | string | Hierarchy Hierarchy of NTP Server |
| | Poll | string | Interval of Inquiry Interval of Inquiry (seconds) This shows the rate at which the source is being polled, as a base-2 logarithm of the interval in seconds. |

| Parameter | | | Type | Description |
|-----------|--|------------|--------|--|
| | | | | Thus, a value of 6 would indicate that a measurement is being made every 64 seconds. chronyd automatically varies the polling rate in response to prevailing conditions. |
| | | Reach | string | Result of Inquiry Displays if the last 8 queries were successful in octal. |
| | | LastRx | string | Previous Inquiry Displays when the previous inquiry was performed. |
| | | LastSample | string | Gap Gap of time from the last measurement. Inside [] indicates result after subtracting slew adjustment. After +/- is the measurement error margin |

[Precautions]

- This API executes the ismadm command below.
- Display of time settings: ismadm time show

4.17.19 Setting of Time Information

[Overview]

Sets the ISM time information.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|------------|--------|---|
| Time | | object | Time Information |
| | Timezone | string | Name of Preset Time Zone Specifies a time zone for setting. Specify from a list of Time Zone. For null, it sets the Default value. If the key is omitted, it does not set a value. |
| | Time | string | Preset Time Specifies time for setting. If the key is omitted, it does not set a value. |
| NTP | | object | NTP Information |
| | NTPenabled | string | To enable or disable NTP Server Set to disable or enable NTP server settings. - Disabled: Disable NTP server |

| Parameter | | Type | Description |
|-----------|---------------|--------|--|
| | | | - Enabled: Enable NTP server |
| | NTPServerList | array | NTP Server |
| | Name | string | Host Name Host Name or IP address |
| | Mode | string | Mode Specifies server processing mode which was set in Name. - Add: Add a server - Delete: Delete server. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|---------------|--------|--|
| Time | | object | Time Information |
| | LocalTime | string | Local Time Output takes in the following forms. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds Time Zone E.g.) Wed 2017-02-01 15:19:50 JST - When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnn Time difference with UTC E.g.) 2017-02-01T15:19:50.000+09:00 |
| | UniversalTime | string | Time in UTC Outputs time in UTC. - When OutputMode=All or VA Week Year-Month-Day Hours:Minutes:Seconds UTC E.g.) Wed 2017-02-01 06:19:50 UTC - When OutputMode=API Year-Month-DayTHours:Minutes:Seconds.nnnZ E.g.) 2017-02-01T06:19:50.000Z |
| | Timezone | string | Time Zone E.g.) Asia/Tokyo (JST, +0900) UTC (UTC, +0000) |
| NTP | | object | NTP Information Output only when OutputMode is All. |
| | NTPenabled | string | To enable or disable NTP Server Outputs to enable or disable NTP server. - Disabled: Disable NTP server |

| Parameter | Type | Description |
|-----------------|--------|---|
| | | - Enabled: Enable NTP server |
| NTPsynchronized | string | <p>Availability or unavailability of synchronization with NTP Server</p> <p>Outputs availability or unavailability of synchronization with NTP server.</p> <ul style="list-style-type: none"> - no: No synchronization - yes: Synchronization enabled |
| RTCinlocalTZ | string | Time Zone Settings of Real Time Clock |
| DSTactive | string | <p>Setting of Daylight Saving Time</p> <ul style="list-style-type: none"> - yes: Period of daylight saving time - no: Other than the period of daylight saving time - n/a: Time zones without settings of daylight saving time |
| LastDSTChange | string | <p>Latest Information of Daylight Saving Time Change</p> <ul style="list-style-type: none"> - When DSTactive: yes, it is the time information of when the latest daylight saving time started. <p>E.g.)</p> <p>DST began at</p> <p>Sun 2017-03-12 01:59:59 CST</p> <p>Sun 2017-03-12 03:00:00 CDT</p> <ul style="list-style-type: none"> - When DSTactive: no, it is the time information of when the last daylight saving time ended. <p>E.g.)</p> <p>DST ended at</p> <p>Sun 2016-11-06 01:59:59 EDT</p> <p>Sun 2016-11-06 01:00:00 EST</p> |
| NextDSTChange | string | <p>Update Information of the Next Daylight Saving Time</p> <ul style="list-style-type: none"> - When DSTactive: yes, it is the time information of when the next daylight saving time will end. <p>E.g.)</p> <p>DST ends (the clock jumps one hour backwards) at</p> <p>Sun 2017-11-05 01:59:59 CDT</p> <p>Sun 2017-11-05 01:00:00 CST</p> <ul style="list-style-type: none"> - When DSTactive: no, it is the time information of when the next daylight saving time starts. <p>E.g.)</p> <p>DST begins (the clock jumps one hour forward) at</p> <p>Sun 2017-03-12 01:59:59 EST</p> <p>Sun 2017-03-12 03:00:00 EDT</p> |
| NTPStatus | string | <p>Status of NTP Server</p> <p>Outputs the following.</p> <ul style="list-style-type: none"> - When NTP Server is not specified <p>506 Cannot talk to daemon</p> <ul style="list-style-type: none"> - When NTP Server is specified |

| Parameter | | Type | Description |
|-----------|---------------|--------|--|
| | | | 210 Number of sources = n (number of registered servers) |
| | NTPServerList | array | NTP Server |
| | Type | string | Category The following are output as NTP types. - Server: Server |
| | Status | string | Status Announces the current status. - *: Synchronization target - +: Synchronization target candidates - -: Out of the target for synchronization - ?: Verifying targets |
| | Name | string | Host Name Host Name or IP address |
| | Stratum | string | Hierarchy Hierarchy of NTP Server |
| | Poll | string | Interval of Inquiry Interval of Inquiry (seconds) The value converted from the original data (Original data: Logarithm base 2 of inquiry interval (seconds). The inquiry interval is equal to 2 to the power of Poll's value.) |
| | Reach | string | Result of Inquiry Shown if the last 8 queries were successful in octal. |
| | LastRx | string | Previous inquiry Shows when the previous inquiry was performed. |
| | LastSample | string | Gap Gap of time from the last measurement. Inside [] indicates result after subtracting slew adjustment. After +/- is the measurement error margin |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
 - Setting of date and time: ismadm time set-time
 - Timezone setting: ismadm time set-timezone
 - Enabling/Disabling of NTP synchronization: ismadm time set-ntp

- Adding of NTP server: ismadm time add-ntpserver
- Removal of NTP server: ismadm time del-ntpserver
- To execute this API, it is required to obtain VA operation privilege in advance.
- If the time settings and the NTP server settings are done at the same time, it may cause an error.

4.17.20 Displaying Available Time Zone Settings

[Overview]

Displays a list of time zones that are available to be set.

[Format]

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

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|--------------|---------------|--|
| TimezoneList | array(string) | List of Time Zone Outputs timezones in array. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Display of available time zones: ismadm time list-timezones

4.17.21 Displaying Volume Settings

[Overview]

Displays volume setting information.

[Format]

```
GET /ismva/settings/volume
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|----------------|--------|--|
| Output | string | Output Result Outputs a result of a command directly. |
| FilesystemList | object | List of File System Information |
| Size | string | Whole Size Unit: Automatically set for such units as G, M and others. |

| Parameter | | Type | Description |
|----------------|---------------|--------|---|
| | | | Sets null for empty disks. |
| | Used | string | Size used Unit: Automatically set for such units as G, M and others. Sets null for empty disks. |
| | Avail | string | Empty Size Unit: Automatically set for such units as G, M and others. Sets null for empty disks. |
| | UseRate | string | Use Rate, % Sets null for empty disks. |
| | MountedOn | string | Mount Directory Sets null for empty disks. |
| | UserGroupName | string | User Group Name When it is allocated to a user group, it is output. When it is not allocated to a user group, it outputs null. |
| VolumeList | | object | List of Volume Information |
| | DeviceName | string | Disk Name |
| | VolumeName | string | Volume Name |
| | DeviceSize | string | Size |
| FreeDeviceList | | array | List of Free Device Information |
| | DeviceName | string | Disk Name |
| DirectoryList | | object | Directory Information List |
| | DirectoryType | string | Announces a Type of Directory. - Log: Entire log - IsmLog: Entire ISM RAS log - Repository: Repository - UserGroup |
| | DirectoryName | string | Announces a Directory Name. Announces a directory as follows. - Log: "ISM-VA Log" - IsmLog: "ISM RasLog" - Repository: "Repository" - User Group Name |
| | DirectorySize | string | Size of Directory Name above For user group, it is a coincident value with the size under use that is output as details of the user group. It differs from the size shown by Used. |

[Precautions]

- This API executes the ismadm command below.
- Display of volume settings: ismadm volume show

4.17.22 Creating LVM Volumes

[Overview]

Creates an LVM volume.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|------------|--------|--------------------------------|
| Volume | | object | Information of Volume |
| | VolumeName | string | Volume Name |
| | DeviceName | string | Device Name of Virtual Disk ID |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|------------|--------|---|
| Volume | | object | Information of Volume |
| | VolumeName | string | Volume Name |
| | DeviceName | string | Device Name of Virtual Disk ID |
| Restart | | string | Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

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

4.17.23 Allocating LVM Volumes to User Groups

[Overview]

Allocate the LVM volume to the specified user group.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

[Response Parameter]

| Parameter | | Type | Description |
|-----------|---------------|--------|---|
| Volume | | object | Information of Volume |
| | VolumeName | string | Volume Name |
| | UserGroupName | string | User Group Name |
| Restart | | string | <p>Outputs if a restart is required as the result of this API.</p> <ul style="list-style-type: none"> - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service - null: No need for restarting <p>It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting.</p> |

[Precautions]

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

4.17.24 Deallocating LVM Volumes from User Groups

[Overview]

Cancels LVM volume allocation in the specified user group.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|---------------|--------|-----------------|
| UserGroupName | string | User Group Name |

[Response Parameter]

| Parameter | Type | Description |
|---------------|--------|--|
| Volume | object | Volume Information that has been specified |
| VolumeName | string | Volume Name |
| UserGroupName | string | User Group Name |
| Restart | string | Restart Outputs if a restart is required as the result of this API. <ul style="list-style-type: none"> - ISM-VA: Restart is required for the ISM-VA - ISM-Service: Restart is required for the ISM service - null: No need for restarting It shows that if ISM-VA or ISM-Service is output, the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Cancellation of allocation of LVM volume to the user group: ismadm volume umount
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.25 Deleting LVM Volumes

[Overview]

Deletes an LVM volume.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|------------|--------|-------------|
| VolumeName | string | Volume Name |

[Response Parameter]

| Parameter | Type | Description |
|------------|--------|--------------------------------|
| Volume | object | Deleted Volume Information |
| VolumeName | string | Volume Name |
| DeviceName | string | Device Name of Virtual Disk ID |

| Parameter | Type | Description |
|-----------|--------|---|
| Restart | string | Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

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

4.17.26 Expanding LVM Volumes

[Overview]

Expands an LVM volume.

[Format]

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

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|------------|--------|--|
| Volume | object | Information of Volume |
| VolumeName | string | Volume Name When the key is omitted, empty character or null, it is added to the system volume. |
| DeviceName | string | Device Name of Virtual Disk ID |

[Response Parameter]

| Parameter | Type | Description |
|------------|--------|---|
| Volume | object | Information of Volume |
| VolumeName | string | Volume Name |
| DeviceName | string | Device Name of Virtual Disk ID |
| Restart | string | Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

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

- This API executes the ismadm commands below.
 - Extension of LVM volume size: ismadm volume extend
 - Extension of the size of LVM system volume: ismadm volume sysvol-extend
- To execute this API, it is required to obtain VA operation privilege 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 |
| | Subject | string | Issued to (subject) (CN part only) |
| | ValidityNotBefore | string | Start of Validated Period |
| | ValidityNotAfter | string | End of Validated Period |
| | Output | string | Outputs Contents of a Certificate (Output results of openssl x509 -text -noout -in). |

[Precautions]

- This API executes the ismadm command below.
 - Display of SSL server certificates: ismadm sslcert show

4.17.28 Deploying SSL Server Certificates

[Overview]

Deploys the SSL server certificate.

[Format]

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

[Query Parameter]

None

[Request Parameter]

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

| Parameter | | Type | Description |
|-----------|---------|--------|-----------------------------------|
| | KeyFile | string | Specifies akey File for setting. |
| | CrtFile | string | Specifies a crt File for setting. |
| | CaFile | string | Specifies a ca File for setting. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Output | string | Outputs Contents of a Certificate (Output results of openssl x509 -text -noout -in). |
| Restart | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API executes the ismadm command below.
 - Deployment of SSL server certificates: ismadm sslcert set
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.29 Output of SSL Server Certificates

[Overview]

Outputs the SSL server certificate.

[Format]

```
POST /ismva/settings/sslcert/export
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|------------------------------------|
| Directory | string | Specifies a Destination Directory. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Path | string | Output File Outputs a path of output file. |
| Restart | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA |

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

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Export of SSL server certificates: ismadm sslcert export

4.17.30 Displaying Information on ISM-VA Internal DHCP server

[Overview]

Displays the information on ISM-VA internal DHCP servers.

[Format]

```
GET /ismva/settings/dhcp
```

[Query Parameter]

| Parameter | Type | Description |
|------------|---------|---|
| OutputMode | string | Output Mode Specifies an output mode. <ul style="list-style-type: none"> - Conf: Output a Conf file. - Log: Output operation log. In this case, Line parameters can be specified at the same time. <ul style="list-style-type: none"> - DHCPMode: Specify DHCP server operation mode. - All: Output all. |
| Line | integer | Specifies the Number of Lines of Output. When unspecified, it will output 20 lines. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| DHCP | object | DHCP Information |
| DHCPMode | string | Operation Mode It displays operation mode of DHCP. <ul style="list-style-type: none"> - local: Use ISM internal DHCP Server - remote: Uses external DHCP Server |
| DHCPConf | string | Content of Conf File |
| DHCPLog | string | Contents of Operation Log |

[Precautions]

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

- This API executes the ismadm command below.
 - Display of the contents of the currently set DHCP server: ismadm dhcpsrv show-conf
 - Display of the DHCP server message: ismadm dhcpsrv show-msg [-line]

4.17.31 Setting up ISM-VA Internal DHCP Server

[Overview]

Sets up an ISM-VA internal DHCP server.

[Format]

```
PATCH /ismva/settings/dhcp
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-----------|--------|--|
| DHCP | | object | DHCP Information |
| | DHCPMode | string | Operation Mode Specifies operation modes of DHCP. - local: Use ISM internal DHCP Server - remote: Uses external DHCP Server |
| | DHCPConf | string | File Path of Conf File Setting up is required when operation mode is set as remote. |
| | DHCPLog | string | Contents of Operation Log |
| | Setting | object | Content of DHCP Simple Setting Setting up is required when operation mode is set as local. |
| | Subnet | string | Specifies an Address of Sub-net Address |
| | Netmask | string | Specifies Subnet Mask |
| | Start | string | Specifies a Lease Starting Address |
| | End | string | Specifies a Lease Ending Address |
| | Broadcast | string | Specifies a Broadcast Address |
| | Dns | string | Specifies IP Address of DNS Server |
| | GateWay | string | SPecifies an Address of a Gateway |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------|--------|---|
| DHCP | | object | DHCP Information |
| | DHCPMode | string | Operation Mode Operation mode of DHCP is displayed. - local: Uses ISM internal DHCP Server - remote: Uses external DHCP Server |
| | | | |

| Parameter | | Type | Description |
|-----------|-----------|--------|--|
| | DHCPConf | string | Content of Conf File |
| | DHCPLog | string | Contents of the Operation Log |
| | Setting | object | Content of DHCP Simple Setting |
| | Subnet | string | Sub-net Address |
| | Netmask | string | Netmask |
| | Start | string | Lease Starting Address |
| | End | string | Lease Ending Address |
| | Broadcast | string | Broadcast Address |
| | Dns | string | Address of DNS Server |
| | GateWay | string | Address of a Gateway |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. null: No restarting required |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm commands below.
 - Setting of ISM-VA internal DHCP Server: ismadm dhcpsrv set-simple, ismadm dhcpsrv set-file
 - Switch of DHCP server: ismadm dhcpsrv show-mode
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.32 Exporting Setting Files for ISM-VA Internal DHCP

[Overview]

Exports a DHCP setting file under use.

[Format]

```
POST /ismva/settings/dhcp/export
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|------------|--------|---|
| Directory | string | Specify an Output Destination Directory. |
| ExportMode | string | Export Mode Specify the export mode. <ul style="list-style-type: none"> - Conf: DHCP setting file in use - Sample: DHCP setting file of a sample |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| Path | string | Output File Path Outputs a path of the output file. - When the ExportMode is Conf /Directory of Request Parameters/dhcpd.conf - When the ExportMode is Sample /Directory of Request Parameters/dhcpd.conf.sample |
| Restart | string | Restart Outputs if a restart is required as the result of this API. null: No restarting required |

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API executes the ismadm commands below.
 - Export of the current setting contents (conf file) to the location where ftp access is possible: ismadm dhcprsv export-conf -dir
 - Export a sample setting content (conf file) to the location where ftp access is possible: ismadm dhcprsv export-sample -dir

4.17.33 Initializing Domain Settings

[Overview]

Initializes settings of a domain.

[Format]

```
POST /ismva/settings/kerberos/init
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Restart | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Initialization of the domain setting information: ismadm kerberos init

- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.34 Adding Domain Settings

[Overview]

Adds settings of a domain.

[Format]

```
POST /ismva/settings/kerberos
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|----------------|--------|------------------------------------|
| Domain | | object | Domain Information |
| | DomainName | string | Specifies the name of a domain. |
| | Realm | string | Specifies a realm name. |
| | ControllerName | string | Specifies a domain control server. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|--------|--|
| Domain | | object | Domain Information |
| | DomainName | string | Name of a Domain |
| | Realm | string | Realm Name |
| | ControllerName | string | Domain Control Server |
| Restart | | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding Administrator role and belonging to Administrator group.
- This API executes the ismadm command below.
 - Addition of the domain setting information: ismadm kerberos add
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.35 Going Back to Previous Domain Setting

[Overview]

Goes back to the previous domain setting.

[Format]

```
POST /ismva/settings/kerberos/restore
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| Restart | string | Restart Outputs if a restart is required as the result of this API. ISM-VA: Restart is required for the ISM-VA It shows that the result of this API will be enabled after restarting. |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Reverting to the previous domain setting information: ismadm kerberos restore
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.36 Displaying Domain Settings

[Overview]

Displays the settings of a domain.

[Format]

```
GET /ismva/settings/kerberos
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|-------------|--------|---------------------------|
| Domain | object | Domain Information |
| Logging | object | Logging Information |
| Default | string | Default |
| Kdc | string | kdc |
| AdminServer | string | admins_server |
| Comment | string | Comment Information |
| Libdefaults | object | Default Value Information |

| Parameter | | | Type | Description |
|-----------|-------------|---------------------|---------------|--------------------------|
| | | Dns_lookup_realm | string | dns_lookup_realm |
| | | Ticket_lifetime | string | ticket_lifetime |
| | | Renew_lifetime | string | renew_lifetime |
| | | Forwardable | string | forwardable |
| | | Rdns | string | rdns |
| | | Default_ccache_name | string | default_ccache_name |
| | | Default_realm | string | default_realm |
| | | Comment | string | Comment Information |
| | Realms | | object | Realms Information |
| | | Realm | string | realm |
| | | Kdc | string | kdc |
| | | AdminServer | string | admin_server |
| | | Comment | string | Comment Information |
| | DomainRealm | | array(string) | |
| | Output | | string | Output Result of Command |

[Precautions]

- Can only be executed by a user holding an Administrator role and belonging to the Administrator group.
- This API executes the ismadm command below.
 - Display of the domain setting information: ismadm kerberos show

4.17.37 Restarting ISM-VA

[Overview]

Restarts ISM-VA.

[Format]

```
POST /ismva/power/restart
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- The following are the precautions for restarting ISM-VA.
 - After logging out internally from a session that has been logged in, it restarts ISM-VA.
 - In order to return this API, it will restart ISM-VA a few seconds after the response.

- Login cannot be performed automatically after a restart.
- This API executes the ismadm command below.
 - Restart of ISM-VA: ismadm power restart
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.38 Stopping ISM-VA

[Overview]

Stops ISM-VA.

[Format]

```
POST /ismva/power/stop
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- After internal logging out a session that has been logged in, it halts ISM-VA.
- In order to return this API, it will halt ISM-VA a few seconds after the response.
- This API executes the ismadm command below.
 - Stop of ISM-VA: ismadm power stop
- To execute this API, it is required to obtain VA operation privilege in advance.

4.17.39 Displaying Service Status

[Overview]

Displays the status of an ISM service in ISM-VA.

[Format]

```
GET /ismva/settings/service
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-------------|----------|--------|--------------|
| ServiceList | | string | Service List |
| | UnitFile | string | Service Name |

| Parameter | | Type | Description |
|-----------|--------|--------|--|
| | | | Outputs the following. ism.service |
| | Active | string | Execution status During running of the service, outputs the following. active (running) since Time and Date of start Time and Date of start is output in the following form. Day of the week YYYY-MM-DD hh:mm:ss Timezone; elapsed time E.g.) Thu 2017-10-26 19:06:14 JST; 24h ago |

4.17.40 Retrieving ISM Version Number

[Overview]

Retrieves information on the ISM version number.

[Format]

```
GET /system/ismva/version
```

[Query Parameter]

None

[Response Parameter]

| Parameter | Type | Description |
|------------|--------|--------------------------------|
| IsmVersion | string | ISM Version Number Information |

4.18 Common Information

4.18.1 List Retrieval for FTP Files

[Overview]

Retrieves all files that stored in the FTP site of the ISM managed by the user group that the users belong to.

[Format]

```
GET /system/settings/ftp/filelist
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|------|--------|-----------------------------|
| Directory | | array | File Information |
| | Path | string | Path it belongs to |
| | Name | string | File Name or Directory Name |

| Parameter | | Type | Description |
|-----------|------------|---------|--|
| | Type | string | Type <ul style="list-style-type: none"> - File: File - Folder: Directory |
| | Size | integer | Size |
| | Timestamp | string | Update Time and Date |
| | UserId | integer | Owner User ID User ID of ISM-VA. |
| | GroupId | integer | Owner Group ID Group ID of ISM-VA. |
| | Permission | string | Access Privilege E.g.) "rwxr--r--" |

4.18.2 Registration of Cloud Management Software

[Overview]

Registers a cloud management software.

[Format]

```
POST /system/settings/cms
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|--------|--|
| CmsInfo | | object | Information of a Cloud Management Software |
| | UserGroupId | string | User group ID for managing of the Cloud Management Software |
| | CmsName | string | Name of the Cloud Management Software for managing Designate a Unique Name in the ISM. |
| | CmsType | string | Type of the Cloud Management Software <ul style="list-style-type: none"> - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS |
| | CmsVersion | string | Version Number of the Cloud Management Software <ul style="list-style-type: none"> - vCenter: 5.5/ 6.0/ 6.5 |

| Parameter | Type | Description |
|-------------|---------|---|
| | | <ul style="list-style-type: none"> - MicrosoftFailoverCluster: 2012/ 2012R2/ 2016 - SystemCenter: 2012/ 2012R2/ 2016 - 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 - KVM SUSELinuxEnterprise: 11/ 11SP1/ 11SP2/ 11SP3/ 11SP4/ 12/ 12SP1/ 12SP2/ 12SP3 - IPCOM OS: 1.x |
| IpAddress | string | IP Address of the Cloud Management Software |
| IpVersion | string | IP Version of IP Address <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| PortNum | integer | Port Number used Specify the port number or null. When null specified, sets the standard port number for the protocol. Connecting protocols for respective cloud management software are as follows: <ul style="list-style-type: none"> - vCenter: CIM (No. 443) - MicrosoftFailoverCluster, SystemCenter: WinRM (No. 5986) - KVM RedHat, KVM SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) |
| DomainName | string | Domain Name Specify a name of FQDN for a realm. E.g.) ISMDOMAIN.LOCAL |
| AccountName | string | Account Name Specify a account name excluding a realm. E.g.) ismadmin |
| Password | string | Password Encrypt the password with a method described in " 2.4 Encryption ." |
| Url | string | WebURL Can register access URL to WebUI and others. |
| VCenter | object | Additional Information for vCenter Presently it is not supported. |
| Scvmm | object | Additional Information for SCVMM Presently it is not supported. |
| Openstack | object | Additional Information for OpenStack Presently it is not supported. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|--------------------------|---------|--|
| CmsInfo | | object | Information of a Cloud Management Software |
| | CmsId | integer | ID of the Cloud Management Software |
| | UserGroupId | string | User Group ID for managing of the Cloud Management Software |
| | CmsName | string | Name of the Cloud Management Software for managing |
| | CmsType | string | Type of the Cloud Management Software <ul style="list-style-type: none"> - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS |
| | CmsVersion | string | Version Number of the Cloud Management Software |
| | IpAddress | string | IP Address of the Cloud Management Software |
| | IpVersion | string | IP Version of IP Address <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | PortNum | integer | Port Number used |
| | DomainName | string | Domain Name |
| | AccountName | string | Account Name |
| | Url | string | WebURL |
| | VCenter | object | Additional Information for vCenter Presently it is not supported. |
| | Scvmm | object | Additional Information for SCVMM Presently it is not supported. |
| | MicrosoftFailoverCluster | object | Additional Information for Microsoft Failover Cluster |
| | SystemCenterId | integer | ID of the Cloud Management Software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, Cloud Management Software ID of the SystemCenter is set up. Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter. Acquire information from SystemCenter. |
| | Openstack | object | Additional Information for OpenStack Presently it is not supported. |
| | Timestamp | string | Last Update Time |
| | RefreshDate | string | The Last Acquisition Time of the information on the Cloud Management Software |

[Precautions]

- The name of a cloud management software starting with under bar "_" cannot be used as it is used with 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 managed by the user group that the users belong to.

[Format]

```
GET /system/settings/cms
```

[Query Parameter]

| Parameter | Type | Description |
|-------------|--------|---------------------------------|
| usergroupid | string | Narrowing down by User Group ID |

[Response Parameter]

| Parameter | Type | Description |
|-------------|---------|---|
| CmsInfoList | array | Information of a Cloud Management Software |
| CmsId | integer | ID of the Cloud Management Software |
| UserGroupId | string | User group ID for managing of the Cloud Management Software |
| CmsName | string | Name of the Cloud Management Software for managing |
| CmsType | string | Type of the Cloud Management Software <ul style="list-style-type: none">- vCenter: VMware vCenter Server- MicrosoftFailoverCluster: Microsoft Failover Cluster- SystemCenter: Microsoft System Center Virtual Machine Manager- KVM RedHat: KVM running on Red Hat Enterprise Linux- KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server- IPCOM OS: IPCOM OS |
| CmsVersion | string | Version Number of the Cloud Management Software |
| IpAddress | string | IP Address of the Cloud Management Software |
| IpVersion | string | IP Version of IP address <ul style="list-style-type: none">- V4: IPv4- V6: IPv6 |
| PortNum | integer | Port Number used |
| DomainName | string | Domain Name |
| AccountName | string | Account Name |
| Url | string | WebURL |
| VCenter | object | Additional Information for vCenter |

| Parameter | | Type | Description |
|-----------|--------------------------|---------|---|
| | | | Presently it is not supported. |
| | Scvmm | object | Additional Information for SCVMM Presently it is not supported. |
| | MicrosoftFailoverCluster | object | Additional Information for Microsoft Failover Cluster |
| | SystemCenterId | integer | ID of the Cloud Management Software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, the cloud management software ID of the SystemCenter is set up. Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter. Acquire information from SystemCenter. |
| | Openstack | object | Additional Information for OpenStack Presently it is not supported. |
| | Timestamp | string | Last Update Time |
| | RefreshDate | string | The Last Acquisition Time of the information on the Cloud Management Software |

4.18.4 Individual Retrieval of Cloud Management Software

[Overview]

Retrieves the specified cloud management software.

[Format]

```
GET /system/settings/cms/{cmsid}
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------|---------|---|
| CmsInfo | | object | Information of a Cloud Management Software |
| | CmsId | integer | ID of the Cloud Management Software |
| | UserGroupId | string | User group ID for managing of the Cloud Management Software |
| | CmsName | string | Name of the Cloud Management Software for managing |
| | CmsType | string | Type of the Cloud Management Software <ul style="list-style-type: none"> - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server |

| Parameter | | Type | Description |
|-----------|--------------------------|---------|---|
| | | | - IPCOM OS: IPCOM OS |
| | CmsVersion | string | Version Number of the Cloud Management Software |
| | IpAddress | string | IP Address of the Cloud Management Software |
| | IpVersion | string | IP Version of IP address - V4: IPv4 - V6: IPv6 |
| | PortNum | integer | Port Number used |
| | DomainName | string | Domain Name |
| | AccountName | string | Account Name |
| | Url | string | WebURL |
| | VCenter | object | Additional Information for vCenter Presently it is not supported. |
| | Scvmm | object | Additional Information for SCVMM Presently it is not supported. |
| | MicrosoftFailoverCluster | object | Additional Information for Microsoft Failover Cluster |
| | SystemCenterId | integer | ID of Cloud Management Software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, cloud management software ID of the SystemCenter is set up. Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter. Acquire information from SystemCenter. |
| | Openstack | object | Additional Information for OpenStack Presently it is not supported. |
| | Timestamp | string | Last Update Time |
| | RefreshDate | string | The Last Acquisition Time of the information on the Cloud Management Software |

4.18.5 Updating of Cloud Management Software

[Overview]

Updates the information of the specified cloud management software.

[Format]

```
PATCH /system/settings/cms/{cmsid}
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| CmsInfo | object | Information of a Cloud Management Software |

| Parameter | Type | Description |
|-------------|---------|--|
| UserGroupId | string | User Group ID for managing of the Cloud Management Software |
| CmsName | string | Name of the Cloud Management Software for managing Designate a unique name in the ISM. |
| IpAddress | string | IP Address of the Cloud Management Software |
| IpVersion | string | IP Version of IP address - V4: IPv4 - V6: IPv6 |
| PortNum | integer | Port Number used Specify the port number or null. When null specified, sets the standard port number for the protocol. Connecting protocols for respective cloud management software are as follows: - vCenter: CIM (No. 443) - MicrosoftFailoverCluster, SystemCenter: WinRM (No. 5986) - KVM RedHat, KVM SUSELinuxEnterprise, IPCOM OS: SSH (No. 22) |
| DomainName | string | Domain Name Specify a name of FQDN for a realm. E.g.) ISMDOMAIN.LOCAL |
| AccountName | string | Account Name Specify an account name excluding a realm. E.g.) ismadmin |
| Password | string | Password Encrypt the password with a method described in " 2.4 Encryption ." |
| Url | string | WebURL Can register access URL to WebUI and others. |
| VCenter | object | Additional Information for vCenter Presently it is not supported. |
| Scvmm | object | Additional Information for SCVMM Presently it is not supported. |
| Openstack | object | Additional Information for OpenStack Presently it is not supported. |

[Response Parameter]

| Parameter | Type | Description |
|-----------|--------|--|
| CmsInfo | object | Information of a Cloud Management Software |

| Parameter | | Type | Description |
|-----------|--------------------------|---------|--|
| | CmsId | integer | ID of the Cloud Management Software |
| | UserGroupId | string | User Group ID for managing of the Cloud Management Software |
| | CmsName | string | Name of the Cloud Management Software for managing |
| | CmsType | string | Type of the Cloud Management Software <ul style="list-style-type: none"> - vCenter: VMware vCenter Server - MicrosoftFailoverCluster: Microsoft Failover Cluster - SystemCenter: Microsoft System Center Virtual Machine Manager - KVM RedHat: KVM running on Red Hat Enterprise Linux - KVM SUSELinuxEnterprise: KVM running on SUSE Linux Enterprise Server - IPCOM OS: IPCOM OS |
| | CmsVersion | string | Version Number of the Cloud Management Software |
| | IpAddress | string | IP Address of the Cloud Management Software |
| | IpVersion | string | IP Version of IP address <ul style="list-style-type: none"> - V4: IPv4 - V6: IPv6 |
| | PortNum | integer | Port Number used |
| | DomainName | string | Domain Name |
| | AccountName | string | Account Name |
| | Url | string | WebURL |
| | VCenter | object | Additional Information for vCenter Presently it is not supported. |
| | Scvmm | object | Additional Information for SCVMM Presently it is not supported. |
| | MicrosoftFailoverCluster | object | Additional Information for Microsoft Failover Cluster |
| | SystemCenterId | integer | ID of the Cloud Management Software for SystemCenter If Microsoft Failover Cluster is managed by the SystemCenter, the cloud management software ID of the SystemCenter is set up. Cannot obtain information from Microsoft Failover Cluster that is managed by SystemCenter. Acquire information from SystemCenter. |
| | Openstack | object | Additional Information for OpenStack Presently it is not supported. |
| | Timestamp | string | Last Update Time |
| | RefreshDate | string | The last acquisition time of the information on the Cloud Management Software |

[Precautions]

- The name of a cloud management software starting with under bar "_" cannot be used as it is used with ISM. After updating of cloud management software, execute an instruction of acquiring virtual information.

4.18.6 Deletion of Cloud Management Software

[Overview]

Deletes the information of the specified cloud management software.

[Format]

```
DELETE /system/settings/cms/{cmsid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

4.18.7 Pool Settings

[Overview]

Sets the pool information managed in the ISM.

[Format]

```
PATCH /pools
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|----------------|--------|---|
| Pool | | object | Pool Information |
| | PoolType | string | Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN |
| | ValueRangeList | array | Range of Values to pool Specify all information of the range of the specified pool type. Overwrites information of the pool type with the specified values. Cannot specify to duplicate ranges. When there are values already dispensed and the dispensed values are beyond a range of pool, it will be an error. |
| | BeginValue | string | Start Value of Range |

| Parameter | | Type | Description |
|-----------|-------------|--------|--|
| | | | Specify in correct format for the respective types of pools <ul style="list-style-type: none"> - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, the separation character is "-" symbol or ":" symbol) - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, the separation character is "-" symbol or ":" symbol) |
| | EndValue | string | End Value of Range Specify in correct format for the respective types of pools <ul style="list-style-type: none"> - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, - symbol or : symbol) - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, the separation character is "-" symbol or ":" symbol) |
| | UserGroupId | string | User Group ID available for the pool range It turns to a range usable for all users unless specified. |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------------|--------|---|
| Pool | | object | Pool Information |
| | PoolType | string | Pool Type <ul style="list-style-type: none"> - MacAddress: Virtual MAC Address - Wwn: Virtual WWN |
| | ValueRangeList | array | Range of Values to pool |
| | BeginValue | string | Start Value of Range <ul style="list-style-type: none"> - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, the separation character is "-" symbol) - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, the separation character is ":" symbol) |
| | EndValue | string | End Value of Range <ul style="list-style-type: none"> - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, the separation character is "-" symbol) - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, the separation character is ":" symbol) |
| | UserGroupId | string | User Group ID available for the pool range It turns to a range usable for all users unless specified. |

[Precautions]

- Can only be executed by ISM administrators.
- It turns to error when the pool range is specified as follows:
 - When ranges of pools overlap
 - When there are values already dispensed and the dispensed values are beyond a range of pool

4.18.8 Retrieval of Pool Information

[Overview]

Retrieves information of all pools managed by the user group that the users belong to.

[Format]

```
GET /pools
```

[Query Parameter]

| Parameter | Type | Description |
|-----------|--------|---|
| pooltype | string | Narrowing down by Pool Type <ul style="list-style-type: none">- MacAddress: Virtual MAC Address- Wwn: Virtual WWN |
| assigned | string | Enable/Disable List output of assigned values It is recommended to use it by combining with pooltype as the assigned pool may get larger content of information. <ul style="list-style-type: none">- No specification: Do not display- Output: Display |

[Response Parameter]

| Parameter | Type | Description |
|-----------------|---------------|--|
| PoolList | array | Pool Information |
| PoolType | string | Type of Pool <ul style="list-style-type: none">- MacAddress: Virtual MAC Address- Wwn: Virtual WWN |
| ValueRangeList | array | Range of Values to pool |
| BeginValue | string | Start Value of Range <ul style="list-style-type: none">- MacAddress: xx-xx-xx-xx-xx-xx (x is 0-9a-f, lower case, the separation character is "-" symbol)- Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, the separation character is ":" symbol) |
| EndValue | string | End Value of Range <ul style="list-style-type: none">- MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, the separation character is "-" symbol)- Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital, the separation character is ":" symbol) |
| UserGroupId | string | User Group ID available for the pool range It turns to a range usable for all users unless specified. |
| ValueLeftNumber | integer | The Number of Pool Values available Displays the number of pool values that are not discharged yet. |
| AssignedList | array(string) | Assigned Value |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | Only displayed when "Output" is specified for "assigned" of the query parameter. |

4.18.9 Allocating Values from Pools

[Overview]

Allocates values from the pool information managed by the user group that the users belong to.

[Format]

```
POST /pools/assign
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|-------------|--------|---|
| Pool | | object | Pool Information |
| | PoolType | string | Type of Pool <ul style="list-style-type: none"> - MacAddress: Virtual MAC Address - Wwn: Virtual WWN |
| | UserGroupId | string | User Group that demands assignment Dispense values in the range available for user groups as specified. A range of values under management of a user group will be prioritized. When there is no available value to dispense from the value range managed by a user group, it is dispensed from a range that all users can use. Becomes an error when there is no value to assign. |
| | AssignMode | string | Mode to assign Unless specified, it operates by Automatic. <ul style="list-style-type: none"> - Automatic: A free value is allocated automatically. - Manual: Specifies a value to assign. It turns to error unless it is a value within a range that a user can use. |
| | Value | string | Value to assign Specify when AssignMode is Manual. Specify in correct format for the respective types of pools <ul style="list-style-type: none"> - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, Capital or lower case, the separation character is "-" symbol or ":" symbol) - Wwn: XX:XX:XX:XX:XX:XX:XX:XX (X is 0-9A-F, Capital or lower case, the separation character is "-" symbol or ":" symbol) |

[Response Parameter]

| Parameter | | Type | Description |
|-----------|----------|--------|--|
| Pool | | object | Pool Information |
| | PoolType | string | Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN |
| | Value | string | Assigned Value - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol) - 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 managed by the user group that the users belong to.

[Format]

```
POST /pools/unassign
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------|----------|--------|--|
| Pool | | object | Pool Information |
| | PoolType | string | Type of Pool - MacAddress: Virtual MAC Address - Wwn: Virtual WWN |
| | Value | string | Value to release - MacAddress: xx-xx-xx-xx-xx-xx (X is 0-9a-f, lower case, - symbol) - 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 Specifies a shared directory information. The maximum value is 5. |
| | SharedDirectoryHostName | string | Host Name Specifies IP address (or Host Name). |
| | SharedDirectoryDomainName | string | Domain Name |
| | SharedDirectoryAccountSetting | object | Account Information |
| | Account | string | Account Name Specifies the Account Name (User Name). |
| | Password | string | Password Specifies a password of an account name by encrypting. Refer to "2.4 Encryption" for encryption method. In addition, specify an encrypted character string whose decrypted result is 256 characters or less. |
| | SharedDirectoryPath | string | Shared Directory Path Specifies a shared directory path. |
| SharedDirectoryType | | string | Shared Directory Type Specifies a type of shared directories. <ul style="list-style-type: none">- NFS: Mount NFS- SMB: Mount SMB/CIFS |

[Response Parameter]

| Parameter | | Type | Description |
|---------------------|-------------------------------|--------|---|
| SharedDirectoryList | | array | Shared Directory Information List Notifies a shared directory information. The maximum value is 5. |
| | MountId | string | Mount ID Announces a mount ID. Notifies null when the result is NG. |
| | SharedDirectoryHostName | string | Host Name Notifies IP address (or Host Name). |
| | SharedDirectoryDomainName | string | Domain Name |
| | SharedDirectoryAccountSetting | object | Account Information |
| | Account | string | Account Name Notifies the Account Name (User Name). |
| | Password | string | Password |

| Parameter | | Type | Description |
|-----------|---------------------|--------|---|
| | | | Notifies a password of the account name. |
| | SharedDirectoryPath | string | Shared Directory Path Informs a shared directory path. |
| | SharedDirectoryType | string | Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS |
| | Modified | string | Update Time and Date Announces a time stamp of the update time and date. |
| | Result | string | Results Announces results added. Announces the following. - OK: Success - NG: Failed - -: Not yet processed |
| | Message | object | Message Notifies error message when the result is NG. |
| | MessageId | string | Message ID |
| | Message | string | Text of Message |

[Precautions]

- Can only be executed by a user holding an Administrator role.
- There are two kinds of errors of this API as shown below:
 - When API itself becomes an error
The API Response is error.
- is set in the Result parameter.
 - When one of the elements specified results in an error
An API Response is normal.
NG is set in the Result parameter.
- Mount ID are as shown below:
 - Each user group is created by the following rules:
User group ID with number of +1-n (n: maximum number of mounting enabled for each user group)
Due to above mentioned reason, by repeating addition and deletion, it may result in the same number.
- The number of registrations is as shown below:
 - Up to 5 IDs can be registered for each user group at a maximum.
 - If you try to register a 6th ID, it will result in an error.
- Details of domain assignment is as shown below:
Specify when Samba server had jointed in Kerberos domain.

4.18.12 List Retrieval for Shared Directories

[Overview]

Retrieves a list of shared directories.

[Format]

```
GET /system/settings/shareddirectory
```

[Query Parameter]

| Parameter | Type | Description |
|-------------|--------|--|
| UserGroupId | string | User Group ID If no specified, displays everything within a range of the executing user's user group. |

[Response Parameter]

| Parameter | | Type | Description |
|---------------|---------------------------|--------|---|
| UserGroupList | | array | List of User Group Information |
| | UserGroupId | string | User Group ID |
| | SharedDirectory | object | Shared Directory Information List Notifies a shared directory information. The maximum value is 5. |
| | MountId | string | Mount ID Announces a mount ID. Notifies null when the result is NG. |
| | SharedDirectoryHostName | string | Host Name IP address (or Host Name) is notified. |
| | SharedDirectoryDomainName | string | Domain Name |
| | SharedDirectoryPath | string | Shared Directory Path Informs a shared directory path. |
| | SharedDirectoryType | string | Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS |
| | SharedDirectoryStatus | string | Mount Status Announces Status of a node. - Mount: Being mounted - Unmount: Not mounted. |
| | SharedDirectoryMountOn | string | Mounting position. When being mounted, it announces its mounting position as follows: /User Group/- When not being mounted, it announces null. |

[Precautions]

- Users holding Administrator or Operator privilege can execute this API.

4.18.13 Individual Retrieval of Shared Directory

[Overview]

Retrieves detailed information of a shared directory.

[Format]

```
GET /system/settings/shareddirectory/{mountid}
```

[Query Parameter]

None

[Response Parameter]

| Parameter | | Type | Description |
|-----------|-------------------------------|--------|---|
| UserGroup | | object | List of User Group Information |
| | UserGroupId | string | User Group ID |
| | SharedDirectoryList | object | Shared Directory Information List Notifies a shared directory information. The maximum value is 5. |
| | MountId | string | Mount ID Announces a mount ID. Notifies null when the result is NG. |
| | SharedDirectoryHostName | string | Host Name Notifies IP address (or Host Name). |
| | SharedDirectoryDomainName | string | Domain Name |
| | SharedDirectoryAccountSetting | object | Account Information |
| | Account | string | Account Name Notifies the Account Name (User Name). |
| | Password | string | Password Notifies a password of the account name. |
| | SharedDirectoryPath | string | Shared Directory Path Informs a shared directory path. |
| | SharedDirectoryType | string | Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS |
| | Modified | string | Update Time and Date Announces a time stamp of the update time and date. |
| | SharedDirectoryStatus | string | Mount Status Announces Status of a node. |

| Parameter | | Type | Description |
|-----------|-----------------------------|---------|---|
| | | | <ul style="list-style-type: none"> - Mount: Being mounted - Unmount: Not mounted. |
| | SharedDirectoryMountOn | string | Mounting Position. When being mounted, it announces its mounting position as follows: /User Group/- When not being mounted, it announces null. |
| | SharedDirectoryMountCounter | integer | Mounting Frequency When being mounted, it announces the number of mounting. When not being mounted, it announces null. |
| | Mounted | string | Time/Date of Mount Announces a time stamp of the mounting. When not being mounted, it announces null. |

[Precautions]

- Users holding Administrator or Operator privilege can execute this API.

4.18.14 Updating Shared Directories

[Overview]

Updates shared directories.

[Format]

```
PATCH /system/settings/shareddirectory/{mountid}
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------------|-------------------------------|--------|---|
| SharedDirectory | | object | Shared Directory Information Specifies a shared directory information. The maximum value is 5. |
| | SharedDirectoryHostName | string | Host Name Specifies IP address (or Host Name). |
| | SharedDirectoryDomainName | string | Domain Name |
| | SharedDirectoryAccountSetting | object | Account Information |
| | Account | string | Account Name Specifies the Account Name (User Name). |
| | Password | string | Password Specifies a password of an account name by encrypting. Refer to " 2.4 Encryption " for encryption method. |

| Parameter | | | Type | Description |
|-----------|---------------------|--|--------|---|
| | | | | In addition, specify an encrypted character string whose decrypted result is 256 characters or less. |
| | SharedDirectoryPath | | string | Shared Directory Path Specifies a shared directory path. |
| | SharedDirectoryType | | string | Shared Directory Type Specifies a type of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS |

[Response Parameter]

| Parameter | | | Type | Description |
|-----------|-----------------|-------------------------------|--------|---|
| UserGroup | | | object | User Group Information |
| | UserGroupId | | string | User Group ID |
| | SharedDirectory | | object | Shared Directory Information Notifies a shared directory information. The maximum value is 5. |
| | | MountId | string | Mount ID Announces a mount ID. Notifies null when the result is NG. |
| | | SharedDirectoryHostName | string | Host Name Notifies IP address (or Host Name). |
| | | SharedDirectoryDomainName | string | Domain Name |
| | | SharedDirectoryAccountSetting | object | Account Information |
| | | Account | string | Account Name Notifies the Account Name (User Name). |
| | | | string | Password Notifies a password of the account name. |
| | | SharedDirectoryPath | string | Shared Directory Path Informs a shared directory path. |
| | | SharedDirectoryType | string | Shared Directory Type Notifies types of shared directories. - NFS: Mount NFS - SMB: Mount SMB/CIFS |
| | | Modified | string | Update Time and Date Announces a time stamp of the update time and date. |

[Precautions]

- Can only be executed by a user holding an Administrator role.
- Updates only keys as specified. Values of the omitted keys are not changed.
- It becomes an error when specifying null to the key. (As any key element has no default value and cannot be deleted)

- The information of the shared directories of which status is Mount cannot be changed.

4.18.15 Deleting Shared Directories

[Overview]

Deletes shared directories.

[Format]

```
DELETE /system/settings/shareddirectory/{mountid}
```

[Query Parameter]

None

[Request Parameter]

None

[Response Parameter]

None

[Precautions]

- Can only be executed by a user holding an Administrator role.
- The information of the shared directories of which status is Mount cannot be changed.

4.18.16 Mounting Shared Directories

[Overview]

Mounts shared directories.

[Format]

```
POST /system/settings/shareddirectory/mount/{mountid}
```

[Query Parameter]

None

[Request Parameter]

| Parameter | | Type | Description |
|-----------------|---------|--------|--|
| SharedDirectory | | object | Shared Directory Information Notifies a shared directory information. The maximum value is 5. |
| | MountOn | string | Mounting Position. Specifies a mounting position. It will be notified appropriately at mounting unless specified. When specifying, specify as follows. /User Group/- |

[Response Parameter]

| Parameter | | Type | Description |
|-----------------|---------|--------|--|
| SharedDirectory | | object | Shared Directory Information Notifies a shared directory information. The maximum value is 5. |
| | MountId | string | Mount ID Announces a mount ID. Notifies null when the result is NG. |
| | MountOn | string | Mounting Position Will be notified of mounting positions as follows <ul style="list-style-type: none"> - When a mounting position is not specified /User Group/mount/n (n: 1-5) - When a mounting position is specified Will be notified of the specified mounting position. |
| | Mounted | string | Time/Date of Mount Announces a time stamp of the mounting. |

[Precautions]

- Can be executed with a user holding an Administrator or an Operator privilege.
- Privilege of mounted directory are as shown below:
 - They will be mounted as read-only.
 - Case of SMB: The same as the directory at the mounting destination
 - Case of NFS: root
- The same and shared directory information cannot be mounted to the different mounting destinations.
- The same and shared directory information can be mounted several times on the same mounting destinations.

4.18.17 Unmounting Shared Directories**[Overview]**

Unmounts shared directories.

[Format]

```
POST /system/settings/shareddirectory/unmount/{mountid}
```

[Query Parameter]

None

[Request Parameter]

| Parameter | Type | Description |
|-------------|--------|--|
| UnmountMode | string | Unmount Mode Specifies a mode of unmount. |

| Parameter | Type | Description |
|-----------|------|--|
| | | <ul style="list-style-type: none"> - Normal: Executes unmount according to the number of mounts. - Forced: Unmount forcibly. <p>When the key is omitted, it assumes Normal is specified.</p> |

[Response Parameter]

None

[Precautions]

- Users holding Administrator or Operator privilege can execute this API.
- When the same and shared directory information is mounted on the same mounting destinations for several times, it will be unmounted when the frequency of mounting is 0.

Appendix A List of Privileges for Each API

The following table summarizes for each user type (privilege) which API they can execute.

The following is a breakdown of the list items.

Authorized users

This section describes the authorized users in the "Execution privileges of each authorized user" column in the table below.

- ISM administrator

A user who belongs to an Administrator group and holds an Administrator role.

Can manage resources before they are assigned to tenants and make operations for portions (racks and chassis) that are shared by multiple tenants.

- Administrator

A user who holds an Administrator role but does not belong to an Administrator group.

Can control the partitioning of resources (such as user creation) within the user group to which they belong to.

- 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 to.

- 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 to.

Meanings of symbols in table

Y: Can execute

-: Cannot execute

I: Only ISM administrators can execute

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|--------------------------------|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation 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 | |
| /datacenters | POST | I | - | - | - | - | - | |
| /datacenters/{datacenterid} | DELETE | I | - | - | - | - | - | |
| /datacenters/{datacenterid} | GET | Y | Y | Y | Y | Y | Y | |
| /datacenters/{datacenterid} | PATCH | I | - | - | - | - | - | |
| /event/actions | GET | Y | Y | Y | Y | Y | Y | |
| /event/actions | POST | Y | Y | - | Y | Y | - | |
| /event/actions/{actionid} | DELETE | Y | Y | - | Y | Y | - | |
| /event/actions/{actionid} | PATCH | Y | Y | - | Y | Y | - | |
| /event/actions/{actionid}/test | POST | Y | Y | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|---|--------|---|----------|---------|-------------------------------------|----------|---------|--|
| | | Resource operation 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 | |
| /event/alarms | POST | Y | Y | - | Y | Y | - | |
| /event/alarms/{alarmid} | DELETE | Y | Y | - | Y | Y | - | |
| /event/alarms/{alarmid} | PATCH | Y | Y | - | Y | Y | - | |
| /event/alarms/eventlist | GET | Y | Y | Y | Y | Y | Y | |
| /event/alarms/settings | GET | Y | Y | Y | Y | Y | Y | |
| /event/alarms/settings | PATCH | Y | Y | - | Y | Y | - | |
| /event/alarms/traplist | GET | Y | Y | Y | Y | Y | Y | |
| /event/history | GET | Y | Y | Y | Y | Y | Y | |
| /event/history/audit/export | POST | I | - | - | - | - | - | If not an ISM administrator, you will be notified of lack of privileges. |
| /event/history/audit/logs/{logid} | GET | I | Y | Y | Y | Y | Y | For users other than ISM administrators, searches yield 0 results. |
| /event/history/audit/show | GET | I | Y | Y | Y | Y | Y | For users other than ISM administrators, searches yield 0 results. |
| /event/history/event/export | POST | Y | Y | Y | Y | Y | Y | |
| /event/history/event/logs/{logid} | GET | Y | Y | Y | Y | Y | Y | |
| /event/history/event/show | GET | Y | Y | Y | Y | Y | Y | |
| /event/history/retentionperiod/settings | GET | Y | Y | Y | Y | Y | Y | |
| /event/history/retentionperiod/settings | PATCH | I | - | - | - | - | - | |
| /event/history/trap | GET | Y | Y | Y | Y | Y | Y | |
| /event/history/trap/ignore | GET | Y | Y | Y | Y | Y | Y | |
| /event/history/trap/ignore | POST | Y | Y | - | Y | Y | - | |
| /event/history/trap/ignore/delete | POST | Y | Y | - | Y | Y | - | |
| /event/snmpmanagers | GET | Y | Y | Y | Y | Y | Y | |
| /event/snmpmanagers | POST | Y | Y | - | Y | Y | - | |
| /event/snmpmanagers/{snmpserverid} | DELETE | Y | Y | - | Y | Y | - | |
| /event/snmpmanagers/{snmpserverid} | PATCH | Y | Y | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|------------------------------------|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /floors | GET | Y | Y | Y | Y | Y | Y | |
| /floors | POST | I | - | - | - | - | - | |
| /floors/{floorid} | DELETE | I | - | - | - | - | - | |
| /floors/{floorid} | GET | Y | Y | Y | Y | Y | Y | |
| /floors/{floorid} | PATCH | I | - | - | - | - | - | |
| /ismva/loginstatus | GET | I | - | - | - | - | - | |
| /ismva/power/restart | POST | I | - | - | - | - | - | |
| /ismva/power/stop | POST | I | - | - | - | - | - | |
| /ismva/privilege | POST | I | - | - | - | - | - | |
| /ismva/privilege/settings | GET | I | - | - | - | - | - | |
| /ismva/privilege/settings | POST | Y | Y | Y | - | - | - | |
| /ismva/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 | - | - | - | - | - | |
| /ismva/settings/service | GET | I | - | - | - | - | - | |
| /ismva/settings/sslcert | GET | Y | Y | Y | Y | Y | Y | |
| /ismva/settings/sslcert | PATCH | I | - | - | - | - | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|-----------------------------------|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /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/unmount | POST | I | - | - | - | - | - | |
| /ismva/webserverlog/export | POST | I | - | - | - | - | - | |
| /networks/connections | GET | Y | Y | Y | Y | Y | Y | |
| /networks/connections | PATCH | I | - | - | - | - | - | |
| /networks/differences | GET | Y | Y | Y | Y | Y | Y | |
| /networks/differences | POST | I | - | - | - | - | - | |
| /networks/nodes/{nodeid}/ifgroups | GET | Y | Y | Y | Y | Y | Y | |
| /networks/nodes/{nodeid}/lags | GET | Y | Y | Y | Y | Y | Y | |
| /networks/nodes/{nodeid}/lags | PATCH | Y | Y | - | Y | Y | - | |
| /networks/nodes/{nodeid}/vfabs | GET | Y | Y | Y | Y | Y | Y | |
| /networks/nodes/{nodeid}/vlans | GET | Y | Y | Y | Y | Y | Y | |
| /networks/ports | GET | Y | Y | Y | Y | Y | Y | |
| /networks/refresh | GET | Y | Y | Y | Y | Y | Y | |
| /networks/refresh | POST | Y | Y | Y | Y | Y | Y | |
| /networks/virtualmachines | GET | Y | Y | Y | Y | Y | Y | |
| /networks/virtualswitches | GET | Y | Y | Y | Y | Y | Y | |
| /networks/vlans | POST | Y | Y | Y | Y | Y | Y | |
| /networks/vlans/cancel | POST | Y | Y | Y | Y | Y | Y | |
| /nodegroups | GET | Y | Y | Y | Y | Y | Y | |
| /nodegroups | POST | I | - | - | - | - | - | |
| /nodegroups/{nodegroupid} | DELETE | I | - | - | - | - | - | |
| /nodegroups/{nodegroupid} | GET | Y | Y | Y | Y | Y | Y | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|---|--------|---|----------|---------|-------------------------------------|----------|---------|--|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /nodegroups/{nodegroupid} | PATCH | I | - | - | - | - | - | |
| /nodes | GET | Y | Y | Y | Y | Y | Y | |
| /nodes | POST | I | - | - | - | - | - | |
| /nodes/{nodeid} | DELETE | I | - | - | - | - | - | |
| /nodes/{nodeid} | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid} | PATCH | Y | Y | - | Y | Y | - | Only the ISM administrator can change the built-in location information of the rack. |
| /nodes/{nodeid}/accounts | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/accounts | POST | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/accounts/{accountid} | DELETE | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/accounts/{accountid} | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/accounts/{accountid} | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/alarmstatus/deactivate | POST | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/inventory | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/inventory/refresh | POST | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/led | GET | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/led | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/maintenancemode | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/monitor/itemlist | GET | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/monitor/network | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/monitor/network/history | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/monitor/settings | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/{nodeid}/monitor/settings | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/os | DELETE | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/os | GET | Y | Y | Y | Y | Y | Y | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|--|--------|---|----------|---------|-------------------------------------|----------|---------|--|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /nodes/{nodeid}/os | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/os | POST | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/power | GET | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/power | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/{nodeid}/profiles/assign | POST | Y | - | - | Y | Y | - | |
| /nodes/{nodeid}/profiles/backup | POST | Y | - | - | Y | Y | - | |
| /nodes/{nodeid}/profiles/restore | POST | Y | - | - | Y | Y | - | |
| /nodes/{nodeid}/profiles/unassign | POST | 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/discovery/manual/csv | POST | I | - | - | - | - | - | |
| /nodes/discovery/manual/csvitems | GET | I | - | - | - | - | - | |
| /nodes/firmware/update | POST | Y | Y | - | Y | Y | - | |
| /nodes/firmware/update/cancel | POST | Y | Y | - | Y | Y | - | Must be executed by same user (user ID). |
| /nodes/inventory | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/logs | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/logs/archivedlog/downloadfiles | GET | Y | Y | - | Y | Y | - | |
| /nodes/logs/archivedlog/downloadfiles/create | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/archivedlog/downloadfiles/create/cancel | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/collection/collect | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/collection/collect/cancel | POST | Y | Y | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|---|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /nodes/logs/collection/settings | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/logs/collection/settings | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/logs/files | GET | Y | Y | - | Y | Y | - | |
| /nodes/logs/files/delete | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/files/delete/cancel | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/nodelog/downloadfiles | GET | Y | Y | - | Y | Y | - | |
| /nodes/logs/nodelog/downloadfiles/create | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/nodelog/downloadfiles/create/cancel | POST | Y | Y | - | Y | Y | - | |
| /nodes/logs/nodelog/search | POST | Y | Y | - | Y | Y | - | |
| /nodes/monitor/items | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/monitor/items | POST | Y | Y | - | Y | Y | - | |
| /nodes/monitor/items/{itemid} | DELETE | Y | Y | - | Y | Y | - | |
| /nodes/monitor/items/{itemid} | PATCH | Y | Y | - | Y | Y | - | |
| /nodes/monitor/items/{itemid}/history | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/monitor/network | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/nodegroups/assign | POST | I | - | - | - | - | - | |
| /nodes/nodetags | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/os | GET | Y | Y | Y | Y | Y | Y | |
| /nodes/powercapping | GET | I | - | - | - | - | - | |
| /nodes/powercapping | POST | I | - | - | - | - | - | |
| /nodes/powercapping/{cappingid} | DELETE | I | - | - | - | - | - | |
| /nodes/powercapping/{cappingid} | GET | I | - | - | - | - | - | |
| /nodes/powercapping/{cappingid} | PATCH | I | - | - | - | - | - | |
| /nodes/powercapping/{cappingid}/policy | PATCH | I | - | - | - | - | - | |
| /nodes/powercapping/cancel | POST | I | - | - | - | - | - | |
| /nodes/profiles/assign/cancel | POST | Y | - | - | Y | Y | - | |
| /nodes/profiles/backup/cancel | POST | Y | - | - | Y | Y | - | |
| /nodes/profiles/restore/cancel | POST | Y | - | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|-------------------------------------|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /nodes/profiles/unassign/cancel | POST | Y | - | - | Y | Y | - | |
| /pools | GET | Y | Y | Y | Y | Y | Y | |
| /pools | PATCH | I | - | - | - | - | - | |
| /pools/assign | POST | Y | Y | - | Y | Y | - | |
| /pools/unassign | POST | Y | Y | - | Y | Y | - | |
| /profiles/backups | GET | Y | - | - | Y | Y | Y | |
| /profiles/backups/{backupid} | DELETE | Y | - | - | Y | Y | - | |
| /profiles/backups/export | POST | Y | - | - | Y | Y | - | |
| /profiles/backups/import | POST | Y | - | - | Y | Y | - | |
| /profiles/backups/policy | POST | Y | - | - | Y | Y | - | |
| /profiles/backups/profile | POST | Y | - | - | Y | Y | - | |
| /profiles/categories | GET | Y | - | - | Y | Y | Y | |
| /profiles/categories | POST | Y | - | - | Y | Y | Y | |
| /profiles/export | POST | Y | - | - | Y | Y | - | |
| /profiles/import | POST | Y | - | - | Y | Y | - | |
| /profiles/packages | GET | Y | - | - | Y | Y | Y | |
| /profiles/policies | GET | Y | - | - | Y | Y | Y | |
| /profiles/policies | POST | Y | - | - | Y | Y | - | |
| /profiles/policies/{policyid} | DELETE | Y | - | - | Y | Y | - | |
| /profiles/policies/{policyid} | GET | Y | - | - | Y | Y | Y | |
| /profiles/policies/{policyid} | PATCH | Y | - | - | Y | Y | - | |
| /profiles/policies/groups | GET | Y | - | - | Y | Y | Y | |
| /profiles/policies/groups | POST | Y | - | - | Y | Y | - | |
| /profiles/policies/groups/{groupid} | DELETE | Y | - | - | Y | Y | - | |
| /profiles/policies/groups/{groupid} | GET | Y | - | - | Y | Y | Y | |
| /profiles/policies/groups/{groupid} | PATCH | Y | - | - | Y | Y | - | |
| /profiles/profiles | GET | Y | - | - | Y | Y | Y | |
| /profiles/profiles | POST | Y | - | - | Y | Y | - | |
| /profiles/profiles/{profileid} | DELETE | Y | - | - | Y | Y | - | |
| /profiles/profiles/{profileid} | GET | Y | - | - | Y | Y | Y | |
| /profiles/profiles/{profileid} | PATCH | Y | - | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|---|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /profiles/profiles/groups | GET | Y | - | - | Y | Y | Y | |
| /profiles/profiles/groups | POST | Y | - | - | Y | Y | - | |
| /profiles/profiles/groups/{groupid} | DELETE | Y | - | - | Y | Y | - | |
| /profiles/profiles/groups/{groupid} | GET | Y | - | - | Y | Y | Y | |
| /profiles/profiles/groups/{groupid} | PATCH | Y | - | - | Y | Y | - | |
| /racks | GET | Y | Y | Y | Y | Y | Y | |
| /racks | POST | I | - | - | - | - | - | |
| /racks/{rackid} | DELETE | I | - | - | - | - | - | |
| /racks/{rackid} | GET | Y | Y | Y | Y | Y | Y | |
| /racks/{rackid} | PATCH | I | - | - | - | - | - | |
| /resources/clusters | GET | Y | Y | Y | Y | Y | Y | |
| /resources/clusters/{clusterid} | GET | Y | Y | Y | Y | Y | Y | |
| /resources/inventory/refresh | POST | Y | Y | - | Y | Y | - | |
| /resources/nodes/{nodeid}/cmsmaintenancemode/set | POST | Y | Y | - | Y | Y | - | |
| /resources/nodes/{nodeid}/cmsmaintenancemode/unset | POST | Y | Y | - | Y | Y | - | |
| /resources/nodes/{nodeid}/restart | POST | Y | Y | - | Y | Y | - | |
| /resources/storagepools | GET | Y | Y | Y | Y | Y | Y | |
| /resources/storagepools/{storagepoolid} | GET | Y | Y | Y | Y | Y | Y | |
| /resources/storagepools/{storagepoolid}/history | POST | Y | Y | Y | Y | Y | Y | |
| /resources/storagepools/refresh | POST | Y | Y | Y | Y | Y | Y | |
| /resources/virtualmachines | GET | Y | Y | Y | Y | Y | Y | |
| /resources/virtualmachines/{virtualmachineid} | GET | Y | Y | Y | Y | Y | Y | |
| /resources/virtualmachines/{virtualmachineid}/move | POST | Y | Y | - | Y | Y | - | |
| /resources/virtualmachines/{virtualmachineid}/power/off | POST | Y | Y | - | Y | Y | - | |
| /resources/virtualmachines/{virtualmachineid}/power/on | POST | Y | Y | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|--|--------|---|----------|---------|-------------------------------------|----------|---------|--|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /resources/virtualswitches | GET | Y | Y | Y | Y | Y | Y | |
| /resources/virtualswitches/{virtualswitchid} | GET | Y | Y | Y | Y | Y | Y | |
| /system/ismva/version | GET | Y | Y | Y | Y | Y | Y | |
| /system/licenses | GET | I | - | - | - | - | - | |
| /system/licenses | PATCH | I | - | - | - | - | - | |
| /system/licenses | POST | I | - | - | - | - | - | |
| /system/licenses/delete | POST | I | - | - | - | - | - | |
| /system/settings/cms | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/cms | POST | Y | Y | - | Y | Y | - | |
| /system/settings/cms/{cmsid} | DELETE | Y | Y | - | Y | Y | - | |
| /system/settings/cms/{cmsid} | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/cms/{cmsid} | PATCH | Y | Y | - | Y | Y | - | |
| /system/settings/firmware/{firmwareid} | DELETE | Y | Y | - | Y | Y | - | |
| /system/settings/firmware/documents | POST | Y | Y | Y | Y | Y | Y | |
| /system/settings/firmware/dvd/{repositoryid} | DELETE | Y | Y | - | Y | Y | - | |
| /system/settings/firmware/dvd/import | POST | Y | Y | - | Y | Y | - | |
| /system/settings/firmware/dvd/import/cancel | POST | Y | Y | - | Y | Y | - | Must be executed by same user (user ID). |
| /system/settings/firmware/import | POST | Y | Y | - | Y | Y | - | |
| /system/settings/firmware/import/cancel | POST | Y | Y | - | Y | Y | - | Must be executed by same user (user ID). |
| /system/settings/firmware/repositories | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/firmware/template | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/firmware/list | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/ftp/filelist | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/job/firmwareupdate | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/job/firmwareupdate/{JobId} | DELETE | Y | Y | - | Y | Y | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|--|--------|---|----------|---------|-------------------------------------|----------|---------|---------|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /system/settings/ldaps | GET | I | - | - | - | - | - | |
| /system/settings/ldaps | PATCH | I | - | - | - | - | - | |
| /system/settings/ldaps/switch | POST | I | - | - | - | - | - | |
| /system/settings/repositories/profiles | GET | Y | - | - | Y | Y | Y | |
| /system/settings/repositories/profiles/{repositoryid} | DELETE | Y | - | - | Y | Y | - | |
| /system/settings/repositories/profiles/dvd/import | POST | Y | - | - | Y | Y | - | |
| /system/settings/repositories/profiles/dvd/import/cancel | POST | Y | - | - | Y | Y | - | |
| /system/settings/shareddirectory | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/shareddirectory/{mountid} | DELETE | I | - | - | - | - | - | |
| /system/settings/shareddirectory/{mountid} | GET | Y | Y | - | Y | Y | - | |
| /system/settings/shareddirectory/{mountid} | PATCH | I | - | - | - | - | - | |
| /system/settings/shareddirectory/{usergroupid} | POST | I | - | - | - | - | - | |
| /system/settings/shareddirectory/mount/{mountid} | POST | Y | Y | - | Y | Y | - | |
| /system/settings/shareddirectory/umount/{mountid} | POST | Y | Y | - | Y | Y | - | |
| /system/settings/smtpserver | GET | Y | Y | Y | Y | Y | Y | |
| /system/settings/smtpserver | PATCH | I | - | - | - | - | - | |
| /system/settings/snmptrapsettings | POST | I | - | - | - | - | - | |
| /system/settings/snmptrapsettings | GET | I | - | - | - | - | - | |
| /system/settings/snmptrapsettings/{snmptrapsettingsid} | PATCH | I | - | - | - | - | - | |
| /system/settings/snmptrapsettings/{snmptrapsettingsid} | DELETE | I | - | - | - | - | - | |

| API | | Execution abilities of each authorized user | | | | | | Remarks |
|---------------------------|--------|---|----------|---------|-------------------------------------|----------|---------|--|
| | | Resource operation of entire ISM | | | Resource operation within own group | | | |
| URI | Method | ISM administrator | Operator | Monitor | Administrator | Operator | Monitor | |
| /system/snap | POST | I | - | - | - | - | - | |
| /tasks | GET | Y | Y | Y | Y | Y | Y | |
| /tasks/{taskid} | GET | Y | Y | Y | Y | Y | Y | |
| /usergroups | GET | Y | Y | Y | Y | Y | Y | |
| /usergroups | POST | I | - | - | - | - | - | |
| /usergroups/{usergroupid} | DELETE | I | - | - | - | - | - | |
| /usergroups/{usergroupid} | GET | Y | Y | Y | Y | Y | Y | |
| /usergroups/{usergroupid} | PATCH | I | - | - | - | - | - | |
| /users | GET | Y | Y | Y | Y | Y | Y | If executed by a user not holding an Administrator role, only the user's own information can be retrieved. |
| /users | POST | Y | - | - | Y | - | - | |
| /users/{userid} | DELETE | Y | - | - | Y | - | - | |
| /users/{userid} | GET | Y | Y | Y | Y | Y | Y | If executed by a user not holding an Administrator role, only the user's own information can be retrieved. |
| /users/{userid} | PATCH | Y | Y | Y | Y | Y | Y | If run with a user not holding Administrator role, only the user's own general information can be edited. |
| /users/login | POST | Y | Y | Y | Y | Y | Y | |
| /users/logout | POST | Y | Y | Y | Y | Y | Y | |
| /users/policy | GET | Y | Y | Y | Y | Y | Y | |
| /users/policy | POST | I | - | - | - | - | - | |

Appendix B Examples of REST API Usage

This appendix provides examples for using the REST APIs in ISM, assuming the following cases of operation:

- [Node Registration \(from Discovery to Registration\)](#)

This section provides sample procedures for registering nodes, using the REST APIs for Node Management.

- [List Display of Node Statuses](#)

This section provides sample procedures for displaying a list of node statuses, using the REST APIs for Node Management.

- [Assigning Profiles](#)

This section provides sample procedures for assigning profile to nodes, using the REST APIs for Profile Management.

- [Update Firmware](#)

This section provides sample procedures for updating firmware on nodes, using the REST APIs for Firmware Management.

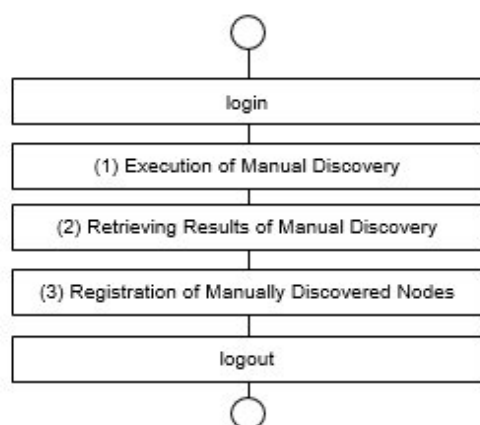
- [Extracting Logs](#)

This section provides sample procedures for extracting logs from nodes, using the REST APIs for Log Management.

B.1 Node Registration (from Discovery to Registration)

This section provides examples of REST API usage for discovering servers and registering them as nodes.

The following is the overview of the process to node registration.



Point

For "login" and "logout" in the above flow, refer to "[3.1.2 Session Authentication](#)."

Based on the overview of processing as described above, this section provides examples of REST API usage for Node Discovery.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates 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: XXXXXXXXX
- IP address: 192.168.1.10
- User name: admin
- Encrypted password: abcdefgh

(1) Execution of Manual Discovery

Discovers a node manually by specifying an IP address and the account information.

Table B.1 REST API for manual node discovery

| REST API | Reference |
|------------------------------|--|
| POST /nodes/discovery/manual | 4.4.1 Execution of Manual Node Discovery |

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/discovery/manual" -X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":{"ManualDiscoverySetting":{"Ranges":[{"IpAddressRange":"192.168.1.10","IpVersion":"V4"}],
"Accounts":[{"AccountType":"Ipmi","PortNum":623,"AccountName":"admin","Password":"abcdefgh",
"Property":{"Ipmi":null,"Ssh":null,
"SnmpV1":{"CommunityName":null},"SnmpV2":{"CommunityName":null},
"SnmpV3":{"SecurityLevel":null,"AuthProtocol":null,"PrivProtocol":null,
"PrivPassword":null,"ContextName":null,"EngineId":null}}
}}}'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesDiscoveryManual-POST-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "ManualDiscoveryId": 1
  }
}
```

(2) Retrieving Results of Manual Discovery

Retrieves the progress and the results of manual discovery.

Table B.2 REST API for retrieving results of manual discovery

| REST API | Reference |
|-----------------------------|---|
| GET /nodes/discovery/manual | 4.4.2 Retrieving Results of Manual Node Discovery |

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/discovery/manual" -X GET
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON) (Processing for discovery incomplete)

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

```

0.0.1.json",
"MessageInfo":[],
"IsmBody":{
  "ManualDiscoveryId":1,
  "Status":"Running",
  "ManualDiscoveredNodes":[],
  "ManualDiscoverySetting":{
    "Ranges":[{"IpAddressRange":"192.168.1.10","IpVersion":"V4"}],
    "Accounts":[{"AccountType":"Ipmi","PortNum":623,"AccountName":"admin",
      "Property":{"Ipmi":null,"Ssh":null,
        "SnmpV1":{"CommunityName":null},"SnmpV2":{"CommunityName":null},
        "SnmpV3":{"SecurityLevel":null,"AuthProtocol":null,"PrivProtocol":null,
          "ContextName":null,"EngineId":null}}
    ]}
  ]}
}
}
}

```

Example of response (JSON) (Processing for discovery completed)

```

{
"SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesDiscoveryManual-GET-Out.
0.0.1.json",
"MessageInfo":[],
"IsmBody":{
  "ManualDiscoveryId":1,
  "Status":"Complete",
  "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 Discovered Nodes

Registers manually discovered nodes in ISM. Execute after confirming that the manual discovery process is complete in "(2) Retrieving Results of Manual Discovery" and that Status of the Manual Discovery Node is Success.

The subsequent syntax examples are based on the following assumptions. You can retrieve manually discovered IDs and manually discovered node IDs by the procedures described in "(2) Retrieving Results of Manual Discovery."

- Manually discovered ID: 1
- Manually discovered node ID: 1

- Node name: Server-1
- Information on mounting position in a rack
 - Rack ID: 1
 - Mounting position: 11 (11 - 12)
 - Number of units in a rack: 2

Note

If you are going to specify information on the mounting positions in racks, execute "[4.3.6 Registration of Racks](#)" before registering manually discovered nodes.

Table B.3 REST API for registration of manually discovered nodes

| REST API | Reference |
|---|---|
| POST /nodes/discovery/manual/{manualdiscoveryid}/{manualnodeid} | 4.4.3 Registration of Manually Discovered Nodes |

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/discovery/manual/1/1" -X POST
--cacert /tmp/certificate.crt
-H "X-IsM-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{ "IsMBody":{ "Node":{ "Name":"Server-1", "Type":"server", "Model":"PRIMERGY RX2540 M4",
  "WebUrl":"http://192.168.1.10", "Description":null, "NodeTagList":[{"NodeTag":"Windows"}],
  "RackInfo":{"RackId":1, "Position":11, "OccupySize":2}, "MountType":null, "PduPosition":null,
  "Outlet":[], "Chassis":null
}}}'
```

Example of response (JSON)

```
{
  "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Nodes/
NodesDiscoveryManualManualDiscoveryIdManualNodeId-POST-Out.0.0.1.json",
  "MessageInfo":[],
  "IsMBody":{
    "Node":{
      "NodeId":10110,
      "Name":"Server-1",
      "Type":"server",
      "Model":"PRIMERGY RX2540 M4",
      "IpAddress":"192.168.1.10",
      "IpVersion":"V4",
      "WebUrl":"http://192.168.1.10",
      "Discription":null,
      "NodeTagList":[{"NodeTag":"Windows"}],
      "RackInfo":{"RackId":1, "Position":11, "OccupySize":2},
      "MountType":null,
      "PduPosition":null,
      "Outlet":[],
      "SlotNum":null,
      "ParentNodeId":null,
      "ParentFabricId":null,
      "ChildNodeList":[],
      "Fabric":[],
      "Status":"Updating",
      "AlarmStatus":"Normal",
      "MaintenanceMode":"Normal",
      "NodeGroupId":8,
```

```

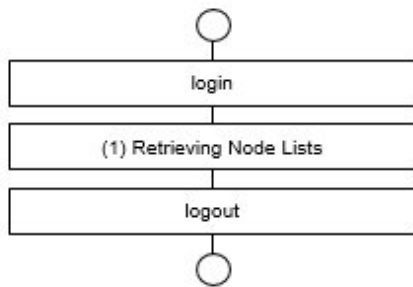
    "UniqInfo": "XXXXXXXX",
    "UpdateDate": "2017-09-21T09:26:43.572Z"
  }
}
}

```

B.2 List Display of Node Statuses

This section provides examples of REST API usage for retrieving the statuses of all devices that are registered as nodes.

The following is the overview of the process to display a list of node statuses.



Point

For "login" and "logout" in the above flow, refer to ["3.1.2 Session Authentication."](#)

Based on the overview of processing as described above, this section provides examples of REST API usage for Node Management.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates 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

Retrieves information on all nodes that are managed by a user group to which users belong to as well as the statuses of respective nodes.

Table B.4 REST API for retrieving node lists

| REST API | Reference |
|------------|--|
| GET /nodes | 4.3.2 List Retrieval for Nodes |

Example of request

```

curl "https://192.168.1.2:25566/ism/api/v2/nodes " -X GET
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"

```

Example of response (JSON)

```

{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/Nodes-GET-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "Nodes": [ {

```

```

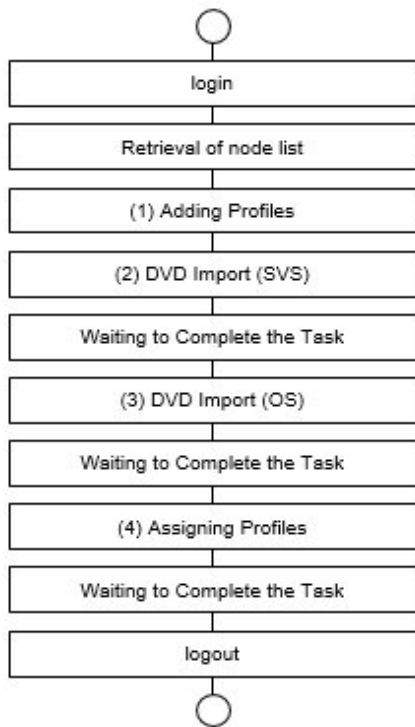
"NodeId":10110,
"Name":"Server-1",
"Type":"server",
  "Model":"PRIMERGY RX2540 M4",
  "IpAddress":"192.168.1.10",
  "IpVersion":"V4",
  "WebUrl":"http://192.168.1.10",
  "Urls":[],
  "Discription":null,
  "NodeTagList":[{"NodeTag":"Windows"}],
  "RackInfo":{"RackId":1, "Position":11, "OccupySize":2},
  "MountType":null,
  "PduPosition":null,
  "Outlet":[],
  "SlotNum":null,
  "ParentNodeId":null,
  "ParentFabricId":null,
  "ChildNodeList":[],
  "Fabric":[],
  "Status":"Normal",
  "AlarmStatus":"Normal",
  "MaintenanceMode":"Normal",
  "NodeGroupId":8,
  "UniqInfo":"XXXXXXXX",
  "UpdateDate":"2017-09-21T09:26:43.572Z"
}, {
  "NodeId":10111,
  "Name":"Server-2",
  "Type":"server",
  "Model":"PRIMERGY RX2540 M4",
  "IpAddress":"192.168.1.11",
  "IpVersion":"V4",
  "WebUrl":"http://192.168.1.11",
  "Urls":[],
  "Discription":null,
  "NodeTagList":[{"NodeTag":"Windows"}],
  "RackInfo":{"RackId":1, "Position":13, "OccupySize":2},
  "MountType":null,
  "PduPosition":null,
  "Outlet":[],
  "SlotNum":null,
  "ParentNodeId":null,
  "ParentFabricId":null,
  "ChildNodeList":[],
  "Fabric":[],
  "Status":"Normal",
  "AlarmStatus":"Normal",
  "MaintenanceMode":"Normal",
  "NodeGroupId":8,
  "UniqInfo":"YYYYYYYY",
  "UpdateDate":"2017-09-21T09:26:43.572Z"
}]
}
}

```

B.3 Assigning Profiles

This section provides examples of REST API usage for assigning profiles for installing the Red Hat Enterprise Linux 7.4 (x86_64) OS on devices that are registered as nodes.

The following is the overview of the process to assign profiles.



Point

- For "login" and "logout" in the above flow, refer to "[3.1.2 Session Authentication](#)."
- For information on "Retrieving Node Lists" in the above flow, refer to "[B.2 List Display of Node Statuses](#)."
- For information on "Waiting to Complete the Task" in the above flow, refer to "[3.8 Task](#)."

Based on the overview of processing as described above, this section provides examples of REST API usage for Profile Management. Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates 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

Adds profiles that specify how to install OSes.

Table B.5 REST API for adding profiles

| REST API | Reference |
|-------------------------|--|
| POST /profiles/profiles | 4.10.3 Adding Profiles |

Example of request (when OS is Red Hat Enterprise Linux 7.4 (x86_64))

```
curl "https://192.168.1.2:25566/ism/api/v2/profiles/profiles " -X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":
{"ProfileName":"SampleProfile","CategoryId":"2","OneTimePasswordKey":"192.168.1.2",
  "ProfileData":{"Server-RX":{"
    "OSInstallation":{"Linux":{"
      "OsType":{"Type":"Red Hat Enterprise Linux 7.4 (x86_64)"},
      "RaidConfig":{"LogicalDiskType":"RAID","RAIDController":"Disabled"},
      "Volumes":{"
        "boot":{"CreatePartition":"Enabled","FileSystem":"ext4",
          "FillToMaximumAllowableSize":"Disabled","PartitionSize":256},
        "swap":{"CreatePartition":"Enabled","FileSystem":"swap",
          "FillToMaximumAllowableSize":"Disabled","PartitionSize":1024},
        "root":{"CreatePartition":"Enabled","FileSystem":"ext4",
          "FillToMaximumAllowableSize":"Enabled"}
      },
      "AdditionalVolumes":[],
      "BasicSettings":{"Language":"English","Keyboard":"United States - English",
        "TimeZone":"Tokyo Standard Time","SystemClockUsesUTC":"Disabled"
      },
      "PackageSettings":{"
        "SelectPackages":{"SelectPackageList":["core"]},
        "SinglePackages":{"SinglePackageList":[]}
      },
      "SystemSettings":{"
        "InstallBootloader":"Enabled","BootloaderLocation":"MBR","KernelParameters":"","
        "SELinux":"Enforcing","UseShadowPasswords":"Enabled","UseMD5":"Enabled",
        "EnableNSCD":"Enabled"
      },
      "AdditionalParameters":{"SelectApplicationList":[]}
    },
    "OsIndividualConfig":{"
      "BasicSettings":{"RootPassword":"U2FsdGVkXl+25IsK4ZPpgfJitxBE2XM1IqSyuLEMy0M="},
      "NetworkSettings":{"GetComputerNameViaDNS":"Enabled","DhcpEnable":"Enabled",
        "NetworkInterface":{"IPv4":{}}}
    }
  }}}
}'
```

Example of response (JSON)

```
{
  "SchemaType":"https://192.168.1.2:25566/ism/schema/v2/Profiles/ProfilesProfiles-POST-Out.
0.0.1.json",
  "MessageInfo":[],
  "IsmBody":{"
    "ProfileId":"1",
    "ProfileName":"SampleProfile"
  }
}
```

(2) DVD Import (SVS)

Imports the ServerView Suite DVD to be used in OS installation.

Table B.6 REST API for importing DVDs

| REST API | Reference |
|--|------------------------------------|
| POST /system/settings/repositories/profiles/dvd/import | 4.10.29 DVD Import |

Example of request (when MediaType is ServerView Suite DVD)

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/repositories/profiles/dvd/import " -X
POST
```

```
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":{"MediaType" : "ServerView Suite DVD","FilePath" : "SVIM_12.17.09.04.iso"}}'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/System/
SystemSettingsRepositoriesProfilesDvdImport-POST-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "TaskId": "10"
  }
}
```

(3) DVD Import (OS)

Imports the DVD with the OS to be used in OS installation.

Table B.7 REST API for importing DVDs

| REST API | Reference |
|--|------------------------------------|
| POST /system/settings/repositories/profiles/dvd/import | 4.10.29 DVD Import |

Example of request (when MediaType is Red Hat Enterprise Linux 7.4 (x86_64))

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/repositories/profiles/dvd/import " -X
POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":{"MediaType" : "Red Hat Enterprise Linux 7.4 (x86_64)",
  "FilePath" : "rhel-server-7.4-x86_64-dvd.iso"}}'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/System/
SystemSettingsRepositoriesProfilesDvdImport-POST-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "TaskId": "11"
  }
}
```

(4) Assigning Profiles

Assigns profiles to nodes.

Table B.8 REST API for assigning profiles

| REST API | Reference |
|---|--|
| POST /ism/api/v2/nodes/{nodeid}/profiles/assign | 4.10.8 Assigning Profiles to Nodes |

Example of request (with Node ID: 10110 and Profile ID: 1)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10110/profiles/assign " -X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":{"ProfileId" : "1"}}'
```

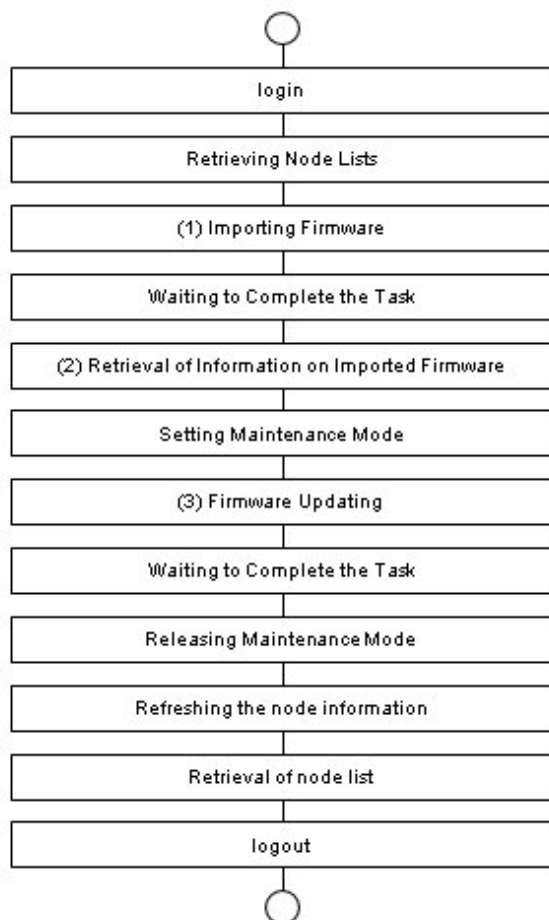
Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/Nodes/NodesNodeIdProfilesAssign-POST-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "TaskId": "12"
  }
}
```

B.4 Update Firmware

This section provides examples of REST API usage for Firmware Management, assuming updating of firmware on devices that are registered as nodes.

The following is the overview of the process for updating firmware.



Point

- For "login" and "logout" in the above flow, refer to "[3.1.2 Session Authentication](#)."
- For information on "Retrieving Node Lists" in the above flow, refer to "[B.2 List Display of Node Statuses](#)."
- For information on "Waiting to Complete the Task" in the above flow, refer to "[3.8 Task](#)."

Based on the overview of processing as described above, this section provides examples of REST API usage for Firmware Management.

Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates 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) Importing Firmware

Refer to the node IDs you retrieved in the node list in advance, then check the firmware information. After checking, download the firmware to be applied. After downloading, forward the firmware to be applied to the target servers to the FTP server of the ISM-VA.

After forwarding the firmware, use this REST API to register the firmware in the repository of the ISM-VA.



Point

- For information on how to forward the firmware to the FTP server of the ISM-VA, refer to "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 Detailed Node Information](#)" or "[4.6.3 Individual Retrieval of Detailed Node Information](#)."

Table B.9 REST API for starting Import Firmware

| REST API | Reference |
|---------------------------------------|---|
| POST /system/settings/firmware/import | 4.11.9 Individual Import Firmware |

Example of request (when importing iRMC firmware (Version 8.12F&3.0) for PRIMERGY RX200 S8)

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/import" -X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{ "IsmBody": { "Path": "RX200_S8", "FirmwareType": "iRMC", "Model": "RX200 S8",
"Version": "8.12F&3.0" } }
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/System/SystemSettingsFirmwareImport-
POST-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "TaskId": "1",
    "CancelUri": "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/import/cancel"
  }
}
```



Point

As for the respective values for FirmwareType, Model and Version to be specified in the request, execute the following REST API to look up the applicable FirmwareType, Model and VersionExample:

Table B.10 REST API for retrieving version number templates

| REST API | Reference |
|--|---|
| GET /system/settings/firmware/template | 4.11.6 Retrieval of Version Number Template Information |

Example of request

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/template " -X GET
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
```

Excerpt from response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/System/SystemSettingsFirmwareTemplate-GET-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "VersionTemplateList": [
      {
        "FirmwareType": "iRMC",
        "ModelList": [
          {
            "Model": "RX100 S7",
            "VersionTemplate": ".*A&.*",
            "VersionExample": "6.62A&3.42"
          },
          (Omitted)
          {
            "Model": "RX200 S8",
            "VersionTemplate": ".*F&.*",
            "VersionExample": "7.82F&3.60"
          },
          (Omitted)
          {
            "Model": "PRIMEQUEST 3800L",
            "VersionTemplate": "PA*",
            "VersionExample": "PA17082"
          }
        ]
      }
    ]
  }
}
```

(2) Retrieval of Information on Imported Firmware

After completing a firmware import task, retrieves the information on the imported firmware.

Table B.11 REST API for retrieving information on imported firmware

| REST API | Reference |
|---|--|
| GET /system/settings/firmware/list?nodeid={value} | 4.11.5 List Retrieval for Firmware |

Example of request (Display list of firmware applicable to Node IDs 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/system/settings/firmware/list?nodeid=10110&nodeid=10111" -X GET
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
```

Example of response (JSON)

```
{
  "SchemaType": "https://10.21.114.117:25566/ism/schema/v2/System/SystemSettingsFirmwareList-GET-Out.0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "FirmwareList": [
      {
        "FirmwareId": 1,
        "NodeId": 10110,
        "ModelName": "RX200 S8",
        "FirmwareName": "RX200 S8_iRMC",
        "RepositoryName": "Individual Repository Administrator",
        "FirmwareVersion": "8.12F&3.0",
        "OperationMode": "Online",
        "FirmwareType": "iRMC",
        "DiskUsage": "31",
        "RegisterDate": "2017-09-22T04:00:50.497Z"
      },
      {
        "FirmwareId": 1,
        "NodeId": 10111,
        "ModelName": "RX200 S8",
        "FirmwareName": "RX200 S8_iRMC",
        "RepositoryName": "Individual Repository Administrator",
        "FirmwareVersion": "8.12F&3.0",
        "OperationMode": "Online",
        "FirmwareType": "iRMC",
        "DiskUsage": "31",
        "RegisterDate": "2017-09-22T04:00:50.497Z"
      }
    ]
  }
}
```

Use the FirmwareName, FirmwareVersion, NodeId, OperationMode, and RepositoryName from the retrieved information when executing Update Firmware of REST API.

Setting Maintenance Mode

Sets into Maintenance Mode the nodes on which to apply the firmware.



When you set the value for the request parameter (AutoMaintenance) of the Update Firmware to "true" on ISM 2.2.0.c or later, this procedure is not required because setting/releasing of the maintenance mode is performed automatically.

For detailed information, refer to "4.11.1 Starting Update Firmware."

Table B.12 REST API for changing Maintenance Mode

| REST API | Reference |
|---------------------------------------|--|
| PATCH /nodes/{nodeid}/maintenancemode | 4.3.33 Changing from/to Maintenance Mode |

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10100/maintenancemode" -X PATCH
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
```

```
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":{"Node":{"MaintenanceMode":"Maintenance"}}}'
```

Excerpt from response (JSON)

```
{
  "MessageInfo": [],
  "SchemaType": "https://192.168.10.160:25566/ism/schema/v2/Nodes/NodesNodeIdMaintenanceMode-
PATCH-Out.0.0.1.json",
  "IsmBody": {
    "Node": {
      "MaintenanceMode": "Maintenance"
    }
  },
}
```

(3) Firmware Updating

Use the firmware stored in the repository when you start Update Firmware.



Point

If you also imported any documents when you imported firmware, you can check those documents.

For information on checking documents, refer to ["4.11.3 List Retrieval for Firmware Documents."](#)

Table B.13 REST API for starting Update Firmware

| REST API | Reference |
|-----------------------------|---|
| POST /nodes/firmware/update | 4.11.1 Starting Update Firmware |

Example of request (when applying iRMC firmware (Version 8.12F&30) of PRIMERGY RX200 S8 to Node IDs: 10110 and 10111)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/firmware/update" -X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody": {"UpdateRequest": [ {"NodeId":10110, "FirmwareName":"RX200 S8_iRMC",
"RepositoryName":"Individual Repository Administrator", "FirmwareVersion":"8.12F&3.0",
"OperationMode":"Online"}, {"NodeId":10111, "FirmwareName":"RX200 S8_iRMC",
"RepositoryName":"Individual Repository Administrator", "FirmwareVersion":"8.12F&3.0",
"OperationMode":"Online"} ] } }'
```

Example of response (JSON)

```
{
  "SchemaType": "https://192.168.1.2:25566/ism/schema/v2/nodes/NodesFirmwareUpdate-POST-Out.
0.0.1.json",
  "MessageInfo": [],
  "IsmBody": {
    "TaskId": "2",
    "CancelUri": "https://192.168.1.2:25566/ism/api/v2/nodes/firmware/update/cancel"
  }
}
```



Note

Even after a Update Firmware task has completed, on some devices Update Firmware becomes effective only by restarting the node. Restart such nodes any time as needed. For information on devices that need to be restarted, refer to the section on "Behavior during updates" in "ServerView Infrastructure Manager V2.2 User's Manual" - "2.2.4.2 Update Firmware."

Releasing Maintenance Mode

Releases Maintenance Mode on the nodes on which application of firmware has completed.



Point

When you set the value for the request parameter (AutoMaintenance) of the Update Firmware to "true" on ISM 2.2.0.c or later, this procedure is not required because setting/releasing of the maintenance mode is performed automatically.

For detailed information, refer to "4.11.1 Starting Update Firmware."

Table B.14 REST API for changing Maintenance Mode

| REST API | Reference |
|---------------------------------------|--|
| PATCH /nodes/{nodeid}/maintenancemode | 4.3.33 Changing from/to Maintenance Mode |

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10100/maintenancemode" -X PATCH
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
-d '{"IsmBody":{"Node":{"MaintenanceMode":"Normal"}}}'
```

Excerpt from response (JSON)

```
{
  "MessageInfo": [],
  "SchemaType": "https://192.168.10.160:25566/ism/schema/v2/Nodes/NodesNodeIdMaintenanceMode-
PATCH-Out.0.0.1.json",
  "IsmBody": {
    "Node": {
      "MaintenanceMode": "Normal"
    }
  }
}
```

Refreshing the node information

After clearing Maintenance Mode, the node information must be refreshed in order to check whether the firmware was correctly applied to the devices.



Point

On ISM 2.2.0.c or later, it is not required to refresh the node information because the node information will be refreshed after the offline updates.

Table B.15 REST API for retrieving node information

| REST API | Reference |
|--|--|
| POST /nodes/{nodeid}/inventory/refresh | 4.6.1 Instruction to Execute Retrieval of Node Information |

Example of request (with Node ID: 10110)

```
curl "https://192.168.1.2:25566/ism/api/v2/nodes/10100/inventory/refresh" -X POST
--cacert /tmp/certificate.crt
-H "X-Ism-Authorization:123456789"
-H "Content-Type:application/JSON;charset=UTF8"
```

Excerpt from response (JSON)

```
{
  "MessageInfo": [],
  "SchemaType": "https://192.168.10.160:25566/ism/schema/v2/Nodes/NodesNodeIdInventoryRefresh-
POST-Out.0.0.1.json",
  "IsmBody": {
    "RefreshDate": "2017-09-22T06:56:00.668Z"
  }
}
```

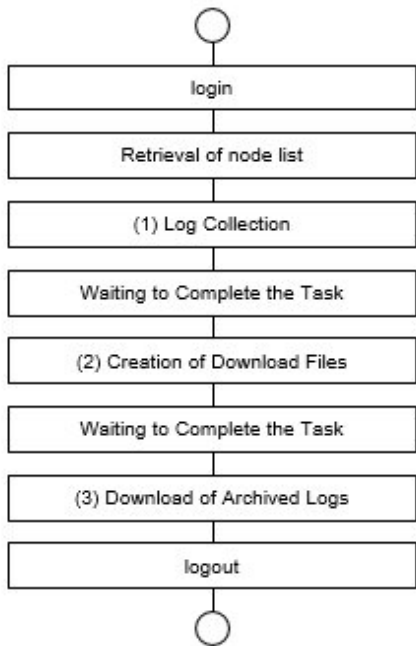
Retrieval of node list

After completing refreshing of the node information, retrieve a list of the nodes. Check the firmware information to confirm whether the firmware was applied to the devices correctly.

B.5 Extracting Logs

This section provides examples of REST API usage for Log Management, assuming that server archived logs (hardware logs and operating system logs) from all devices registered as nodes are collected and downloaded any time as needed.

The following is the overview of the process to extracting logs.



Point

- For "login" and "logout" in the above flow, refer to "[3.1.2 Session Authentication](#)."
- For information on "Retrieving Node Lists" in the above flow, refer to "[B.2 List Display of Node Statuses](#)."
- For information on "Waiting to Complete the Task" in the above flow, refer to "[3.8 Task](#)."

Based on the overview of processing as described above, this section provides examples of REST API usage for Log Management. Moreover, these examples of REST API usage are described as examples of curl command use.

The subsequent syntax examples are based on the following assumptions.

- The IP address of the ISM-VA is assumed to be "192.168.1.2."
- Certificates 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, perform 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

Registers the settings for log collection for all nodes with any status other than "Exempt", such as "Idle."

After retrieving the settings for log collection, you can use these retrieved settings as parameters for changing the current log collection settings.

Disable any schedule settings, and then specify collection of both hardware log (HWLogEnable) and operating system log (OSLogEnable).



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 collecting logs from the node ID of each server.

Table B.19 REST API for starting log collection

| REST API | Reference |
|-------------------------------------|--|
| POST /nodes/logs/collection/collect | 4.12.5 Collecting Logs |

Example of request (with Node IDs: 10110 and 10111)

```
curl "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, creates a download file of the archived log.

The following is an example of creating a download file of the latest archived log.

Table B.20 REST API for creating download files for archived logs

| REST API | Reference |
|---|---|
| POST /nodes/logs/archivedlog/downloadfiles/create | 4.12.9 Creating Archived Log Download Files |

Example of request (with Node IDs: 10110 and 10111)

```

curl "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

Retrieves the corresponding download URLs to 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 describes detailed information about the following parameters:

- [4.10.3 Adding Profiles](#)
- [4.10.5 Individual Retrieval of Profiles](#)
- [4.10.6 Updating Profiles](#)
- [4.10.17 Adding Policies](#)
- [4.10.19 Individual Retrieval of Policies](#)
- [4.10.20 Updating Policies](#)

C.1 Server-BX

| Parameter | Type | Description |
|---|--------|--|
| BIOS | object | BIOS Settings |
| SasController | string | Specifies the operation of the onboard SAS/SATA storage controller unit (SCU). If none are set, specifies null. - Enabled: Enables SCU. - Disabled: Disables SCU. |
| SasSataOpRom | string | Specifies the operation of Option ROM for SAS/SATA controller. Specify when SasController is Enabled. If none are set, specifies null. - Enabled: Enables Option ROM. - Disabled: Disables Option ROM. |
| SasSataDriver | string | Specifies the type of Option ROM for SAS/SATA controller. Specify when SasSataOpRom is Enabled. If none are set, specifies null. - LSI MegaRAID: Uses Option ROM which uses Embedded MegaRAID. - Intel RSTe: Uses Intel RSTe-use Option ROM. |
| HyperThreading | string | Specifies the CPU's Hyper Threading Technology operation. If the installed CPU does not support this function, this setting has no meaning. If none are set, specifies null. - Enabled: Enables function. - Disabled: Disables function. |
| XDBitfunctionalityAndNXMemoryProtection | string | Specifies the CPU's Execute Disable Bit operation. This function is also called XD (eXecute Disable) bit or NX (No eXecute) bit. |

| Parameter | Type | Description |
|--------------------------|--------|--|
| | | <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| VirtualizationTechnology | string | <p>Specifies operation of the CPU's virtualization support function.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| IntelVTd | string | <p>Specifies the CPU's Virtualization Technology for Directed I/O function operation.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| PowerTechnologyCpu | string | <p>Specifies the CPU's power management operation.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Energy Efficient: Behavior optimized for power-saving. - Custom: Detailed behavior setup by using additional setting items. - Disabled: Disables power management function. |
| EnhancedSpeedStep | string | <p>Specifies operation of power saving functions.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| TurboMode | string | <p>Specifies Turbo Boost Technology behavior of a CPU.</p> <p>If the installed CPU does not support this function, this function is set to regardless of this setting.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| NUMA | string | <p>Specifies operation of NUMA (Non-Uniform Memory Access) function.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables NUMA function. - Disabled: Disables NUMA function. |
| DDR_Performance | string | <p>Specifies operation of memory module.</p> <p>Memory modules operate with different speeds (Frequencies).</p> <p>The faster the speed, the higher the performance.</p> <p>The slower the speed the more the power saved.</p> <p>The available memory speeds differ depending on the installed memory module configurations.</p> |

| Parameter | Type | Description |
|---------------------------|--------|---|
| | | <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Low-Voltage optimized: The fastest setting available with low voltage - Energy optimized: The slowest setting available with power-saving - Performance optimized: The fastest setting available for achieving the highest performance |
| Csm | string | <p>Specifies the CSM (Compatibility Support Module) execution operation.</p> <p>Legacy operating system can be booted only when the CSM is loaded.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: CSM is executed to ensure Legacy or UEFI operating system can startup. - Disabled: CSM is not executed to ensure only UEFI operating system can startup. |
| BootOptionFilter | string | <p>Specifies boot operation of a drive.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - UEFI and Legacy: Bootable from UEFI OS drive and Legacy OS drive. - Legacy only: Bootable only from Legacy OS drive. - UEFI only: Bootable only from UEFI OS drive. |
| LaunchPxeOpRomPolicy | string | <p>Specifies the PXE Option ROM to be booted.</p> <p>For PXE boot, there are available normal (Legacy) PXE boot and UEFI PXE boot.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Do not launch: Option ROM not booted. - UEFI only: Only UEFI Option ROM booted. - Legacy only: Only Legacy Option ROM booted. |
| LaunchStorageOpRomPolicy | string | <p>Specifies the Storage Option ROM to be booted.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Do not launch: Storage Option ROM not booted. - UEFI only: Only UEFI Storage Option ROM booted. - Legacy only: Only Legacy Storage Option ROM booted. |
| OtherPciDeviceRomPriority | string | <p>Specifies the Option Rom booted with the devices other than a network, mass storage device and video.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - UEFI OpROM: Only UEFI Option ROM booted. - Legacy OpROM: Only Legacy Option ROM booted. |
| NetworkStack | string | <p>Specifies whether UEFI Network Stack can be used for network access on UEFI.</p> |

| Parameter | Type | Description |
|------------------|--------|---|
| | | <p>For example, when unable to use UEFI network stack, UEFI install cannot be executed via PXE.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Disabled: Cannot use UEFI network stack. - Enabled: Can use UEFI network stack. |
| IPv4PxeSupport | string | <p>Specifies whether PXE UEFI Boot with IPv4 can be used with UEFI mode for installation of an operating system.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Disabled: Cannot use PXE UEFI Boot with IPv4. - Enabled: Can use PXE UEFI Boot with IPv4. |
| IPv6PxeSupport | string | <p>Specifies whether PXE UEFI Boot with IPv6 can be used with UEFI mode for installation of an operating system.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Disabled: Cannot use PXE UEFI Boot with IPv6. - Enabled: Can use PXE UEFI Boot with IPv6. |
| LaunchSlot1Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 1.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot2Oprom | string | <p>Specifies the execution of the extended ROM of the option card mounted in PCI slot 2.</p> <p>You can specify this for multiple slots in the profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot3Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 3.</p> <p>You can specify this for multiple slots in profile. Do not specify this for a slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot4Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 4.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. |

| Parameter | Type | Description |
|----------------------|--------|--|
| | | - Disabled: Extended ROM not executed. |
| LaunchSlot5Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 5.</p> <p>You can specify this for multiple slots in profile. Do not specify this for a slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot6Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 6.</p> <p>You can specify this for multiple slots in profile. Do not specify this for a slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| SyncRTCwithMMB | string | <p>Specifies whether to synchronize Real Time Clock with the management blade.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Synchronizes. - Disabled: Does not synchronize. |
| AdjustDateTime | string | <p>Specifies whether to modify the time of the server based on the time of management server when the profile is assigned.</p> <p>This item can be set up only when SyncRTCwithMMB is Disabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Local Time: Specifies time according to the time zone of the management server. - UTC: Specifies time converted to UTC from the time zone of the management server. |
| iRMC | object | Settings of iRMC (Integrated Remote Management Controller) |
| ConfPostErrorHalt | string | <p>Specifies performance at startup error of a server</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Boot continued even after the occurrence of an error. - Halt on errors: Boot interrupted until the key entry when an error occurs. |
| ConfPowerControlMode | string | <p>Specifies the power-saving and noise canceling operations for a server.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - O/S Controlled: Control by OS followed. - Minimum Power: Operation where priority is placed on reduction in power consumption. |

| Parameter | Type | Description |
|--------------------------|---------|---|
| ConfPowerFailBehavior | string | <p>Specifies the power source operation upon power restore operation after interruption of AC power source input.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - As Before: State upon power source interruption maintained (Powered on if a server is powered on upon interruption/ Not powered on if the server is powered off.) - Remain Off: Always powered off. - Always On: Always powered on. |
| ConfSoftWatchdogEnable | string | <p>Specifies whether to use Software Watchdog to perform periodic communication confirmations while an OS is running.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Communication monitored. - Disabled: Communication not monitored. |
| ConfSoftWatchdogBehavior | string | <p>Specifies an operation when the OS does not communicate due to Software Watchdog.</p> <p>Specifies when ConfSoftWatchdogEnable is Enabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. |
| ConfSoftWatchdogTime | integer | <p>Specifies a value from 1-100 minutes for monitoring time by the Software Watchdog.</p> <p>Specifies when ConfSoftWatchdogEnable is Enabled.</p> <p>It is judged as unable to communicate when there is no communication after a specified time here.</p> <p>If none are set, specifies null.</p> |
| ConfBootWatchdogEnable | string | <p>Specifies the monitoring the period between POST completion and OS start, with use of Boot Watchdog.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Period monitored. - Disabled: Period not monitored. |
| ConfBootWatchdogBehavior | string | <p>Specifies behavior for the case when an OS does not start within the specified time in Boot Watchdog.</p> <p>Specifies when ConfBootWatchdogEnable is Enabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. |
| ConfBootWatchdogTime | integer | <p>Specifies a value from 1-100 minutes for the Boot Watchdog monitoring time.</p> |

| Parameter | Type | Description |
|---------------------------------|---------|--|
| | | <p>Specifies when ConfBootWatchdogEnable is Enabled.</p> <p>It is judged as abnormality when OS cannot start after a specified time here.</p> <p>If none are set, specifies null.</p> |
| ConfBmcSnmpServiceEnable | string | <p>Specifies SNMP service performance at iRMC.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables the operation. - Disabled: Disables the operation. |
| ConfBMCSnmpServicePort | integer | <p>Specifies a port where an SNMP service is in an idle state.</p> <p>Typically it becomes the UDP 161 port.</p> <p>If none are set, specifies null.</p> |
| ConfBMCSnmpServiceEnableV3Only | string | <p>Specifies the SNMP protocol.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - All (SNMPv1/v2c/v3): All protocol support (SNMPv1/v2c/v3) - SNMPv3 only:SNMPv3 |
| ConfBMCSnmpServiceCommunityName | string | <p>Specifies a community name for when it is SNMP v1/v2c.</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 18 at a maximum.</p> <p>Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:_?;-@&)%!.</p> <p>Blank symbols and \ may not be used.</p> |
| ConfBMCSnmpV3UserServiceEnabled | string | <p>Specifies SNMPv3 support operations for a user.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables it. - Disabled: Disables it. |
| ConfBMCSnmpV3UserAuthType | string | <p>Specifies authentication protocols that SNMPv3 uses for authentication.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SHA: Uses SHA (Secure Hash Algorithm) for authentication. - MD5: Uses MD5 (Message-Digest Algorithm 5) authentication. - none: Does not use authentication. |
| ConfBMCSnmpV3UserPrivType | string | <p>Specifies encryption protocol that SNMPv3 uses to encrypt SNMPv3 traffic.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - DES: Uses DES (Digital Encryption Standard) for SNMPv3 traffic encryption. - AES: Uses AES (Advanced Encryption Standard) 128 bits encryption for SNMPv3 traffic encryption. |

| Parameter | Type | Description |
|------------------------------|--------|--|
| | | - none: Does not use encryption. |
| ConfBMCSnmpV3UserAccessType | string | Specifies access privilege of a user. "Read only" has been set as fixed. If none are set, specifies null. - Read Only: Read-only |
| ConfBMCSnmpTrapCommunityName | string | Specifies the SNMP Community Name. If none are set, specifies null. The number of characters specifiable is 18 at a maximum. Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/*,._?;-@&)%!. Blank symbols and \ may not be used. |
| ConfBMCSnmpV3UserSelected | string | Specifies a SNMPv3 user already defined as SNMPv3 trap destination. Specifies a user name that has been created on iRMC. If none are set, specifies null. A user name can be specified with 16 characters at a maximum. A valid user name should start with an alphabet. For the remaining part of the name, it can accept only alphabets, digits, under bar, dash, period and at mark (@). Blank symbols may not be used. |
| ConfBMCSnmpTrapDestName1 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at a maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.). |
| ConfBMCSnmpTrapDestName2 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at a maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.). |
| ConfBMCSnmpTrapDestName3 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." If none are set, specifies null. The number of characters specifiable is 64 at a maximum. Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.). |
| ConfBMCSnmpTrapDestName4 | string | Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination." |

| Parameter | Type | Description |
|--------------------------|--------|---|
| | | <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName5 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName6 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName7 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpProtocol1 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol2 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol3 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c |

| Parameter | Type | Description |
|----------------------|--------|--|
| | | - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol4 | string | Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol5 | string | Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol6 | string | Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol7 | string | Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| IOVirtualization | object | Settings of Virtual IO For details, refer to " D.3 IOVirtualization ." |
| OSInstallation | object | Settings of OS Installation For details, refer to " D.4 OSInstallation ." |

C.2 Storage-DX

| Parameter | Type | Description |
|---------------|--------|---|
| StandRaid | object | RAID Settings |
| RaidGroup | array | List of RAID Groups |
| RaidGroupName | string | Name of RAID Group |
| RaidLevel | string | RAID Level of Disk Array to be built - RAID1: RAID level 1 - RAID5: RAID level 5 - RAID6: RAID level 6 |

| Parameter | | | Type | Description | |
|-----------|------------|----------------|---|--|-----------|
| | | | | - RAID1+0: RAID level 1+0 | |
| | | DiskCount | integer | The Number of Disks used in Raid Group | |
| | | DiskKind | object | Disk Information List to be registered as Raid Group | |
| | | Inch | string | Disk Inch | |
| | | | | - 2.5Inch | |
| | | | | - 3.5Inch | |
| | | Type | string | Disk Interface | |
| | | | | - SAS: SAS | |
| | | | | - NL-SAS: Near line SAS | |
| | | | | - SED: Disk for self-encrypting | |
| | | - SSD: SSD | | | |
| Size | string | Disk Capacity | | | |
| | | - 100GB | | | |
| | | - 200GB | | | |
| | | - 300GB | | | |
| | | - 400GB | | | |
| | | - 450GB | | | |
| | | - 600GB | | | |
| | | - 800GB | | | |
| | | - 900GB | | | |
| | | - 1TB | | | |
| - 1.2TB | | | | | |
| - 1.6TB | | | | | |
| - 1.8TB | | | | | |
| - 2TB | | | | | |
| - 3TB | | | | | |
| - 4TB | | | | | |
| - 6TB | | | | | |
| Volumes | | array | List of Volume Information | | |
| | VolumeName | string | Volume Name | | |
| | VolumeSize | string | Volume Size | | |
| GHotSpare | | | object | Setting of Hot Spares | |
| | GHotDisks | | array | List of Hot Spares | |
| | Disks | array | Disk Information List to be registered as Hot Spare | | |
| | | | Inch | string | Disk Inch |
| | | | | | - 2.5Inch |
| | | | - 3.5Inch | | |
| Type | string | Disk Interface | | | |

| Parameter | | | | Type | Description | | |
|--------------|----------------|---------------|--------------|--------|---|---|----------------|
| | | | | | <div>- SAS: SAS</div> <div>- NL-SAS: Near line SAS</div> <div>- SED: Disk for self-encrypting</div> <div>- SSD: SSD</div> | | |
| | | | Size | string | Disk Capacity <div><div>- 100GB</div><div>- 200GB</div><div>- 300GB</div><div>- 400GB</div><div>- 450GB</div><div>- 600GB</div><div>- 800GB</div><div>- 900GB</div><div>- 1TB</div><div>- 1.2TB</div><div>- 1.6TB</div><div>- 1.8TB</div><div>- 2TB</div><div>- 3TB</div><div>- 4TB</div><div>- 6TB</div></div> | | |
| HostAffinity | | | | object | Settings of Host Affinity | | |
| | HostAffinities | | | array | List of Host Affinity | | |
| | | LunGroup | | | object | LUN Group Information | |
| | | | LunGroupName | | | string | LUN Group Name |
| | | Volumes | | | array | Information of Volume | |
| | | | VolumeName | | | string | Volume Name |
| | PortGroup | | | object | Port Group Information | | |
| | | PortGroupName | | | string | Port Group Name | |
| | | Ports | | | array | Information of Ports that belong to a port group | |
| | | | PortNumber | | | string | Port Number |
| | HostGroup | | | object | Information of Host Group | | |
| | | HostGroupName | | | string | Host Group Name | |
| | | HostType | | | string | Host Type <div><div>- iscsi:iSCSI</div><div>- fc:FC</div></div> | |
| | | FcParameter | | | array | Host Information for FC Designate when HostType is "FC." | |

| Parameter | | | | | Type | Description |
|-----------|----------------|--|----------------|-----------|--------|--|
| | | | | HostName | string | Host Name |
| | | | | HostWwn | string | Host WWN |
| | | | IscsiParameter | | array | Host Information for iSCSI Designate when HostType is "iSCSI." |
| | | | | HostName | string | Host Name |
| | | | | IscsiName | string | iSCSI Name Specifies "iqn." or "eui." at the head. |
| | | | DetailSettings | | | |
| | PostRunCommand | | | | string | Control Command to be executed in ETERNUS before running profile assigning operation (structuring of RAID/Hot spare) |
| | PreRunCommand | | | | string | Control Command to be executed in ETERNUS after running profile assigning operation (structuring of RAID/Hot spare) |

C.3 Switch-SRX

| Parameter | | | Type | Description |
|-----------|----------|----------|--------|--|
| Snmp | | | object | SNMP Function Information |
| | Service | | object | Setting Enabling/Disabling of SNMP Agent Function and SNMP Trap Function |
| | | Mode | string | Availability/Non-availability of SNMP Function - on: Enables SNMP Function. - off: Disables SNMP Function. |
| | Agent | | object | SNMP Agent Function |
| | | Address | object | Address Information of SNMP Agent |
| | | Address | string | Address of SNMP Agent Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254,192.0.0.1- 223.255.255.254" When 0.0.0.0 is specified, deletes all settings. |
| | Engineid | | object | SNMP Engine ID Information |
| | | Engineid | string | SNMP Engine ID Specifies 1-27 characters as a string. Specifies when using SNMPv3. |
| | Manager | | array | SNMP Manager Function Setting available for up to 8 at a maximum. Specifies when using SNMPv1, SNMPv2c. |
| | | Number | string | SNMP Host Definition Number Specifies "0"- "7" in the character string. |
| | | Address | string | IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" When 0.0.0.0 is specified, allow access from all hosts. |

| Parameter | | Type | Description |
|-----------|-----------|--------|---|
| | Community | string | SNMP Community Name Specifies either "public" (communication with any host enabled) or any string consists of 1-32 characters. |
| | | string | Availability or Unavailability of Transmission of SNMP Trap - v1: Transmits a SNMPv1 trap. - v2c: Transmits a SNMPv2 trap. - off: Does not transmit SNMP trap. |
| | | string | Writing Permission from the SNMP Manager - enable: Writing from SNMP manager is permitted. - disable: Writing from SNMP manager is not permitted. |
| | User | | SNMP User Function Setting available for up to 8 at a maximum. Specifies when using SNMPv3. |
| | | string | SNMP User Definition Number Specifies "0"- "7" in the character string. |
| | | object | SNMP User Name Information |
| | | string | SNMP User Name Specifies either "public" (communication with any host enabled) or any string consists of 1-32 characters. |
| | | object | SNMP Host Address Information |
| | | string | SNMP Host Definition Number Specifies "0"- "7" in the character string. |
| | | string | IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, allow access from all IPv4 hosts. Specifies "::2- fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, allow access from all IPv6 hosts. |
| | | object | SNMP Trap Notification Host Address Information |
| | | string | SNMP Host Definition Number Specifies "0"- "7" in the character string. |
| | | string | IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2- fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |
| | Auth | | SNMP Authentication Protocol Information |
| | Protocol | string | SNMP Authentication Protocol - md5: Uses MD5. |

| Parameter | | | | Type | Description |
|-----------|----------|----------|----------|--|---|
| | | | | | <ul style="list-style-type: none">- sha: Uses SHA.- none: Does not use a protocol for authentication. |
| | | | Password | string | SNMP Authentication Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters. |
| | | Priv | | object | SNMP Privacy Protocol Information |
| | | | Protocol | string | SNMP Privacy Protocol <ul style="list-style-type: none">- des: Uses DES.- none: Does not use a protocol for encryption. |
| | | | Password | string | SNMP Privacy Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters. |
| | | Write | | object | SNMP MIB Writing Permission Information |
| | | | Access | string | SNMP MIB Writing Permission <ul style="list-style-type: none">- all: Allows writing to MIB.- none: Does not allow writing to MIB. |
| | | | Read | | object |
| | | | Access | string | SNMP MIB Reading Permission <ul style="list-style-type: none">- all: Allows reading of MIB.- none: Does not allow reading from MIB. |
| | | | Notify | | object |
| | | | Access | string | SNMP Trap Notification Permission <ul style="list-style-type: none">- all: Allows SNMP trap notification.- none: Does not allow SNMP trap notification. |
| | | | AutoTime | | object |
| | Server | | object | Information of a Time-provider Server | |
| | | Address | string | IP Address of a Time-provider Server Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:: - feff:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. | |
| | | Protocol | string | Protocol Used <ul style="list-style-type: none">- time: Uses TCP.- sntp: Uses UDP. | |
| | Interval | | object | An Interval for Auto Time Adjustment | |
| | | Time | string | An Interval for Auto Time Adjustment 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 uses |

| Parameter | | | Type | Description |
|-----------|--|----------|--------|---|
| | | Offset | string | Time Zone that the Device uses Specifies sexagesimal digits [-2359]-[2359] in the character string. |
| Account | | | object | Password Information of Device Administrator |
| | | Password | string | Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 32 characters. |
| Stp | | | object | STP |
| | | Mode | string | Operation Mode for STP <ul style="list-style-type: none"> - disable: Does not use STP. - stp: STP operating mode - rstp: RSTP operating mode - mstp: MSTP operating mode |

C.4 Switch-CFX

| Parameter | | | Type | Description |
|-----------|--|---------|--------|---|
| Interface | | | array | Interface Information Setting available for up to 256 at a maximum. |
| | | Targets | string | Setting target ether Port Specify by either "chassis ID/ether port number" or "domain ID/switch ID/chassis ID/ether port number." When chassis ID is 0 and ether port number is 1, it specifies "0/1. " It is also possible to specify a range using a character of "-" as a case of "0/1-0/3" as well as to specify partially by using a character of "," as a case of "0/1,0/3." <ul style="list-style-type: none"> - domain ID: Sets in decimal digits within a range of 1-32. - switch ID: Sets in decimal digits within a range of 1-8. - chassis ID: Sets in decimal digits within a range of 0-2. - ether port number: Sets in decimal digits. |
| | | Type | object | Information by Type of ether Port |
| | | Mode | string | Type of ether Port <ul style="list-style-type: none"> - endpoint: C-Fabric End Point |
| Lldp | | | object | LLDP Operation Information of ether Port |
| | | Mode | string | LLDP Operation of ether Port <ul style="list-style-type: none"> - disable: LLDP function does not work. - enable: Transmits/receives LLDP information. - send: Performs only transmission of LLDP information. - receive: Performs only reception of LLDP information. |

| Parameter | | Type | Description |
|-----------|-----------|--------|---|
| | Cfab | object | Usage Mode Information by Type of ether Port |
| | Mode | string | Usage Mode by Type of ether Port - auto: Operates by port type as detected automatically. - external: Runs as external port by force. |
| Snmpp | | object | SNMP Function Information |
| | Service | object | Setting Enabling/Disabling of SNMP Agent Function and SNMP Trap Function |
| | Mode | string | Enabling/disabling of SNMP Function - on: Enables SNMP function. - off: Disables SNMP function. |
| | Agent | array | SNMP Agent Function Setting available for up to 32 at a maximum. |
| | Domainid | string | Domain ID Specifies "1"- "32" in the character string. |
| | Address | object | Address Information of SNMP Agent |
| | Address | string | Address of SNMP Agent Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, deletes all settings. Specifies "::2- fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, deletes all settings. |
| | Engineid | object | SNMP Engine ID Information |
| | Engineid | string | SNMP Engine ID Specifies 1-27 characters as a string. Specifies when using SNMPv3. |
| | Manager | array | SNMP Manager Function Setting available for up to 8 at a maximum. Specifies when using SNMPv1, SNMPv2c. |
| | Number | string | SNMP Host Definition Number Specifies "0"- "7" in the character string. |
| | Address | string | IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, allow access from all IPv4 hosts. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, allow access from all IPv6 hosts. |
| | Community | string | SNMP Community Name |

| Parameter | | Type | Description |
|-----------|------|--------------|--|
| | | | Specifies either "public" (communication with any host enabled) or any string consists of 1-32 characters. |
| | | Trap | Availability or Unavailability of Transmission of SNMP Trap <ul style="list-style-type: none"> - v1: Transmits a SNMPv1 trap. - v2c: Transmits a SNMPv2 trap. - off: Does not transmit SNMP trap. |
| | | Write | Writing Permission from the SNMP Manager <ul style="list-style-type: none"> - enable: Writing from SNMP manager is permitted. - disable: Writing from SNMP manager is not permitted. |
| | User | | array SNMP User Function Setting available for up to 8 at a maximum. Specifies when using SNMPv3. |
| | | Number | string SNMP User Definition Number Specifies "0"-"7" in the character string. |
| | | Name | object SNMP User Name Information |
| | | Name | string SNMP User Name Specifies any string consists of 1-32 characters. |
| | | Address | object SNMP Host Address Information |
| | | Number | string SNMP Host Definition Number Specifies "0"-"7" in the character string. |
| | | Address | string IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |
| | | Notification | object SNMP Trap Notification Host Address Information |
| | | Number | string SNMP Host Definition Number Specifies "0"-"7" in the character string. |
| | | Address | string IP Address of SNMP Host Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |
| | | Auth | object SNMP Authentication Protocol Information |
| | | Protocol | string SNMP Authentication Protocol <ul style="list-style-type: none"> - md5: Uses MD5. - sha: Uses SHA. - none: Does not use a protocol for authentication. |
| | | Password | string SNMP Authentication Password Set the password encrypted with AES256+Base64. |

| Parameter | | | Type | Description |
|-----------|----------|----------|--------|---|
| | | | | A password before encryption has a length of 8 to 16 characters. |
| | Priv | | object | SNMP Privacy Protocol Information |
| | | Protocol | string | SNMP Privacy Protocol - des: Uses DES. - none: Does not use a protocol for encryption. |
| | | Password | string | SNMP Privacy Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 16 characters. |
| | Write | | object | SNMP MIB Writing Permission Information |
| | | Access | string | SNMP MIB Writing Permission - all: Allows writing to MIB. - none: Does not allow writing to MIB. |
| | Read | | object | SNMP MIB Reading Permission Information |
| | | Access | string | SNMP MIB Reading Permission - all: Allows reading of MIB. - none: Does not allow reading from MIB. |
| | Notify | | object | SNMP Trap Notification Permission Information |
| | | Access | string | SNMP Trap Notification Permission - all: Allows SNMP trap notification. - none: Does not allow SNMP trap notification. |
| AutoTime | | | object | Information of Auto Time Adjustment |
| | Server | | object | Information of a Time-provider Server |
| | Address | | string | IP Address of a Time-provider Server Specifies "1.0.0.1- 126.255.255.254,128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. When 0.0.0.0 is specified, use the address informed from the DHCP server. When 255.255.255.255 is specified, use the broadcast address. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:: - feff:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. When :: is specified, use the address informed from the DHCP server. |
| | Protocol | | string | Protocol Used - time: Uses TCP. - sntp: Uses UDP. |
| Interval | | | object | An interval for Auto Time Adjustment |
| | Time | | string | An interval for Auto Time Adjustment Specifys "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). |

| Parameter | | Type | Description |
|-----------|----------|------------|---|
| | Zone | object | Time Zone that the Device uses |
| | Offset | string | Time Zone that the Device uses Specifies sexagesimal digits [-1200]-[1300] in the character string. |
| Account | | object | Password Information of Device Administrator |
| | Password | string | Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 32 characters. |
| Aaa | | array | AAA information |
| | Groupid | | Group ID Specifies "0"-"9" in the character string. |
| | Ldap | | LDAP Information |
| | | Service | Availability/Non-availability Settings for LDAP Function |
| | | Mode | Availability/Non-availability of LDAP Function - on: Enables LDAP function. - off: Disables LDAP function. |
| | Client | | Client Information |
| | | Number | Server Definition Number Specifies "0"-"3" in the character string. |
| | | Serverinfo | Server Information |
| | | Address | IP Address of LDAP Authentication Server Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2-fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |
| | | Source | Information of LDAP Authentication Client |
| | | Domainid | Domain ID Specifies "1"-"32" in the character string. |
| | | Address | IP Address Specifies "1.0.0.1- 126.255.255.254, 128.0.0.1 - 191.255.255.254, 192.0.0.1- 223.255.255.254" for IPv4. Specifies "::2 - fe7f:ffff:ffff:ffff:ffff:ffff:ffff:ffff, fec0:ffff:ffff:ffff:ffff:ffff:ffff:ffff" for IPv6. |
| | | Rdn | Information of Relative Authentication Name for LDAP Authentication |
| | | Name | Relative attribute for identification of bind identification names E.g.) CN |
| | | Bindnordn | Information of LDAP Authentication Server |
| | | Name | Bind Identification Name Except for Opposing Identification Name E.g.) CN: user, DC: local |

| Parameter | | | | | Type | Description |
|-----------|--|--|--|------------|--------|--|
| | | | | Admin | object | Information of Administrator's Class for LDAP Authentication Server |
| | | | | Classid | string | Number of Class Definition Specifies "0"-"3" in the character string. |
| | | | | Adminclass | string | Value of Administrator Classes 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 NOS6 is reflected on the device (enabling and disabling of functions available) NOS4 is not reflected on the device (Cannot be disabled as always being enabled). - on: Enables SNMP function. - off: Disables SNMP function. |
| | | | | Host | array | SNMP v1/2c Trap and Destination Settings Setting available for up to 6 at maximum. Specifies when using SNMPv1/2c. |
| | | | | Address | string | IP Address of SNMP Host Specifies character strings in accordance with address description of IPv4 and IPv6. |
| | | | | Community | string | SNMP Community Name Specify any of character strings set with keys "Snmp"-->"Community"-->"Name" |
| | | | | Severitylevel | string | SNMP Trap Level - none: None - debug: Debug - info: Informational - warning: Warning - error: Error - critical: Critical |
| | | | | Trapversion | string | SNMP Trap Version - 1: SNMP Version 1 - 2c: SNMP Version 2c |
| | | | | Udpport | string | SNMP Trap Transmission Port Number Specifies "0"-"65535" in the character string. |

| Parameter | | Type | Description |
|-----------|---------------|--------|---|
| | V3host | array | Settings of SNMPv3 Trap and Destination of Transmission Setting available for up to 6 at a maximum. Specifies when using SNMPv3. |
| | Address | string | IP Address of SNMP Host Specifies character strings in accordance with address description of IPv4 and IPv6. |
| | Username | string | SNMP User Name Specifies 1-16 characters in the character string. Specifies any of strings set by "Snmp" --> "User" --> "Username" |
| | Notifytype | string | SNMP Trap Type - traps: Trap - informs: Inform |
| | Engineid | string | SNMP Engine ID Specifies "0:0:0:0:0:0:0:0" - "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 Specifies "0" - "65535" in the character string. |
| | Severitylevel | string | SNMP Trap Level - none: None - debug: Debug - info: Informational - warning: Warning - error: Error - critical: Critical |
| | Community | array | SNMP Community Information Setting available for up to 256 at maximum. When assigning the profile, in order to delete a community that exists by default, there is a need to recreate it if required. |
| | Name | string | SNMP Community Name Specifies 1-64 characters in the character string. |
| | Write | object | SNMP Community Writing Permission Information |
| | Access | string | SNMP Community Writing Permission NOS6 is not reflected on the device (direct associating function for the community not available). NOS4 is reflected on the device (function available). - enable: Writing to SNMP community is permitted. - disable: Writing to SNMP community is not permitted. |

| Parameter | | Type | Description |
|-----------|-------|--------|--|
| | Group | object | SNMP Group Information |
| | | string | SNMP Group Name Specify 1-16 characters in character string. Specify any of strings set by keys of "Snmp" --> "Group" --> "Name." |
| | User | | SNMP User Information Setting available for up to 10 at a maximum. |
| | | string | SNMP User Name Specify 1-16 characters in character string. |
| | | string | SNMP Group Name Specify 1-16 characters in character string. Specify any of strings set by keys of "Snmp"-->"Group"-->"Name." |
| | | object | SNMP Authentication Protocol Information |
| | | string | SNMP Authentication Protocol - md5: Uses md5. - sha: Uses SHA. - noauth: Does not use a protocol for authentication. |
| | | string | SNMP Authentication Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters. |
| | | object | SNMP Privacy Protocol Information |
| | | string | SNMP Privacy Protocol - DES: Uses DES. - AES128: Use the AES128. - nopriv: Does not use a protocol for encryption. |
| | | string | SNMP Privacy Password Sets the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters. |
| | Group | | SNMP Group Information Setting available for up to 10 at maximum. NOS6 is reflected on the device (MIB access possibility grouping function available). NOS4 is not reflected on the device (function not available). |
| | Name | string | Group Name Specify 1-16 characters in character string. |
| | | string | SNMP Version - v1: SNMP Version 1 - v2c: SNMP Version 2c |

| Parameter | | | Type | Description |
|-----------|--|---------------|--------|--|
| | | | | - v3: SNMP Version 3 |
| | | V3 | object | SNMPv3 Information |
| | | Securitylevel | string | Security Level for SNMPv3 Specify when using SNMPv3. - priv: Enables authentication and encryption. - auth: Enables authentication. - noauth: Disables authentication and encryption. |
| | | Read | object | SNMP MIB Reading Permission Information |
| | | Access | string | SNMP MIB Reading Permission - all: Allows reading of MIB. - none: Does not allow reading from MIB. |
| | | Write | object | SNMP MIB Writing Permission Information |
| | | Access | string | SNMP MIB Writing Permission - all: Allows writing to MIB. - none: Does not allow writing to MIB. |
| | | Notify | object | SNMP Trap Notification Permission Information |
| | | Access | string | SNMP Trap Notification Permission - all: Allows SNMP trap notification. - none: Does not allow SNMP trap notification. |
| | | AutoTime | object | Information of Auto Time Adjustment |
| | | Server | array | Information of a Time-provider Server Setting available for up to 5 at maximum. |
| | | Address | string | IP Address of a Time-provider Server Information Specifies character strings in accordance with address description of IPv4 and IPv6. |
| | | Zone | object | Time Zone Information |
| | | Regioncity | string | Region/City - Africa/Luanda - Africa/Ouagadougou - Africa/Bujumbura - Africa/Porto-Novo - Africa/Gaborone - Africa/Kinshasa - Africa/Lubumbashi - Africa/Bangui - Africa/Brazzaville - Africa/Abidjan - Africa/Douala |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - Africa/Djibouti - Africa/Algiers - Africa/Cairo - Africa/El_Aaiun - Africa/Asmara - Africa/Ceuta - Africa/Addis_Ababa - Africa/Libreville - Africa/Accra - Africa/Banjul - Africa/Conakry - Africa/Malabo - Africa/Bissau - Africa/Nairobi - Africa/Monrovia - Africa/Maseru - Africa/Tripoli - Africa/Casablanca - Africa/Bamako - Africa/Nouakchott - Africa/Blantyre - Africa/Maputo - Africa/Windhoek - Africa/Niamey - Africa/Lagos - Africa/Kigali - Africa/Khartoum - Africa/Freetown - Africa/Dakar - Africa/Mogadishu - Africa/Sao_Tome - Africa/Mbabane - Africa/Ndjamena - Africa/Lome - Africa/Tunis - Africa/Dar_es_Salaam - Africa/Kampala |

| Parameter | | | Type | Description |
|-----------|--|--|------|---|
| | | | | <ul style="list-style-type: none"> - Africa/Johannesburg - Africa/Lusaka - Africa/Harare - America/Antigua - America/Anguilla - America/Curacao - America/Argentina/Buenos_Aires - America/Argentina/Cordoba - America/Argentina/San_Luis - America/Argentina/Jujuy - America/Argentina/Tucuman - America/Argentina/Catamarca - America/Argentina/La_Rioja - America/Argentina/San_Juan - America/Argentina/Mendoza - America/Argentina/Rio_Gallegos - America/Argentina/Ushuaia - America/Aruba - America/Guatemala - America/Guyana - America/Tegucigalpa - America/Port-au-Prince - America/Guadeloupe - America/Jamaica - America/St_Kitts - America/Cayman - America/St_Lucia - America/Marigot - America/Adak - America/Martinique - America/Montserrat - America/Mexico_City - America/Cancun - America/Edmonton - America/Cambridge_Bay - America/Yellowknife - America/Inuvik |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - America/Dawson_Creek - America/Vancouver - America/Whitehorse - America/Thunder_Bay - America/Iqaluit - America/Pangnirtung - America/Resolute - America/Rankin_Inlet - America/Winnipeg - America/Rainy_River - America/Regina - America/Barbados - America/St_Barthelemy - America/La_Paz - America/Noronha - America/Belem - America/Fortaleza - America/Recife - America/Araguaina - America/Maceio - America/Bahia - America/Sao_Paulo - America/Campo_Grande - America/Cuiaba - America/Santarem - America/Porto_Velho - America/Merida - America/Monterrey - America/Mazatlan - America/Chihuahua - America/Hermosillo - America/Tijuana - America/Managua - America/Panama - America/Lima - America/Miquelon - America/Puerto_Rico |

| Parameter | | | Type | Description |
|-----------|--|--|------|---|
| | | | | <ul style="list-style-type: none"> - America/Asuncion - America/Paramaribo - America/El_Salvador - America/Grand_Turk - America/Montevideo - America/St_Vincent - America/Caracas - America/Tortola - America/St_Thomas - America/New_York - America/Detroit - America/Kentucky/Monticello - America/Indiana/Indianapolis - America/Indiana/Vincennes - America/Indiana/Knox - America/Indiana/Winamac - America/Indiana/Marengo - America/Indiana/Vevay - America/Chicago - America/Boa_Vista - America/Manaus - America/Eirunepe - America/Rio_Branco - America/Nassau - America/Belize - America/St_Johns - America/Halifax - America/Glace_Bay - America/Moncton - America/Goose_Bay - America/Blanc-Sablon - America/Montreal - America/Toronto - America/Nipigon - America/Swift_Current - America/Dawson - America/Santiago |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - America/Bogota - America/Costa_Rica - America/Havana - America/Dominica - America/Santo_Domingo - America/Guayaquil - America/Grenada - America/Cayenne - America/Godthab - America/Danmarkshavn - America/Scoresbysund - America/Thule - America/Indiana/Tell_City - America/Indiana/Petersburg - America/Menominee - America/North_Dakota/Center - America/North_Dakota/New_Salem - America/Denver - America/Boise - America/Shiprock - America/Phoenix - America/Los_Angeles - America/Anchorage - America/Juneau - America/Yakutat - America/Nome - America/Port_of_Spain - Antarctica/McMurdo - Antarctica/South_Pole - Antarctica/Rothera - Antarctica/Mawson - Antarctica/Davis - Antarctica/Casey - Antarctica/Vostok - Antarctica/DumontDURville - Antarctica/Syowa - Arctic/Longyearbyen |

| Parameter | | | Type | Description |
|-----------|--|--|------|---|
| | | | | <ul style="list-style-type: none"> - Asia/Dubai - Asia/Kabul - Asia/Yerevan - Asia/Baku - Asia/Dhaka - Asia/Bahrain - Asia/Brunei - Asia/Thimphu - Asia/Shanghai - Asia/Harbin - Asia/Chongqing - Asia/Urumqi - Asia/Kashgar - Asia/Nicosia - Asia/Tbilisi - Asia/Hong_Kong - Asia/Jakarta - Asia/Pontianak - Asia/Makassar - Asia/Jayapura - Asia/Jerusalem - Asia/Kolkata - Asia/Baghdad - Asia/Tehran - Asia/Amman - Asia/Tokyo - Asia/Bishkek - Asia/Phnom_Penh - Asia/Pyongyang - Asia/Seoul - Asia/Kuwait - Asia/Almaty - Asia/Qyzylorda - Asia/Aqtobe - Asia/Aqtau - Asia/Oral - Asia/Vientiane |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - Asia/Beirut - Asia/Colombo - Asia/Rangoon - Asia/Ulaanbaatar - Asia/Hovd - Asia/Choibalsan - Asia/Macau - Asia/Kuala_Lumpur - Asia/Kuching - Asia/Katmandu - Asia/Muscat - Asia/Manila - Asia/Karachi - Asia/Gaza - Asia/Qatar - Asia/Yekaterinburg - Asia/Omsk - Asia/Novosibirsk - Asia/Krasnoyarsk - Asia/Irkutsk - Asia/Yakutsk - Asia/Vladivostok - Asia/Sakhalin - Asia/Magadan - Asia/Kamchatka - Asia/Anadyr - Asia/Riyadh - Asia/Singapore - Asia/Damascus - Asia/Bangkok - Asia/Dushanbe - Asia/Dili - Asia/Ashgabat - Asia/Taipei - Asia/Samarkand - Asia/Tashkent - Asia/Ho_Chi_Minh |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - Asia/Aden - Atlantic/Bermuda - Atlantic/Cape_Verde - Atlantic/Canary - Atlantic/Stanley - Atlantic/Faroe - Atlantic/South_Georgia - Atlantic/Reykjavik - Atlantic/Madeira - Atlantic/Azores - Atlantic/St_Helena - Australia/Lord_Howe - Australia/Hobart - Australia/Currie - Australia/Melbourne - Australia/Sydney - Australia/Brisbane - Australia/Lindeman - Australia/Adelaide - Australia/Darwin - Australia/Perth - Australia/Eucla - Europe/Andorra - Europe/Tirane - Europe/Vienna - Europe/Mariehamn - Europe/Sarajevo - Europe/Brussels - Europe/Sofia - Europe/Minsk - Europe/Zurich - Europe/Prague - Europe/Berlin - Europe/Copenhagen - Europe/Tallinn - Europe/Madrid - Europe/Helsinki |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - Europe/Paris - Europe/London - Europe/Guernsey - Europe/Oslo - Europe/Gibraltar - Europe/Athens - Europe/Zagreb - Europe/Budapest - Europe/Dublin - Europe/Isle_of_Man - Europe/Rome - Europe/Jersey - Europe/Vaduz - Europe/Vilnius - Europe/Luxembourg - Europe/Riga - Europe/Monaco - Europe/Chisinau - Europe/Podgorica - Europe/Skopje - Europe/Malta - Europe/Amsterdam - Europe/Warsaw - Europe/Lisbon - Europe/Bucharest - Europe/Belgrade - Europe/Kaliningrad - Europe/Moscow - Europe/Volgograd - Europe/Samara - Europe/Stockholm - Europe/Ljubljana - Europe/Bratislava - Europe/San_Marino - Europe/Istanbul - Europe/Kiev - Europe/Uzhgorod |

| Parameter | | | Type | Description |
|-----------|--|--|------|--|
| | | | | <ul style="list-style-type: none"> - Europe/Zaporozhye - Europe/Simferopol - Europe/Vatican - Indian/Cocos - Indian/Christmas - Indian/Chagos - Indian/Comoro - Indian/Antananarivo - Indian/Mauritius - Indian/Maldives - Indian/Reunion - Indian/Mahe - Indian/Kerguelen - Indian/Mayotte - Pacific/Pago_Pago - Pacific/Rarotonga - Pacific/Easter - Pacific/Galapagos - Pacific/Fiji - Pacific/Truk - Pacific/Ponape - Pacific/Kosrae - Pacific/Guam - Pacific/Tarawa - Pacific/Enderbury - Pacific/Kiritimati - Pacific/Majuro - Pacific/Kwajalein - Pacific/Saipan - Pacific/Noumea - Pacific/Norfolk - Pacific/Nauru - Pacific/Niue - Pacific/Auckland - Pacific/Chatham - Pacific/Tahiti - Pacific/Marquesas |

| Parameter | | | Type | Description |
|-----------|----------|--|--------|--|
| | | | | <ul style="list-style-type: none"> - Pacific/Gambier - Pacific/Port_Moresby - Pacific/Pitcairn - Pacific/Palau - Pacific/Guadalcanal - Pacific/Fakaofu - Pacific/Tongatapu - Pacific/Funafuti - Pacific/Johnston - Pacific/Midway - Pacific/Wake - Pacific/Honolulu - Pacific/Efate - Pacific/Wallis - Pacific/Apia |
| Account | | | object | Account Information |
| | Password | | string | Password Set the password encrypted with AES256+Base64. 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 <ul style="list-style-type: none"> - on: Enables SNMP function. - off: Disables SNMP function. |
| | Host | | array | SNMP v1/2c Trap and Destination Settings Setting available for up to 8 at a maximum. Specify when using SNMPv1/2c. |
| | | Address | string | IP Address of SNMP Host Specifies character strings in accordance with address description of IPv4 and IPv6. |
| | | Community | string | SNMP Community Name Specify 1-20 characters in character string. Specify any of character strings set with keys "Snmp"-->"Community"-->"Name." |
| | Trapversion | | string | SNMP Trap Version |

| Parameter | | Type | Description |
|-----------|-----------|------------|--|
| | | | - 1: SNMP Version 1 - 2c: SNMP Version 2c |
| | | Udpport | string SNMP Trap Transmission Port Number Specify "1"-"65535" in the character string. |
| | V3host | | array SNMPv3 Trap and Destination Settings Setting available for up to 8 at a maximum. Specify when using SNMPv3. |
| | | Address | string IP Address of SNMP Host Specify character strings in accordance with address description of IPv4 and IPv6. |
| | | Username | string SNMP User Name Specify 1-30 characters in the character string. Specify any of strings set by "Snm"-->"User"-->"Username." |
| | | Notifytype | string SNMP Trap Type - traps: Trap - informs: Inform |
| | | Udpport | string SNMP Trap Transmission Port Number Specify "1"-"65535" in the character string. |
| | Community | | array SNMP Community Information Setting available for up to 8 at maximum. |
| | | Name | string SNMP Community Name Specify 1-20 characters in the character string. |
| | | Write | object SNMP Community Writing Permission Information |
| | | Access | string SNMP Community Writing Permission - enable: Writing to SNMP community is permitted. - disable: Writing to SNMP community is not permitted. |
| | | Group | object SNMP Group Information |
| | | Name | string SNMP Group Name Specify 1-30 characters in the character string. Specify any of strings set by keys of "Snm"-->"Group"-->"Name." |
| | User | | array SNMP User Information Setting available for up to 8 at a maximum. |
| | | Username | string SNMP User Name Specify 1-30 characters in character string. |
| | | Groupname | string SNMP Group Name Specify 1-30 characters in character string. Specify any of strings set by keys of "Snm"-->"Group"-->"Name." |
| | | Auth | object SNMP Authentication Protocol Information |

| Parameter | | | Type | Description |
|-----------|--|---------------|--------|---|
| | | Auth | string | SNMP Authentication Protocol - md5: Uses MD5. - sha: Uses SHA. - noauth: Does not use a protocol for authentication. |
| | | Password | string | SNMP Authentication Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters. |
| | | Priv | object | SNMP Privacy Protocol Information |
| | | Priv | string | SNMP Privacy Protocol - des: Uses DES. - nopriv: Does not use a protocol for encryption. |
| | | Password | string | SNMP Privacy Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 1 to 32 characters. |
| | | Group | array | SNMP Group Information Setting available for up to 8 at a maximum. |
| | | Name | string | Group Name Specify 1-30 characters in character string. |
| | | Snmversion | string | SNMP Version - v1: SNMP Version 1 - v2c: SNMP Version 2c - v3: SNMP Version 3 |
| | | V3 | object | SNMPv3 Information |
| | | Securitylevel | string | Security Level for SNMPv3 Specify when using SNMPv3. - priv: Enables authentication and encryption. - auth: Enables authentication. - noauth: Disables authentication and encryption. |
| | | Read | object | SNMP MIB Reading Permission Information |
| | | Access | string | SNMP MIB Reading Permission - Default: Allows reading of MIB. - none: Does not allow reading from MIB. |
| | | Write | object | SNMP MIB Writing Permission Information |
| | | Access | string | SNMP MIB Writing Permission - Default: Allows writing to MIB. - none: Does not allow writing to MIB. |
| | | Notify | object | SNMP Trap Notification Permission Information |
| | | Access | string | SNMP Trap Notification Permission |

| Parameter | | | | Type | Description |
|-----------|----------|---------|--|---------|---|
| | | | | | <div>- Default: Allows SNMP trap notification.</div> <div>- none: Does not allow SNMP trap notification.</div> |
| AutoTime | | | | object | Information of Auto Time Adjustment |
| | Server | | | array | Information of a Time-provider Server Setting available for up to 3 at a maximum. |
| | | Address | | string | IP Address of a Time-provider Server Information Specifies character strings in accordance with address description of IPv4 and IPv6. |
| | Mode | | | string | Mode Used <div>- broadcast: Synchronizes the time by inquiring the broadcast information to the SNTP server.</div> <div>- unicast: SNTP client works with a SNTP server in a relation of point-to-point.</div> |
| | Interval | | | object | An Interval for Auto Time Adjustment |
| | | Time | | integer | An Interval for Auto Time Adjustment Specifies a second value between 6-10 seconds. Default value is 6 seconds. |
| | Zone | | | object | Time Zone Information |
| | | Offset | | string | Time Zone that the Device uses Specify sexagesimal digits [-1200]-[1300] in character string. |
| | Account | | | | object |
| | Password | | | string | Password Set the password encrypted with AES256+Base64. A password before encryption has a length of 8 to 64 characters. |

Appendix D Details of Profile Parameters (ProfileData)

This section describes detailed information about the following parameters:

- [4.10.3 Adding Profiles](#)
- [4.10.5 Individual Retrieval of Profiles](#)
- [4.10.6 Updating Profiles](#)
- [4.10.17 Adding Policies](#)
- [4.10.19 Individual Retrieval of Policies](#)
- [4.10.20 Updating Policies](#)
- [C.1 Server-BX](#)

D.1 BIOS

| Parameter | Type | Description |
|---|--------|--|
| BIOS | object | BIOS Settings |
| SasController | string | Specifies the operation of the onboard SAS/SATA storage controller unit (SCU). If none are set, specifies null. <ul style="list-style-type: none"> - Enabled: Enables SCU. - Disabled: Disables SCU. |
| SasSataOpRom | string | Specifies the operation of Option ROM for SAS/SATA controller. Specifies when SasController is Enabled. If none are set, specifies null. <ul style="list-style-type: none"> - Enabled: Enables Option ROM. - Disabled: Disables Option ROM. |
| SasSataDriver | string | Specifies the type of Option ROM for SAS/SATA controller. Specifies when SasSataOpRom is Enabled. If none are set, specifies null. <ul style="list-style-type: none"> - LSI MegaRAID: Use Option ROM which uses Embedded MegaRAID. - Intel RSTe: Use Intel RSTe-use Option ROM. |
| HyperThreading | string | Specifies the CPU's Hyper Threading Technology operation. If the installed CPU does not support this function, this setting has no meaning. If none are set, specifies null. <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| XDBitfunctionalityAndNXMemoryProtection | string | Specifies the CPU's Execute Disable Bit operation. This function is also called XD (eXecute Disable) bit or NX (No eXecute) bit. If none are set, specifies null. |

| Parameter | Type | Description |
|--------------------------|--------|---|
| | | <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| VirtualizationTechnology | string | <p>Specifies operation of the CPU's virtualization support function.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| IntelVTd | string | <p>Specifies the CPU's Virtualization Technology for Directed I/O function operation.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| PowerTechnologyCpu | string | <p>Specifies the CPU's power management operation.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Energy Efficient: Behavior optimized for power-saving. - Custom: Sets detailed behavior setup by using additional setting items - Disabled: Disables power management function. |
| EnhancedSpeedStep | string | <p>Specifies operation of power saving functions.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| TurboMode | string | <p>Specifies Turbo Boost Technology behavior of a CPU.</p> <p>If the installed CPU does not support this function, this function is set to regardless of this setting.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables function. - Disabled: Disables function. |
| NUMA | string | <p>Specifies operation of NUMA (Non-Uniform Memory Access) function.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables NUMA function. - Disabled: Disables NUMA function. |
| DDR_Performance | string | <p>Specifies operation of memory module.</p> <p>Memory modules operates with different speed (frequencies).</p> <p>The faster the speed, the higher the performance.</p> <p>The slower the speed the more the power saved.</p> <p>The available memory speeds differ depending on the installed memory module configurations.</p> <p>If none are set, specifies null.</p> |

| Parameter | Type | Description |
|---------------------------|--------|---|
| | | <ul style="list-style-type: none"> - Low-Voltage optimized: The fastest setting available with low voltage - Energy optimized: The slowest setting available with power-saving - Performance optimized: The fastest setting available for achieving the highest performance |
| Csm | string | <p>Specifies the CSM (Compatibility Support Module) execution operation.</p> <p>Legacy operating system can be booted only when the CSM is loaded.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: CSM is executed to ensure UEFI operating system can startup. - Disabled: CSM is not executed to ensure only UEFI operating system can startup. |
| BootOptionFilter | string | <p>Specifies boot operation of a drive.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - UEFI and Legacy: Bootable from UEFI OS drive and Legacy OS drive. - Legacy only: Bootable only from Legacy OS drive. - UEFI only: Bootable only from UEFI OS drive. |
| LaunchPxeOpRomPolicy | string | <p>Specifies the PXE Option ROM to be booted.</p> <p>For PXE boot, there are available, normal (Legacy) PXE boot and UEFI PXE boot.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Do not launch: Option ROM not booted. - UEFI only: Only UEFI Option ROM booted. - Legacy only: Only Legacy Option ROM booted. |
| LaunchStorageOpRomPolicy | string | <p>Specifies the Storage Option ROM to be booted.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Do not launch: Storage Option ROM not booted. - UEFI only: Only UEFI Storage Option ROM booted. - Legacy only: Only Legacy Storage Option ROM booted. |
| OtherPciDeviceRomPriority | string | <p>Specifies the Option ROM booted with the devices other than a network, mass storage device and video.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - UEFI OpROM: Only UEFI Option ROM booted. - Legacy OpROM: Only Legacy Option ROM booted. |
| NetworkStack | string | <p>Specifies whether UEFI Network Stack can be used for network access on UEFI.</p> <p>For example, when unable to use UEFI network stack, UEFI install cannot be executed via PXE.</p> <p>If none are set, specifies null.</p> |

| Parameter | Type | Description |
|------------------|--------|---|
| | | <ul style="list-style-type: none"> - Disabled: Cannot use UEFI network stack. - Enabled: Can use UEFI network stack. |
| IPv4PxeSupport | string | <p>Specifies whether PXE UEFI Boot with IPv4 can be used with UEFI mode for installation of an operating system.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Disabled: Cannot use PXE UEFI Boot with IPv4. - Enabled: Can use PXE UEFI Boot with IPv4. |
| IPv6PxeSupport | string | <p>Specifies whether PXE UEFI Boot with IPv6 can be used with UEFI mode for installation of an operating system.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Disabled: Cannot use PXE UEFI Boot with IPv6. - Enabled: Can use PXE UEFI Boot with IPv6. |
| LaunchSlot1Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 1.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot2Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 2.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot3Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 3.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot4Oprom | string | <p>Specifies the execution of e extended ROM of the option card mounted on PCI slot 4.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot5Oprom | string | <p>Specifies the execution of e extended ROM of the option card mounted on PCI slot 5.</p> |

| Parameter | Type | Description |
|-------------------|--------|--|
| | | <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot6Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 6.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot7Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 7.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot8Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 8.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot9Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 9.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot10Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 10.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot11Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 11.</p> |

| Parameter | Type | Description |
|-------------------|--------|--|
| | | <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |
| LaunchSlot12Oprom | string | <p>Specifies the execution of extended ROM of the option card mounted on PCI slot 12.</p> <p>You can specify this for multiple slots in profile. Do not specify this for the slot that does not exist on an actual device.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Extended ROM executed. - Disabled: Extended ROM not executed. |

D.2 iRMC

| Parameter | Type | Description |
|-------------------------|--------|--|
| iRMC | object | Settings of iRMC (Integrated Remote Management Controller) |
| ConfDefaultGuiLanguage | string | <p>Specifies the initial settings of language</p> <p>This is enabled from the next time iRMC Web interface is called.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - English - German - Japanese |
| ConfBmcTimeSyncSource | string | <p>Specifies time setting performance of iRMC.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - System RTC: Time of iRMC obtained from the system clock of a managed server. - NTP Server: Time of iRMC synchronized with that of an NTP server which operates based on specific time as its reference time source by using Network Time Protocol (NTP). |
| ConfBmcRtcTimeMode | string | <p>Specifies time display performance of iRMC.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - UTC: iRMC time displayed in UTC (Coordinated Universal Time) format. - Localtime: iRMC time displayed in local time format. |
| ConfBmcTimeZoneLocation | string | <p>Specifies time zone to correspond to a location of a server.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Asia/Tokyo - US/Pacific - US/Mountain - US/Central |

| Parameter | Type | Description |
|------------------------|--------|--|
| | | <ul style="list-style-type: none"> - US/Eastern - Europe/Berlin - Europe/London - UTC |
| ConfBmcNtpServer0 | string | Specifies the IP address or the DNS name of the primary NTP server. If none are set, specifies null. |
| ConfBmcNtpServer1 | string | Specifies the IP address or the DNS name of the secondary NTP server. If none are set, specifies null. |
| ConfPostErrorHalt | string | Specifies the operation in response to the occurrence of an error upon server boot. If none are set, specifies null. <ul style="list-style-type: none"> - Continue: Boot continued even after the occurrence of an error. - Halt on errors: Boot interrupted until the key entry when an error occurs. |
| ConfPowerControlMode | string | Specifies the power-saving and noise canceling operations for a server. If none are set, specifies null. <ul style="list-style-type: none"> - O/S Controlled: Control by OS followed. - Minimum Power: Operation where priority is placed on reduction in power consumption. |
| ConfDisableFanTest | string | Specifies diagnostic execution of the fan. If none are set, specifies null. <ul style="list-style-type: none"> - Enabled: Tests conducted every day at the specified time. - Disabled: Fan tests not conducted. |
| ConfFanDailyTestTime | string | Specifies starting time of the fan test. Becomes valid when executing the fan test. If none are set, specifies null. |
| ConfPowerFailBehavior | string | Specifies the power source operation upon power restore operation after interruption of AC power source input. If none are set, specifies null. <ul style="list-style-type: none"> - As Before: State upon power source interruption maintained (Powered on if a server is powered on upon interruption/ Not powered on if the server is powered off.) - Remain Off: Always powered off. - Always On: Always powered on. |
| ConfSoftWatchdogEnable | string | Specifies whether to use Software Watchdog to perform periodic communication confirmations while an OS is running. If none are set, specifies null. <ul style="list-style-type: none"> - Enabled: Communication monitored. - Disabled: Communication not monitored. |

| Parameter | Type | Description |
|--------------------------|---------|--|
| ConfSoftWatchdogBehavior | string | <p>Specifies an operation when the OS does not communicate due to Software Watchdog.</p> <p>Specifies when ConfSoftWatchdogEnable is Enabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. |
| ConfSoftWatchdogTime | integer | <p>Specifies a value from 1-100 minutes for monitoring time by the Software Watchdog.</p> <p>Specifies when ConfSoftWatchdogEnable is Enabled.</p> <p>It is judged as unable to communicate when there is no communication after a specified time here.</p> <p>If none are set, specifies null.</p> |
| ConfBootWatchdogEnable | string | <p>Specifies the monitoring the period between POST completion and OS start, with use of Boot Watchdog.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Period monitored. - Disabled: Period not monitored. |
| ConfBootWatchdogBehavior | string | <p>Specifies behavior for the case when an OS does not start within the specified time in Boot Watchdog.</p> <p>Specifies when ConfBootWatchdogEnable is Enabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. |
| ConfBootWatchdogTime | integer | <p>Specifies a value from 1-100 minutes for the Boot Watchdog monitoring time.</p> <p>Specifies when ConfBootWatchdogEnable is Enabled.</p> <p>It is judged as abnormality when OS cannot start after a specified time here.</p> <p>If none are set, specifies null.</p> |
| ConfBMCTelnetPort | integer | <p>Specifies Telnet port for iRMC.</p> <p>If none are set, specifies null.</p> |
| ConfBMCSshPort | integer | <p>Specifies SSH (Secure Shell) port for iRMC.</p> <p>If none are set, specifies null.</p> |
| ConfBMCTelnetEnable | string | <p>Specifies connection with Telnet.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables Telnet connection. - Disabled: Disables Telnet connection. |
| ConfBMCSshEnable | string | <p>Specifies connection with SSH.</p> <p>If none are set, specifies null.</p> |

| Parameter | Type | Description |
|---------------------------------|---------|--|
| | | <ul style="list-style-type: none"> - Enabled: Enables SSH connection. - Disabled: Disables SSH connection. |
| ConfBmcSnmpServiceEnable | string | <p>Specifies SNMP service performance at iRMC.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Enables the operation. - Disabled: Disable the operation. |
| ConfBMCSnmpServicePort | integer | <p>Specifies a port where an SNMP service is in an idle state.</p> <p>Typically it becomes the UDP 161 port.</p> <p>If none are set, specifies null.</p> |
| ConfBMCSnmpServiceEnableV3Only | string | <p>Specifies the SNMP protocol.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - All (SNMPv1/v2c/v3): All protocol support (SNMPv1/v2c/v3) - SNMPv3 only:SNMPv3 |
| ConfBMCSnmpServiceCommunityName | string | <p>Specifies a community name for when it is SNMP v1/v2c.</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 18 at a maximum.</p> <p>Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/*, _ ? ; - @ &) % !.</p> <p>Blank symbols and \ may not be used.</p> |
| ConfBMCSnmpV3UserServiceEnabled | string | <p>Specifies SNMPv3 support operations for a user.</p> <p>If none are set, specifies null.</p> <p>Enabled: Enables it.</p> <p>Disabled: Disable it.</p> |
| ConfBMCSnmpV3UserAuthType | string | <p>Specifies authentication protocols that SNMPv3 uses for authentication.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SHA: Uses SHA (Secure Hash Algorithm) for authentication. - MD5: Uses MD5 (Message-Digest Algorithm 5) authentication. - none: Does not use authentication. |
| ConfBMCSnmpV3UserPrivType | string | <p>Specifies encryption protocol that SNMPv3 uses to encrypt SNMPv3 traffic.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - DES: Uses DES (Digital Encryption Standard) for SNMPv3 traffic encryption. - AES: Uses AES (Advanced Encryption Standard) 128 bits encryption for SNMPv3 traffic encryption. - none: Does not use encryption. |
| ConfBMCSnmpV3UserAccessType | string | <p>Specifies access privilege of a user.</p> <p>"Read only" has been set as fixed.</p> <p>If none are set, specifies null.</p> |

| Parameter | Type | Description |
|------------------------------|--------|---|
| | | - Read Only: Read-only |
| ConfBMCSnmpTrapCommunityName | string | <p>Specifies the SNMP Community Name.</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 18 at a maximum.</p> <p>Characters and symbols specifiable are A-Z, a-z, 0-9 and (*/:_?;-@&) % !.</p> <p>Blank symbols and \ may not be used.</p> |
| ConfBMCSnmpV3UserSelected | string | <p>Specifies a SNMPv3 user already defined as SNMPv3 trap destination.</p> <p>Specifies a user name that has been created on iRMC.</p> <p>If none are set, specifies null.</p> <p>A user name can be specified with 16 characters at a maximum.</p> <p>A valid user name should start with an alphabet.</p> <p>For the remaining part of the name, it can accept only alphabets, digits, under bar, dash, period and at mark (@).</p> <p>Blank symbols may not be used.</p> |
| ConfBMCSnmpTrapDestName1 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName2 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName3 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName4 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName5 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> |

| Parameter | Type | Description |
|--------------------------|--------|---|
| | | <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName6 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpTrapDestName7 | string | <p>Specifies DNS name or IP address of a server that belongs to a community to be configured as "trap transmission destination."</p> <p>If none are set, specifies null.</p> <p>The number of characters specifiable is 64 at a maximum.</p> <p>Characters and symbols specifiable are half-width alphabets of (a-z, A-Z) , Arabian figures (0-9), hyphen (-), colon (:) and dot (.).</p> |
| ConfBMCSnmpProtocol1 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol2 | string | <p>Specifies the version of SNMP protocol used in reception of trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol3 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol4 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol5 | string | <p>Specifies the version of SNMP protocol used for receiving a trap.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |

| Parameter | Type | Description |
|----------------------|--------|--|
| ConfBMCSnmpProtocol6 | string | Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - SNMPv3: SNMP Protocol Version 3 |
| ConfBMCSnmpProtocol7 | string | Specifies the version of SNMP protocol used for receiving a trap. If none are set, specifies null. <ul style="list-style-type: none"> - SNMPv1: SNMP Protocol Version 1 - SNMPv2c: SNMP Protocol Version 2c - 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. <ul style="list-style-type: none"> - true: Uses a virtual address. By turning UseVirtualAddresses of the port to false, only virtual address of specific port can be turned to invalid. - false: Dose not use a virtual address. Do not specify all of VirtualAddresses of this profile. |
| BootMenuEnable | string | Specifies if the Bboot Menu should be enabled. <ul style="list-style-type: none"> - true: Enables the boot menu. - false: Disables the boot menu. |
| SmuxSetting | string | Specifies Settings of SMUX. SMUX means a function to change connection between LAN card and Fabric. Omit this settings for any platform not supported for SMUX setup. Becomes equivalent with a state specified for Fabric4 when omitted. <ul style="list-style-type: none"> - Fabric3: Uses Fabric3. - Fabric4: Uses Fabric4. - Fabric3+4: LAN1 uses Fabric3 and LAN2 uses Fabric4. |
| SRIOV | string | Specifies if SR-IOV should be used. <ul style="list-style-type: none"> - true: Enables SR-IOV. By turning SRIOV of the port to false, only virtual address of specific port can turned to invalid. - false:Disables SR-IOV. |
| BootMode | string | Shows a boot mode for use when there is IO channel to be defined as a boot device. <ul style="list-style-type: none"> - LegacyFirst: Prioritizes Legacy Boot (BIOS). Uses UEFI Boot as well. |

| Parameter | | | Type | Description |
|-----------|--|--|--------------------|--|
| | | | | <ul style="list-style-type: none"> - LegacyOnly: Uses only Legacy Boot (BIOS). - UEFIFirst: Prioritizes UEFI Boot. Uses Legacy Boot (BIOS) as well. - UEFIOOnly: Uses only UEFI Boot. |
| | | | Slots | Settings of Slot |
| | | | Slot | Settings of Slot |
| | | | OnboardControllers | Specifies settings of onboard. Omits if there is no need to configure onboard. |
| | | | OnboardController | Specifies settings of onboard. Specifies either CNAAdapter, LANAdapter, FCAdapter. |
| | | | CNAAdapter | CNA Adapter Settings Omit if there is no need to configure the CNA adapter. For details, refer to " D.3.1 CNAAdapter. " |
| | | | LANAdapter | LAN Adapter Settings For details, refer to " D.3.2 LANAdapter. " |
| | | | FCAdapter | FC Adapter Settings For details, refer to " D.3.3 FCAdapter. " |
| | | | AddOnCards | Specifies settings of PCI card. Omit if there is no need to configure the PCI card. |
| | | | AddOnCard | Specifies settings of PCI card. Specifies either CNAAdapter, LANAdapter, FCAdapter. |
| | | | @AddOnCardIdx | Specifies a number the PCI card will attach. The value starts from 1. |
| | | | CNAAdapter | CNA Adapter Settings Omit if there is no need to configure the CNA adapter. For details, refer to " D.3.1 CNAAdapter. " |
| | | | LANAdapter | LAN Adapter Settings For details, refer to " D.3.2 LANAdapter. " |
| | | | FCAdapter | FC Adapter Settings For details, refer to " D.3.3 FCAdapter. " |
| | | | DaughterCards | Specifies settings of an expansion card. Omit if there is no need to configure an expansion card. |
| | | | DaughterCard | Specifies settings of an expansion card. Specifies either CNAAdapter, LANAdapter, FCAdapter. |
| | | | @DaughterCardIdx | Specifies a number an expansion card belongs to. The value starts from 1. |
| | | | CNAAdapter | CNA Adapter Settings Omit if there is no need to configure the CNA adapter. For details, refer to " D.3.1 CNAAdapter. " |

| Parameter | | | | | | Type | Description | |
|-----------|--|--|--|--|--|------------|-------------|---|
| | | | | | | LANAdapter | object | LAN Adapter Settings For details, refer to " D.3.2 LANAdapter. " |
| | | | | | | FCAdapter | object | FC Adapter Settings For details, refer to " D.3.3 FCAdapter. " |

D.3.1 CNAAdapter

| Parameter | | | | | | Type | Description |
|------------|-------|------|------------|---------------------|--|---------|---|
| CNAAdapter | | | | | | object | CNA Adapter Settings Omit if there is no need to configure the CNA adapter. |
| | Ports | | | | | object | Port Settings |
| | | Port | | | | array | Port Settings |
| | | | @PortIdx | | | integer | Specifies a number of a port. The value starts from 1. |
| | | | PortEnable | | | string | Setting of Port Validity - true: Enables a port. - false: Does not enable a port. |
| | | | Functions | | | object | CNA Function Specifies either LANFunction, FCoEFunction, or ISCSIFunction. |
| | | | Function | | | array | CNA Function |
| | | | | @FunctionIdx | | integer | Specifies a number of Function. The value starts from 1. |
| | | | | LANFunction | | object | LAN Function |
| | | | | FunctionEnable | | string | Setting of Function Validity - true: Enables Function. - false: Does not enable Function. |
| | | | | VLANId | | integer | Specifies the VLAN ID. |
| | | | | Bandwidth | | integer | Specifies settings of bandwidth. Specifies respective IO channels so that the total is 100. If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally accordingly. |
| | | | | RateLimit | | integer | Maximum Share Percent of Bandwidth Available in This Function It should be exceeding the value of Bandwidth of this Function. |
| | | | | SRIOV | | string | Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV. |
| | | | | UseVirtualAddresses | | string | Settings of the Use of Virtual Address - true: Uses a virtual address. |

| Parameter | | | | | Type | Description | |
|-----------|--|--|--|--|--------------------|--|---|
| | | | | | | - false: Does not use virtual address. | |
| | | | | | VirtualAddress | object | Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards. It is recommended that you set the virtual address within the following range. MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1) WWN (50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| | | | | | MAC | string | Specifies a virtual MAC address. Divide into 2-digit half-width English characters using a colon(:) or hyphen(-). When specifying a virtual address automatically, specify null. |
| | | | | | BootProtocol | string | Settings of Boot Methods - None: Does not specify how to boot. - PXE: Uses PXE. |
| | | | | | BootPriority | integer | Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used. |
| | | | | | PXEBootEnvironment | object | Settings of PXE Boot |
| | | | | | IPUsage | string | Specifies the IP protocol to use in PXE boot. - IP4first: Uses the IPv4 first. - IP4only: Uses IPv4 only. - IP6first: Uses the IPv6 first. - IP6only: Uses IPv6 only. |
| | | | | | FCoEFunction | object | FCoE Function |
| | | | | | FunctionEnable | string | Settings of Function Validity - true: Enables Function. - false: Does not enable Function. |
| | | | | | Bandwidth | integer | Specifies settings of bandwidth. Specifies respective IO channels so that the total is 100. |

| Parameter | | | | | | Type | Description |
|-----------|--|--|--|--|--|---------------------|--|
| | | | | | | | If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally accordingly. |
| | | | | | | RateLimit | integer Maximum Share Percent of Bandwidth Available at This Function It should be exceeding the value of Bandwidth of this Function. |
| | | | | | | SRIOV | string Settings to Enable SR-IOV - true: Enables SR-IOV. - false: Disables SR-IOV. |
| | | | | | | UseVirtualAddresses | string Settings of the Use of Virtual Address - true: Uses a virtual address. - false: Does not use virtual address. |
| | | | | | | VirtualAddress | object Virtual Address It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards. It is recommended that you set the virtual address within the following range. MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1) WWN (50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| | | | | | | WWNN | string Specifies a virtual WWNN. Divide into 2 digit half-width English characters using (:). When specifying a virtual address automatically, specify null. |
| | | | | | | WWPN | string Specifies a virtual WWPN. Divide into 2 digit half-width English characters using (:). WWPN, including other profiles, should be unique as a whole. When specifying a virtual address automatically, specify null. |
| | | | | | | MAC | string Specifies a virtual MAC address. Divide into 2-digit half-width English characters using a colon(:) or hyphen(-). When specifying a virtual address automatically, specify null. |
| | | | | | | BootProtocol | string Settings of Boot Methods - None: Does not specify how to boot. |

| Parameter | | | | | Type | Description |
|-----------|--|--|--|-------------------|---------|---|
| | | | | | | - FC: Uses FC. |
| | | | | BootPriority | integer | Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used. |
| | | | | FCBootEnvironment | object | FC Boot Settings |
| | | | | FCTargets | object | FC Target Settings |
| | | | | FCTarget | array | FC Target Settings Specifies information of the first and second storages that start up by SAN boot. |
| | | | | @FCTargetId x | integer | Specifies information of the first and second storages that start up by SAN boot. |
| | | | | TargetWWPN | string | Specifies WWPN of storage that starts up by SAN boot. |
| | | | | TargetLUN | integer | Specifies LUN of storage that starts up by SAN boot. |
| | | | | FCLinkSpeed | string | Specifies speed of connection. - auto: Automatic - 1: 1 Gbit/s - 2: 2 Gbit/s - 4: 4 Gbit/s - 8: 8 Gbit/s - 16: 16 Gbit/s When the connection speed that you want to set is not in the alternatives, specify "auto." |
| | | | | FCTopology | string | Specifies a form of connection. - auto_loop: Automatic (It tries to connect by Arbitrated loop at first) - PtP: Point-to-Point - auto_PtP: Automatic (It tries to connect by Point-to-Point at first) - loop: Arbitrated loop |
| | | | | ISCSIFunction | object | iSCSI Function |
| | | | | FunctionEnable | string | Settings of Function Validity - true: Enables Function. - false: Does not enable Function. |
| | | | | VLANId | integer | VLAN ID |
| | | | | Bandwidth | integer | Specifies settings of bandwidth. Settings respective IO channels so that the total is 100. If the total bandwidth of respective channels is not 100, the bandwidth value is adjusted internally accordingly. |
| | | | | RateLimit | integer | Maximum Share Percent of Bandwidth Available at This Function It should be exceeding the value of Bandwidth of this Function. |
| | | | | SRIOV | string | Settings to Enable SR-IOV |

| Parameter | | | | | Type | Description |
|-----------|--|--|--|----------------------|---------|---|
| | | | | | | <ul style="list-style-type: none"> - true: Enables SR-IOV. - false: Disables SR-IOV. |
| | | | | UseVirtualAddresses | string | Settings of the Use of Virtual Address <ul style="list-style-type: none"> - true: Uses a virtual address. - false: Does not use virtual address. |
| | | | | VirtualAddress | object | Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards. It is recommended that you set the virtual address within the following range. MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1) WWN (50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| | | | | MAC | string | Virtual MAC Address Divide into 2-digit half-width English characters using a colon(:) or hyphen(-). When specifying a virtual address automatically, specify null. |
| | | | | BootProtocol | string | Settings of Boot Methods <ul style="list-style-type: none"> - None: Does not specify how to boot. - iSCSI: Uses iSCSI. |
| | | | | BootPriority | integer | Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used. |
| | | | | ISCSIBootEnvironment | object | Setting of iSCSI Boot |
| | | | | ISCSIInitiator | object | Setting of iSCSI Initiator |
| | | | | DHCPUsage | string | Settings of Acquiring Method of IP Address for Initiator <ul style="list-style-type: none"> - true: Acquires an address from DHCP server dynamically. - false: Sets up an address statically. |
| | | | | Name | string | Initiator IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-") |
| | | | | IPv4Address | string | IP Address for Initiator |

| Parameter | | | | | | | | | | Type | Description |
|-----------|--|--|--|--|--|--|--|--|--|----------------------|---|
| | | | | | | | | | | | Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false. |
| | | | | | | | | | | SubnetMask | string Subnet Mask Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false. |
| | | | | | | | | | | GatewayIPv4Address | string Gateway Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false. |
| | | | | | | | | | | VLANId | integer VLAN ID used to send requirements of HBA |
| | | | | | | | | | | ISCSITarget | object Setting of iSCSI Target |
| | | | | | | | | | | DHCPUsage | string Setting of How to Acquire IP Address of a Target - true: Acquires an address from DHCP server dynamically. - false: Sets up an address statically. |
| | | | | | | | | | | Name | string Target IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-") It is possible to omit when the DHCPUsage of the ISCSITarget is true. |
| | | | | | | | | | | IPv4Address | string Target IP Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false. |
| | | | | | | | | | | PortNumber | integer Target Port Number Specifies when DHCPUsage is false. It can be omitted even when DHCPUsage is false. If omitted, set to 3260. |
| | | | | | | | | | | BootLUN | integer Specifies LUN number (0-255) of the target. Specifies when DHCPUsage is false. |
| | | | | | | | | | | AuthenticationMethod | string Setting of Authentication Methods - None: No Authentication - CHAP: CHAP Authentication - MutualCHAP: Mutual CHAP Authentication |
| | | | | | | | | | | ChapUserName | string Authentication User Name Specifies a string with less than 127 characters consisting of alphabetic characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. |

| Parameter | | | | | | | | Type | Description |
|-----------|--|--|--|--|--|--|------------------|--------|---|
| | | | | | | | | | It is recommended to use only alphanabetic characters. |
| | | | | | | | ChapSecret | string | <p>Secret of CHAP Authentication</p> <p>Set the password encrypted with AES256+Base64.</p> <p>For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols.</p> <p>Specifies when AuthenticationMethod is anything besides None.</p> <p>You may not use symbols by type of hardware. It is recommended to use only alphanabetic characters.</p> |
| | | | | | | | MutualChapSecret | string | <p>Secret of Mutual CHAP Authentication</p> <p>Set the password encrypted with AES256+Base64.</p> <p>For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols.</p> <p>Specifies when AuthenticationMethod is anything besides None.</p> <p>You may not use symbols by type of hardware. It is recommended to use only alphanabetic characters.</p> |

D.3.2 LANAdapter

| Parameter | | | Type | Description |
|------------|-------|---------------------|---------|---|
| LANAdapter | | | object | LAN Adapter Settings |
| | Ports | | object | Port Settings |
| | | Port | array | Port Settings |
| | | @PortIdx | integer | <p>Specifies a number of a port.</p> <p>The value starts from 1.</p> |
| | | PortEnable | string | <p>Setting of Port Validity</p> <ul style="list-style-type: none"> - true: Enables a port. - false: Does not enable a port. |
| | | SRIOV | string | <p>Settings to Enable SR-IOV</p> <ul style="list-style-type: none"> - true: Enables SR-IOV. - false: Disables SR-IOV. |
| | | UseVirtualAddresses | string | <p>Settings of the Use of Virtual Address</p> <ul style="list-style-type: none"> - true: Uses a virtual address. - false: Does not use virtual address. |
| | | VirtualAddress | object | <p>Specifies a virtual address.</p> <p>It is not required when a virtual address is not used.</p> <p>It is required that the Virtual MAC address, WWPN and IQN are unique across the system.</p> <p>Except for the same card, it is required that the WWNN is unique across the system.</p> |

| Parameter | | | Type | Description |
|-----------|--|--|----------------------|--|
| | | | | <p>There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time.</p> <p>Network communication is not possible if virtual MAC addresses overlap.</p> <p>Multicast MAC addresses cannot be used as virtual MAC addresses.</p> <p>If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards.</p> <p>It is recommended that you set the virtual address within the following range.</p> <p>MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1)</p> <p>WWN (50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF)</p> |
| | | | MAC | <p>Virtual MAC Address</p> <p>Divide into 2-digit half-width English characters using a colon(:) or hyphen(-).</p> <p>When specifying a virtual address automatically, specify null.</p> |
| | | | BootProtocol | <p>Settings of Boot Methods</p> <ul style="list-style-type: none"> - None: Does not specify how to boot. - PXE: Uses PXE. - iSCSI: Uses iSCSI. |
| | | | BootPriority | <p>Sequence of booting should be specified by values 1 to 4.</p> <p>Any redundant value in a profile cannot be used.</p> |
| | | | ISCSIBootEnvironment | Settings of iSCSI Boot |
| | | | ISCSIInitiator | Settings of iSCSI Initiator |
| | | | DHCPUsage | <p>Settings of Acquiring Method of IP Address for Initiator</p> <ul style="list-style-type: none"> - true: Acquires an address from DHCP server dynamically. - false: Sets up an address statically. |
| | | | Name | <p>Initiator IQN</p> <p>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 "-").</p> |
| | | | IPv4Address | <p>IP Address for Initiator</p> <p>Specifies a string consisting half-width digits (0-255) and period (".").</p> <p>Specifies when DHCPUsage is false.</p> |
| | | | SubnetMask | <p>Subnet Mask</p> <p>Specifies a string consisting half-width digits (0-255) and period (".").</p> <p>Specifies when DHCPUsage is false.</p> |
| | | | GatewayIPv4Address | <p>Gateway Address</p> <p>Specifies a string consisting half-width digits (0-255) and period (".").</p> <p>Specifies when DHCPUsage is false.</p> |
| | | | VLANId | VLAN ID used to send requirements of HBA |
| | | | ISCSITarget | Setting of iSCSI Target |

| Parameter | | | | | Type | Description | |
|---------------------|--|--|--|--|----------------------|----------------------|--|
| | | | | | DHCPUsage | string | Setting of How to Acquire IP Address of a Target - true: Acquires an address from DHCP server dynamically. - false: Sets up an address statically. |
| | | | | | Name | string | Target IQN A string within 223 characters should be specified with its head and tail expressed in alphanumerical and the rest consisting of alphanumerical and symbols (period ".", colon ":" and hyphen "-") It is possible to omit when the DHCPUsage of the ISCSITarget is true. |
| | | | | | IPv4Address | string | Target IP Address Specifies a string consisting half-width digits (0-255) and period ("."). Specifies when DHCPUsage is false. |
| | | | | | PortNumber | integer | Target Port Number Specifies when DHCPUsage is false. It can be omitted even when DHCPUUsage is false. If omitted, set to 3260. |
| | | | | | BootLUN | integer | Specifies LUN number (0-255) of the target. Specifies when DHCPUsage is false. |
| | | | | | AuthenticationMethod | string | Setting of Authentication Methods None: No Authentication CHAP: CHAP Authentication MutualCHAP: Mutual CHAP Authentication |
| | | | | | ChapUserName | string | Authentication User Name Specifies a string with less than 127 characters consisting of alphametric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters. |
| | | | | | ChapSecret | string | Secret of CHAP Authentication Set the password encrypted with AES256+Base64. For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters. |
| | | | | | MutualChapSecret | string | Secret of Mutual CHAP Authentication Set the password encrypted with AES256+Base64. For a secret before encryption, use a string with over 12 and less than 16 characters consisting of alphanumeric characters and symbols. Specifies when AuthenticationMethod is anything besides None. You may not use symbols by type of hardware. It is recommended to use only alphametric characters. |
| PXENBootEnvironment | | | | | object | Settings of PXE Boot | |

| Parameter | | | | Type | Description |
|-----------|--|--|---------|--------|--|
| | | | IPUsage | string | Settings of the IP Protocol to Use in PXE Boot. <ul style="list-style-type: none"> - IP4first: Uses the IPv4 first. - IP4only: Uses IPv4 only. - IP6first: Uses the IPv6 first. - IP6only: Uses IPv6 only. |

D.3.3 FCAdapter

| Parameter | | | | Type | Description |
|-----------|-------|------|---------------------|---------|---|
| FCAdapter | | | | object | FC Adapter Settings |
| | Ports | | | object | Port Settings |
| | | Port | | array | Port Settings |
| | | | @PortIdx | integer | Specifies a number of a port. The value starts from 1. |
| | | | PortEnable | string | Setting of Port Validity <ul style="list-style-type: none"> - true: Enables a port. - false: Does not enable a port. |
| | | | SRIOV | string | Settings to Enable SR-IOV <ul style="list-style-type: none"> - true: Enables SR-IOV. - false: Disables SR-IOV. |
| | | | UseVirtualAddresses | string | Settings of the Use of Virtual Address <ul style="list-style-type: none"> - true: Uses a virtual address. - false: Does not use virtual address. |
| | | | VirtualAddress | object | Specifies a virtual address. It is not required when a virtual address is not used. It is required that the Virtual MAC address, WWPN and IQN are unique across the system. Except for the same card, it is required that the WWNN is unique across the system. There is a risk that the volume is damaged if overlapping IQN, WWPN or WWNN access the same volume at the same time. Network communication is not possible if virtual MAC addresses overlap. Multicast MAC addresses cannot be used as virtual MAC addresses. If you set virtual IP addresses arbitrarily there is a risk that they might overlap with the factory shipping values of other cards. It is recommended that you set the virtual address within the following range. MAC Address (00:19:99:3E:D2:A1 - 00:19:99:3F:CC:A1) WWN (50:01:99:93:ED:2A:10:00 - 50:01:99:93:FC:C9:FF:FF) |
| | | | WWNN | string | Specifies a virtual WWNN. |

| Parameter | | | | Type | Description |
|-----------|--|--|--|-------------------|---|
| | | | | | Divide into 2-digit half-width English characters using (:). When specifying a virtual address automatically, specify null. |
| | | | | WWPN | Specifies a virtual WWPN. Divide into 2 digit half-width English characters using (:). WWPN, including other profiles, should be unique as a whole. When specifying a virtual address automatically, specify null. |
| | | | | BootProtocol | Settings of Boot Methods - None: Does not specify how to boot. - FC: Uses the FC. Set as None or FC when FCAdapter. |
| | | | | BootPriority | Sequence of booting should be specified by values 1 to 4. Any redundant value in a profile cannot be used. |
| | | | | FCBootEnvironment | FC Boot Settings |
| | | | | FCTargets | FC Target Settings |
| | | | | FCTarget | FC Target Settings Specifies information of the first and second storages that start up by SAN boot. |
| | | | | @FCTargetIdx | Specifies information of the first and second storages that start up by SAN boot. |
| | | | | TargetWWPN | Specifies WWPN of storage that starts up by SAN boot. |
| | | | | TargetLUN | Specifies LUN of storage that starts up by SAN boot. |
| | | | | FCLinkSpeed | Setting of Connection Speed - auto: Automatic - 1: 1 Gbit/s - 2: 2 Gbit/s - 4: 4 Gbit/s - 8: 8 Gbit/s - 16: 16 Gbit/s When the connection speed that you want to set is not in the alternatives, specify "auto." |
| | | | | FCTopology | Setting of Form of Connection - auto_loop: Automatic (It tries to connect by Arbitrated loop at first) - PtP: Point-to-Point - auto_PtP: Automatic (It tries to connect by Point-to-Point at first) - loop: Arbitrated loop |

D.4 OSInstallation

| Parameter | | Type | Description |
|----------------|--------------------|--------|---|
| OSInstallation | | object | Settings of OS Installation |
| | Linux | object | Settings of Linux |
| | OsType | object | OS Classification |
| | Type | string | Type of Imported OS Media <ul style="list-style-type: none"> - Red Hat Enterprise Linux 7.4 (x86_64) - Red Hat Enterprise Linux 7.3 (x86_64) - Red Hat Enterprise Linux 7.2 (x86_64) - Red Hat Enterprise Linux 7.1 (x86_64) - Red Hat Enterprise Linux 6.9 (x86_64) - Red Hat Enterprise Linux 6.9 (x86) - Red Hat Enterprise Linux 6.8 (x86_64) - Red Hat Enterprise Linux 6.8 (x86) - Red Hat Enterprise Linux 6.7 (x86_64) - Red Hat Enterprise Linux 6.7 (x86) - Red Hat Enterprise Linux 6.6 (x86_64) - Red Hat Enterprise Linux 6.6 (x86) - SUSE Linux Enterprise Server 12 SP3 (x86_64) - SUSE Linux Enterprise Server 12 SP2 (x86_64) - SUSE Linux Enterprise Server 12 SP1 (x86_64) - SUSE Linux Enterprise Server 12 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86_64) - SUSE Linux Enterprise Server 11 SP4 (x86) |
| | ServerViewSuiteDVD | object | Settings of ServerView Suite DVD |
| | Version | string | Version Number of DVD to Use at Installation When omitting settings of ServerView Suite DVD, use the newest version from the versions imported. |
| | PostScript | object | Settings of Optional Script for Execution after Installation |
| | FolderPath | string | FTP Directory that Saved a Script for Execution and the Name of the Script File for Execution |
| | ScriptName | string | Name of Script File for Execution |
| | RaidConfig | object | Setting of Array Controller |
| | LogicalDiskType | string | Type of Disk Drive <ul style="list-style-type: none"> - RAID: RAID - SATA: SATA - SAS: SAS - FC: FC - ISCSIHBA: iSCSI HBA - PCIeSSD: PCIeSSD |

| Parameter | | | | Type | Description | |
|-----------|-------------------|------------|----------------|-------------|---|---|
| | | | | | <div>- USBSTOR: USBSTOR</div> <div>When using a card which has both SAS controller function and SAS array controller function as the SAS controller card, select "RAID."</div> | |
| | | | RAIDController | string | <div>Types of Array Controllers</div> <div><div>- Disabled: Uses the existing array configuration. (Select also when do not use RAID.)</div><div>- OnBoard: Uses onboard array controller.</div><div>- SasRaid01: Uses array controller enabled for SAS RAID0/1.</div><div>- SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6.</div></div> <div>When configuring a new array, select the type of the array controller.</div> <div>When using the existing array configuration, select "Disabled."</div> | |
| | | | RAIDLevel | string | <div>RAID Level of Disk Array to be Built</div> <div><div>- RAID0: RAID level 0</div><div>- RAID1: RAID level 1</div><div>- RAID1E: RAID level 1E</div><div>- RAID5: RAID level 5</div><div>- RAID6: RAID level 6</div><div>- RAID10: RAID level 1+0</div></div> | |
| | | | RAIDDisk | integer | The Number of Disks to be Built in RAID | |
| | ManagementLanInfo | | | object | <div>Information of LAN to be Used as Management LAN</div> <div>If omitted, use the lead port onboard.</div> | |
| | | | AdapterInfo | object | <div>Information of an Adapter to be Used as Management LAN</div> <div>Specifies either MACAddress or AdapterInfo.</div> | |
| | | | | AdapterType | string | <div>Types of Adapters</div> <div><div>- Onboard: Onboard</div><div>- AddOnCard: PCI card</div></div> |
| | | | | SlotIndex | integer | <div>Slot Number</div> <div>Specifies when AdapterType is AddOnCard.</div> |
| | | | | PortIndex | integer | Port Number |
| | | MACAddress | | | string | <div>MAC Address to be Used as Management LAN</div> <div>Specifies either MAC Address or Adapter.</div> |
| | PxeBootInfo | | | object | Settings of PXE Boot | |
| | | | BootType | string | <div>Class of Boot</div> <div><div>- Legacy: Legacy</div><div>- UEFI: UEFI (Unified Extensible Firmware Interface)</div></div> <div>Specified operation varies by model.</div> <div>There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration.</div> | |

| Parameter | | | | Type | Description |
|-----------|--|--|----------------------------|---------|---|
| | | | | | When unspecified, it will turn out to the following specified states. <ul style="list-style-type: none"> - For PRIMERGY RX/CX M4 or later and PRIMEQUEST 3000B/3000E: UEFI - For other than the above models: Legacy |
| | | | Volumes | object | Specification of a mount point |
| | | | boot | object | Settings of /boot |
| | | | CreatePartition | string | Creation of Partitions <ul style="list-style-type: none"> - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | FileSystem | string | Types of File System <ul style="list-style-type: none"> - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series. |
| | | | PartitionSize | integer | Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | FillToMaximumAllowableSize | string | Usable or Not of up to the Maximum Allowable Value <ul style="list-style-type: none"> - Enabled: Uses up to max capacity of the partition. - Disabled: Does not use up to max capacity of the partition. |
| | | | swap | object | Settings of /swap |
| | | | CreatePartition | string | Creation of Partitions <ul style="list-style-type: none"> - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | FileSystem | string | Types of File System <ul style="list-style-type: none"> - swap: Swap |
| | | | PartitionSize | integer | Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | FillToMaximumAllowableSize | string | Usable or Not of up to the Maximum Allowable Value <ul style="list-style-type: none"> - Enabled: Uses up to max capacity of the partition. - Disabled: Does not use up to max capacity of the partition. |
| | | | root | object | Settings of /root |
| | | | CreatePartition | string | Creation of Partitions <ul style="list-style-type: none"> - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | FileSystem | string | Types of File Systems |

| Parameter | | | | Type | Description |
|-----------|------|--|----------------------------|-------------------|--|
| | | | | | <ul style="list-style-type: none">- ext2: ext2- ext3: ext3- ext4: ext4- xfs: XFS- vfat: vfat <p>xfs cannot be specified in Red Hat Enterprise Linux 6 series.</p> |
| | | | PartitionSize | integer | Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | FillToMaximumAllowableSize | string | Usable or not of up to the maximum allowable value <ul style="list-style-type: none">- Enabled: Uses up to the partition's max capacity.- Disabled: Does not use up to max capacity of the partition. |
| | home | | object | Settings of /home | |
| | | | CreatePartition | string | Creation of Partitions <ul style="list-style-type: none">- Enabled: Creates partition.- Disabled: Does not create partition. |
| | | | FileSystem | string | Types of File System <ul style="list-style-type: none">- ext2: ext2- ext3: ext3- ext4: ext4- xfs: XFS- vfat: vfat <p>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series.</p> |
| | | | PartitionSize | integer | Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | FillToMaximumAllowableSize | string | Usable or Not of up to the Maximum Allowable Value <ul style="list-style-type: none">- Enabled: Uses up to the partition's max capacity.- Disabled: Does not use up to max capacity of the partition. |
| | var | | object | Settings o /var | |
| | | | CreatePartition | string | Creation of Partitions <ul style="list-style-type: none">- Enabled: Creates partition.- Disabled: Does not create partition. |
| | | | FileSystem | string | Types of File System <ul style="list-style-type: none">- ext2: ext2- ext3: ext3- ext4: ext4- xfs: XFS |

| Parameter | | | | Type | Description |
|-----------|--|--|------|----------------------------|--|
| | | | | | <ul style="list-style-type: none"> - vfat: vfat <p>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series.</p> |
| | | | | PartitionSize | integer <p>Capacity of partitions (MB)</p> <p>When specifying the use up to the maximum acceptable amount, it can be omitted.</p> |
| | | | | FillToMaximumAllowableSize | string <p>Usable or Not of up to the Maximum Allowable Value</p> <ul style="list-style-type: none"> - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to max capacity of the partition. |
| | | | user | | object <p>Settings of /user</p> |
| | | | | CreatePartition | string <p>Creation of Partitions</p> <ul style="list-style-type: none"> - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | | FileSystem | string <p>Types of File System</p> <ul style="list-style-type: none"> - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat <p>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series.</p> |
| | | | | PartitionSize | integer <p>Capacity of partitions (MB)</p> <p>When specifying the use up to the maximum acceptable amount, it can be omitted.</p> |
| | | | | FillToMaximumAllowableSize | string <p>Usable or Not of up to the Maximum Allowable Value</p> <ul style="list-style-type: none"> - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity. |
| | | | opt | | object <p>Settings of /opt</p> |
| | | | | CreatePartition | string <p>Creation of Partitions</p> <ul style="list-style-type: none"> - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | | FileSystem | string <p>Types of File System</p> <ul style="list-style-type: none"> - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat <p>xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series.</p> |

| Parameter | | | | Type | Description |
|-----------|--|--|--|----------------------------|---|
| | | | | PartitionSize | integer Capacity of partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | | FillToMaximumAllowableSize | string Usable or not of up to the maximum allowable value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity. |
| | | | | tmp | object Settings of /tmp |
| | | | | CreatePartition | string Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | | FileSystem | string Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| | | | | PartitionSize | integer Capacity of Partitions (MB) When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | | FillToMaximumAllowableSize | string Usable or Not of up to the Maximum Allowable Value - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity. |
| | | | | AdditionalVolumes | array Specification of a Mount Point |
| | | | | Volume | object Specification of a Mount Point |
| | | | | MountPoint | string Name of a Mount Point to Create |
| | | | | CreatePartition | string Creation of Partitions - Enabled: Creates partition. - Disabled: Does not create partition. |
| | | | | FileSystem | string Types of File System - ext2: ext2 - ext3: ext3 - ext4: ext4 - xfs: XFS - vfat: vfat xfs cannot be specified in Red Hat Enterprise Linux 6 series and CentOS 6 series. |
| | | | | PartitionSize | integer Capacity of Partitions (MB) |

| Parameter | | | | Type | Description |
|-----------|--|--|-----------------|----------------------------|---|
| | | | | | When specifying the use up to the maximum acceptable amount, it can be omitted. |
| | | | | FillToMaximumAllowableSize | Usable or Not of up to the Maximum Allowable Value <ul style="list-style-type: none"> - Enabled: Uses up to the partition's max capacity. - Disabled: Does not use up to the partition's max capacity. |
| | | | BasicSettings | | Basic Settings |
| | | | | Language | Specifying Language <ul style="list-style-type: none"> - English - German - Japanese |
| | | | | Keyboard | Type of Keyboard <ul style="list-style-type: none"> - United States - English: English Keyboard - German: German Keyboard - Japanese: Japanese Keyboard |
| | | | | TimeZone | Specification of Time Zone <ul style="list-style-type: none"> - GMT Standard Time - Pacific Standard Time - Mountain Standard Time - Central Standard Time - Eastern Standard Time - W. Europe Standard Time - Tokyo Standard Time |
| | | | | SystemClockUsesUTC | Use of UTC at the System Clock <ul style="list-style-type: none"> - Enabled: Uses UTC in system clock. - Disabled: Does not use UTC in system clock. |
| | | | PackageSettings | | Settings of Packages to Install |
| | | | | SelectPackages | Selection of Package Groups |
| | | | | SelectPackageList | Package Groups to Install <ul style="list-style-type: none"> - 32bit - additional-devel - apparmor - backup-client - backup-server - base - basic-desktop - Basis-Devel - cifs-file-server - compat-libraries |

| Parameter | | | | | Type | Description |
|-----------|--|--|--|--|------|---|
| | | | | | | <ul style="list-style-type: none"> - console-internet - core - debugging - desktop-debugging - desktop-platform - desktop-platform-devel - development - dhcp_dns_server - dial-up - directory_server - directory-client - directory-server - documentation - Dom0 - eclipse - emacs - file_server - file-server - fonts - ftp-server - gateway_server - general-desktop - german-support - gnome - gnome-basic - gnome-desktop - graphical-admin-tools - graphics - hardware-monitoring - identity-management-server - infiniband - input-methods - internet-browser - japanese-support - java-platform - kde - kde-desktop |

| Parameter | | | | | Type | Description |
|-----------|--|--|--|--|------|--|
| | | | | | | <ul style="list-style-type: none"> - kvm_server - kvm_tools - lamp_server - large-systems - legacy-unix - legacy-x - load-balancer - mail_server - mail-server - mainframe-access - mariadb - mariadb-client - mysql - mysql-client - network-file-system-client - network-server - network-tools - nfs-file-server - ofed - oracle_server - performance - perl-runtime - php - platform-devel - postgresql - postgresql-client - print_server - print-client - printing - print-server - remote-desktop-clients - remote-system-management - ruby-runtime - sap_server - scientific - security-tools - server-platform |

| Parameter | | | | | Type | Description | | | |
|-------------------|--------|--|--|--|------|---|-------------------------|-------------------------------|---|
| | | | | | | <ul style="list-style-type: none">- server-platform-devel- smart-card- storage-client-fcoe- storage-client-iscsi- storage-client-multipath- storage-server- system-admin-tools- system-management- system-management-messaging-client- system-management-snmp- system-management-wbem- technical-writing- tex- turbogears- virtualization- virtualization-client- virtualization-hypervisor- virtualization-platform- virtualization-tools- WBEM- web-server- web-servlet- x11- xen_server- xen_tools | | | |
| | | | | | | SinglePackages | object | Selection of Specific Package | |
| | | | | | | SinglePackageList | array(string) | Names of Packages to install | |
| | | | | | | SystemSettings | | object | System Settings |
| | | | | | | | ConfigureXWindowsSystem | string | X Windows System Settings <ul style="list-style-type: none">- Enabled: Uses X Window System.- Disabled: Does not use X Window System. For SUSE Linux Enterprise Server, it can be omitted. |
| DisplayResolution | string | Specification of Screen Resolution <ul style="list-style-type: none">- 640x480- 800x600- 1024x768- 1152x864 | | | | | | | |

| Parameter | Type | Description |
|---------------------------|--------|--|
| | | <ul style="list-style-type: none"> - 1280x800 - 1280x1024 - 1400x1050 - 1600x1200 - 1920x1440 - 2048x1536 <p>For SUSE Linux Enterprise Server, it can be omitted.</p> |
| ColorDepth | string | <p>Specification of the Number of Colors on the Screen</p> <ul style="list-style-type: none"> - 8 - 16 - 24 - 32 <p>For SUSE Linux Enterprise Server, it can be omitted.</p> |
| DefaultDesktop | string | <p>Type of Desktop to Use in Default</p> <ul style="list-style-type: none"> - GNOME: Uses the GNOME. - KDE: Uses KDE. - None: Does not specify. <p>For SUSE Linux Enterprise Server, it can be omitted.</p> |
| StartXWindowsSystemOnBoot | string | <p>X Window System Starts up at the System Boot</p> <ul style="list-style-type: none"> - Enabled: Starts up X Window System. - Disabled: Does not startup X Window System. <p>For SUSE Linux Enterprise Server, it can be omitted.</p> |
| InstallBootloader | string | <p>Installation of a Boot Loader</p> <ul style="list-style-type: none"> - Enabled: Installs boot loader. - Disabled: Does not install boot loader. |
| BootloaderLocation | string | <p>Destination of Installation of a Boot Loader</p> <ul style="list-style-type: none"> - MBR: Master Boot Record |
| KernelParameters | string | Kernel Parameter |
| SELinux | string | <p>Setting for Using SE Linux</p> <ul style="list-style-type: none"> - Enforcing: Uses enforcing mode. - Disabled: Does use in disabled mode. - Permissive: Uses at the mode is permissive. |
| UseShadowPasswords | string | <p>Setting for the Use of Shadow Password</p> <ul style="list-style-type: none"> - Enabled: Uses shadow password. - Disabled: Does not use shadow password. |
| UseMD5 | string | <p>Settings of MD5 for Encryption of Password</p> <ul style="list-style-type: none"> - Enabled: Uses MD5 for password encryption. - Disabled: Does not use MD5 for password encryption. |

| Parameter | | | Type | Description | |
|-----------|--|-----------------------|---------------|---|--|
| | | EnableNSCD | string | Settings for Using Name Switch Cache <ul style="list-style-type: none">- Enabled: Uses Name Switch Cache.- Disabled: Does not use Name Switch Cache. | |
| | | AdditionalParameters | | object | Applications Automatically Installed after OS Install. |
| | | SelectApplicationList | array(string) | Applications to Install <ul style="list-style-type: none">- ServerView Agentless Service- ServerView CIM Provider- ServerView RAID Manager- AIS Connect- ServerView Operations Manager- Java Runtime- SV Agent- SV Agent SLES- SV Update Agent- SV Update Agent SLES- DSNAP- Software Support Guide- Dynamic Reconfiguration utility PQ2- REMCS Option PQ2- HBA blockage PQ2- SIRMS PQ2- ServerView Mission Critical Option PQ2 | |
| | | 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 <ul style="list-style-type: none">- Enabled: Uses DNS acquired host name.- Disabled: Does not use DNS acquired host name. | |
| | | ComputerName | string | Unspecified Host Name Used when Host Name cannot be Acquired from DNS Host. | |
| | | DhcpEnable | string | Setting of the Use of DHCP <ul style="list-style-type: none">- Enabled: Uses DHCP.- Disabled: Does not use DHCP. | |
| | | NetworkInterface | | object | Network Interface Settings |
| | | | IPv4 | object | IPv4 Settings |
| | | | Address | string | IP Address |
| | | | | SubnetMask | string |

| Parameter | | | | | | Type | Description |
|-----------|--|--|--|--|--|---------------------------------|--|
| | | | | | | DefaultGateWay | Default Gateway |
| | | | | | | DnsServer | IP Address of DNS Server This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP. |
| | | | | | | AdditionalSettings | Settings to Add |
| | | | | | | WaitTimeForFinishOsInstallation | Wait time (minutes) when OS Installation Completed Effective at SUSE Linux Enterprise Server. Use the default value (12 minutes) when omitted. |
| | | | | | | Windows | Settings of Windows |
| | | | | | | OsType | OS Classification |
| | | | | | | Type | Type of Imported OS Media <ul style="list-style-type: none"> - Windows Server 2016 Datacenter (Fujitsu Media) - Windows Server 2016 Standard (Fujitsu Media) - Windows Server 2016 (Microsoft Media) - Windows Server 2016 (Microsoft VL Media) - Windows Server 2012 R2 Datacenter (Fujitsu Media) - Windows Server 2012 R2 Standard (Fujitsu Media) - Windows Server 2012 R2 (Microsoft Media) - Windows Server 2012 R2 (Microsoft VL Media) - Windows Server 2012 Datacenter (Fujitsu Media) - Windows Server 2012 Standard (Fujitsu Media) - Windows Server 2012 (Microsoft Media) - Windows Server 2012 (Microsoft VL Media) - Windows Server 2008 R2 Datacenter + SP1 (Fujitsu Media) - Windows Server 2008 R2 Enterprise + SP1 (Fujitsu Media) - Windows Server 2008 R2 Standard + SP1 (Fujitsu Media) - Windows Server 2008 R2 + SP1 (Microsoft Media) - Windows Server 2008 R2 + SP1 (Microsoft VL Media) |
| | | | | | | CoreVersion | Core Version <ul style="list-style-type: none"> - Full: Full installation - Core: Core install |
| | | | | | | Edition | Edition <ul style="list-style-type: none"> - Standard - Datacenter - Enterprise |
| | | | | | | ServerViewSuiteDVD | Settings of ServerView Suite DVD |
| | | | | | | Version | Version Number of DVD to Use at Installation 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 <ul style="list-style-type: none"> - RAID: RAID - SATA: SATA - SAS: SAS - FC: FC - ISCSIHBA: iSCSI HBA - PCIeSSD: PCIeSSD - USBSTOR: USBSTOR When using a card which has both SAS controller function and SAS array controller function as the SAS controller card, select "RAID." |
| | RAIDController | string | Types of Array Controllers <ul style="list-style-type: none"> - Disabled: Uses the existing array configuration. (Select also when do not use RAID.) - OnBoard: Uses onboard array controller. - SasRaid01: Uses array controller enabled for SAS RAID0/1. - SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. When configuring a new array, select a type of the array controller. When using the existing array configuration, select "Disabled." |
| | RAIDLevel | string | RAID Level of Disk Array to be Built <ul style="list-style-type: none"> - RAID0: RAID level 0 - RAID1: RAID level 1 - RAID1E: RAID level 1E - RAID5: RAID level 5 - RAID6: RAID level 6 - RAID10: RAID level 1+0 |
| | RAIDDisk | integer | The Number of Disks to be Built in RAID |
| | ManagementLanInfo | object | Information of LAN to be Used as Management LAN If omitted, use the lead port on board. |
| | AdapterInfo | object | Information of an Adapter to be Used as Management LAN Specifies either MACAddress (MAC Address) or AdapterInfo (Adapter). |
| | AdapterType | string | Types of Adapters <ul style="list-style-type: none"> - Onboard: OnBoard - AddOnCard: PCI card |

| Parameter | | | | Type | Description | |
|----------------------|---------|-------------|----------------|---|---|--|
| | | | SlotIndex | integer | Slot Number Specifies AdapterType in the case of the AddOnCard. | |
| | | | PortIndex | integer | Port Number | |
| | | | MACAddress | string | MAC Address to be Used as Management LAN Specifies either MAC Address or Adapter. | |
| | | PxeBootInfo | | object | Settings of PXE Boot | |
| | | | BootType | string | Class of Boot - Legacy: Legacy - UEFI: UEFI (Unified Extensible Firmware Interface) Specified operation varies by model. There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration. When unspecified, it will turn out to the following specified states. - For PRIMERGY RX/CX M4 or later and PRIMEQUEST 3000B/3000E: UEFI - For other than the above models: Legacy | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | 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 - NTFS:NT File System |
| PartitionSize | integer | | | | | Partition Size |
| QuickFormat | string | | | | | Settings for the use of quick format of partition - Enabled: Uses quick format. - Disabled: Does not use quick format. |
| BasicSettings | | object | Basic Settings | | | |
| | | TimeZone | string | Time Zone - GMT Standard Time - Pacific Standard Time - Mountain Standard Time - Central Standard Time - Eastern Standard Time - W. Europe Standard Time - Tokyo Standard Time | | |
| | | | | | Language | string |

| Parameter | | | | Type | Description |
|-----------|--|--|--|--------------------|---|
| | | | | | - Japanese |
| | | | | Keyboard | Language and Type of Keyboard <ul style="list-style-type: none"> - United States - English: English Keyboard - United States - International: English international keyboard - German: German Keyboard - Japanese: Japanese Keyboard |
| | | | | ProductID | Product Key |
| | | | | SystemSettings | System Settings |
| | | | | DisplayResolution | Screen Resolution <ul style="list-style-type: none"> - 640x480 - 800x600 - 1024x768 - 1152x864 - 1280x1024 - 1600x1200 |
| | | | | RefreshRate | Refresh Rate <ul style="list-style-type: none"> - 60 - 70 - 72 - 75 - 80 - 85 - 100 |
| | | | | ColorDepth | The Number of Colors Shown on the Screen <ul style="list-style-type: none"> - 1 - 4 - 8 - 15 - 16 - 24 - 32 |
| | | | | Service | Service |
| | | | | Snmp | SNMP Settings |
| | | | | Setup | SNMP Service Installation Settings <ul style="list-style-type: none"> - true: Installs SNMP service. - false: Does not install SNMP service. |
| | | | | TrapConfigurations | List of SNMP Trap Settings |
| | | | | TrapConfiguration | Trap Settings |

| Parameter | | | Type | Description |
|-----------|---------------------|-------------------------------|--------|--|
| | | 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 <ul style="list-style-type: none"> - None - Read Create - Read Write - Read Only - Notify |
| | SnmAgent | | object | SNMP Agent Settings |
| | | ContactName | string | Contact Information (name of administrator) |
| | | Location | string | Location (physical position) |
| | SnmMisc | | object | SNMP Misc Settings |
| | | AuthenticationTrap | string | Settings for Transmission of Authentication Trap <ul style="list-style-type: none"> - Enabled: Sends certification trap. - Disabled: Does not send certification trap. |
| | | AcceptSnmPacketsFromLocalhost | string | Settings for Receiving Localhost SNMP Packet <ul style="list-style-type: none"> - Enabled: Receives SNMP packet of Localhost. - Disabled: Does not receive SNMP packet of Localhost. |
| | | AcceptHostName | string | Host Name that Receives the SNMP Packet |
| | | ServiceApp | string | Settings of Application Services <ul style="list-style-type: none"> - Enabled: Uses application service. - Disabled: Does not use application service. |
| | | ServiceEndToEnd | string | Settings of End-To-End Service <ul style="list-style-type: none"> - Enabled: Uses End-To-End service. - Disabled: Does not use End-To-End service. |
| | | ServiceInternet | string | Settings of Internet Service <ul style="list-style-type: none"> - Enabled: Uses Internet service. - Disabled: Does not use Internet service. |
| | | ServiceDataLink | string | Settings of Data Link Service <ul style="list-style-type: none"> - Enabled: Uses data link service. - Disabled: Does not use data link service. |
| | | ServicePhysical | string | Settings of Physical Service <ul style="list-style-type: none"> - Enabled: Uses physical service. - Disabled: Does not use physical service. |
| | AdditionalParameter | | object | Settings of Remote Assistance |

| Parameter | | | | Type | Description | | |
|-----------|--|--|--------------------|------------------------|----------------------|---|---|
| | | | | RemoteDesktop | string | Settings for the Use of Remote Desktop - Enabled: Uses remote desktop. - Disabled: Does not remote desktop. | |
| | | | | RemoteAssistance | string | Settings of the Use of Remote Assistance - Enabled: Uses remote assistance. - Disabled: Does not use remote assistance. | |
| | | | | FullRemoteControl | string | Settings of Remote Control - Enabled: Uses remote control. - Disabled: Does not remote control. | |
| | | | | ExpiredHours | integer | Maximum time to Active an Invitation | |
| | | | | ScvmmFirewallException | string | Settings of Firewall Needed to Register in SCVMM. - Enabled: Sets up required firewall to register for SCVMM. - Disabled: Does not set required firewall for to register for SCVMM. | |
| | | | AddOnConfig | | | object | Settings of Applications to Add |
| | | | | | JavaRuntime | string | Java Runtime Environment (JRE) Installation settings - Enabled: Installs Java Runtime Environment (JRE). - Disabled: Does not install Java Runtime Environment (JRE). Cannot install if CoreVersion is Core. |
| | | | | | SVAgent | string | Settings of ServerView Agent Installation - Enabled: Installs ServerView agent. - Disabled: Does not install ServerView agent. |
| | | | | | SVUpdateAgent | string | Settings of ServerView Update Agent Installation - Enabled: Installs ServerView update agent. - Disabled: Does not install ServerView update agent. Installing ServerView update agent calls for installation of ServerView agent. |
| | | | | | DSNAP | string | Setting of Installation of DSNAP - Enabled: Installs DSNAP. - Disabled: Does not install DSNAP. |
| | | | | | SoftwareSupportGuide | string | Settings of Installation of Software Support Guide. - Enabled: Installs software support guide. - Disabled: Does not install software support guide. |
| | | | | | RAIDManager | string | Settings of Server View RAID Manager Installation - Enabled: Installs Server View RAID Manager. - Disabled: Does not install Server View RAID Manager. |
| | | | OsIndividualConfig | | | object | Specific Information |
| | | | | BasicSettings | object | Basic Settings | |

| Parameter | | | | Type | Description |
|-----------|--|--|--|-----------------------|---|
| | | | | AdministratorPassword | Administrator Password |
| | | | | UserName | Name of a User |
| | | | | Organization | Organization Name |
| | | | | ComputerName | Computer Name |
| | | | | SystemSettings | System Settings |
| | | | | DomainOrWorkgroup | Settings for Participating in Work Group Domain <ul style="list-style-type: none"> - Workgroup: work group - Domain: Domain |
| | | | | WorkGroupName | Work Group Name |
| | | | | DomainName | Domain Name |
| | | | | DomainUser | Domain User Name |
| | | | | DomainPassword | Domain Password |
| | | | | NetworkInterface | Network Settings |
| | | | | IPv4 | IPv4 Address Settings |
| | | | | DhcpEnable | Setting of DHCP Validity <ul style="list-style-type: none"> - Enabled: Enables DHCP. - Disabled: Does not enable DHCP. |
| | | | | Address | IP Address |
| | | | | SubnetMask | Subnet Mask |
| | | | | DefaultGateWay | Gateway |
| | | | | DnsDomainName | DNS Domain Name <p>This setting can be omitted even when setting IP address, subnet mask and default gateway without using DHCP.</p> |
| | | | | DnsServer | IP Address of DNS Server <p>This setting can be omitted even when setting IP address, subnet mask and default gateway without using DHCP.</p> |
| | | | | DnsServer2 | IP Address of DNS Server <p>Specify the settings when you want to set multiple DNS servers.</p> <p>This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.</p> |
| | | | | Vmware | Settings of VMware ESXi |
| | | | | OsType | OS Classification |
| | | | | Type | Type of Imported OS Media <ul style="list-style-type: none"> - VMware ESXi 6.5 Update 1 (Fujitsu Media) - VMware ESXi 6.5 (Fujitsu Media) - VMware ESXi 6.0 Update 3 (Fujitsu Media) - VMware ESXi 6.0 Update 2 (Fujitsu Media) - VMware ESXi 6.0 Update 1 (Fujitsu Media) - VMware ESXi 5.5 Update 3 (Fujitsu Media) |

| Parameter | | Type | Description |
|-----------|--------------------|---------|--|
| | ServerViewSuiteDVD | object | Settings of ServerView Suite DVD |
| | Version | string | Version Number of DVD to Use at Installation When omitting settings of ServerView Suite DVD, use the newest version from the versions imported. |
| | PostScript | object | Optional Script for Execution after Installation |
| | FolderPath | string | FTP Directory that Saved a Script for Execution and the Name of the Script File for Execution |
| | ScriptName | string | Name of Script File for Execution |
| | RaidConfig | object | Setting of Array Controller |
| | LogicalDiskType | string | Type of Disk Drive <ul style="list-style-type: none"> - RAID: RAID - SATA: SATA - SAS: SAS - FC:FC - iSCSIHBA:iSCSI HBA - PCIeSSD: PCIeSSD - USBSTOR: USBSTOR When using a card which has both SAS controller function and SAS array controller function as the SAS controller card, select "RAID." |
| | RAIDController | string | Types of Array Controllers <ul style="list-style-type: none"> - Disabled: Uses the existing array configuration. (Select also when do not use RAID.) - OnBoard: Uses onboard array controller. - SasRaid01: Uses array controller enabled for SAS RAID0/1. - SasRaid0156: Uses array controller enabled for SAS RAID0/1/5/6. When configuring a new array, select a type of the array controller. When using the existing array configuration, select "Disabled." |
| | RAIDLevel | string | RAID Level of Disk Array to be Built <ul style="list-style-type: none"> - RAID0: RAID level 0 - RAID1: RAID level 1 - RAID1E: RAID level 1E - RAID5: RAID level 5 - RAID6: RAID level 6 - RAID10: RAID level 1+0 |
| | RAIDDisk | integer | The Number of Disks to be Built in RAID |
| | ManagementLanInfo | object | Information of LAN to be Used as Management LAN If omitted, use the lead port on board. |
| | AdapterInfo | object | Information of an Adapter to be Used as Management LAN |

| Parameter | | | Type | Description |
|-----------|----------------------|----------------------------|---------|--|
| | | | | Specifies either MACAddress (MAC Address) or AdapterInfo (Adapter). |
| | | AdapterType | string | Types of Adapters <ul style="list-style-type: none">- Onboard: Onboard- AddOnCard: PCI card |
| | | SlotIndex | integer | Slot Number Specifies AdapterType in the case of the AddOnCard. |
| | | PortIndex | integer | Port Number |
| | | MACAddress | string | MAC Address to be Used as Management LAN Specifies either MAC Address or Adapter. |
| | PxeBootInfo | | object | Settings of PXE Boot |
| | | BootType | string | Class of Boot <ul style="list-style-type: none">- Legacy: Legacy- UEFI: UEFI (Unified Extensible Firmware Interface) Specified operation varies by model. There are platforms that execute PXE boot by prioritizing the classification of boot order as specified by respective BIOS, in spite of this configuration. When unspecified, it will turn out to the following specified states. <ul style="list-style-type: none">- For PRIMERGY RX/CX M4 or later and PRIMEQUEST 3000B/3000E: UEFI- For other than the above models: Legacy |
| | BasicSettings | | object | Basic Settings |
| | | LicenseAgreement | string | Setting of Acknowledgment of a License Agreement <ul style="list-style-type: none">- Enabled: Agrees to the license agreement terms.- Disabled: Does not agree to the license agreement terms. |
| | | Keyboard | string | Language and Type of Keyboard <ul style="list-style-type: none">- United States - English: English Keyboard- German: German Keyboard- Japanese: Japanese Keyboard |
| | NetworkSettings | | object | Network Settings |
| | | SetupStandardNetworkForVM | string | Configurations for Setting up VM Standard Network <ul style="list-style-type: none">- Enabled: Sets up VM standard network.- Disabled: Does not setup VM standard network. |
| | | VlanId | integer | VLAN ID |
| | AdditionalParameters | | object | Parameters to Add |
| | | Cms | object | Information of Cloud Management Software |
| | | AddVmHostAfterInstallation | string | Settings of Registration of Cloud Management Software after Installation <ul style="list-style-type: none">- Enabled: Registers cloud management software. |

| Parameter | | | | Type | Description | | |
|-----------|--------------------|------------------|-----------------------|--------------|---|--|--|
| | | | | | <div>- Disabled: Does not register cloud management software.</div> <div>For registration, disable DHCP at the network settings and input an IP address.</div> | | |
| | | | CmsName | string | Cloud Management Software Name of Cloud Management Software Registered in ServerView Infrastructure Manager | | |
| | | | AddLocation | string | <div>Specify a folder name or cluster name of registration destination of a host.</div> <div>When folders are created hierarchically, specify a name of the bottom folder.</div> <div>When there are folders of the identical name, it may be possible that it will not be registered at an intended place.</div> | | |
| | OsIndividualConfig | | | object | Settings of Specific Information | | |
| | | | BasicSettings | | object | Basic Settings | |
| | | | | RootPassword | string | Root Password | |
| | | NetworkSettings | | | object | Network Settings | |
| | | | GetComputerNameViaDNS | | string | <div>Setting of How to Use a Host Name for Acquiring DNS</div> <div><div>- Enabled: Uses DNS acquired host name.</div><div>- Disabled: Does not install DNSAP.</div></div> | |
| | | | ComputerName | | string | Host Name | |
| | | | DhcpEnable | | string | <div>Setting of the Use of DHCP</div> <div><div>- Enabled: Uses DHCP.</div><div>- Disabled: Does not use DHCP.</div></div> | |
| | | NetworkInterface | | | object | Settings of Network Interface | |
| | | | | IPv4 | | object | Settings of Network Interface |
| | | | | | Address | string | Fixed IP Address |
| | | | | | SubnetMask | string | Subnet Mask |
| | | | | | DefaultGateWay | string | Gateway |
| | | | | | DnsDomainName | string | <div>DNS Domain Name</div> <div>This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.</div> |
| | | | | | DnsServer | string | <div>IP Address of DNS Server</div> <div>This setting can be omitted even when setting the IP address, subnet mask and default gateway without using DHCP.</div> |

D.5 MMB

| Parameter | | Type | Description |
|-----------|---------------------|---------|---|
| MMB | | object | Partition Settings of MMB (Management Board) |
| | ConfRetryCounterMax | integer | <p>Specifies the number of retrying to restart OS when the OS is shut down due to watchdog or hardware error.</p> <p>If none are set, specifies null.</p> <p>Specify 0 when not to restart.</p> |

| Parameter | Type | Description |
|--------------------------|---------|---|
| | | Specify the number of restarts (1-10) when trying to restart. |
| ConfRetryZeroAction | string | <p>Specifies the action when exceeding the number of re-trying.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Stop rebooting and Power off: Stops reboot and turns the power of the partitions OFF. - Stop rebooting: Stops reboot and stops partitions. - Diagnostic Interrupt assert: Stops reboot and asserts NMI interruption for the partitions. |
| ConfSoftWatchdogEnable | string | <p>Specifies whether to use Software Watchdog to perform periodic communication confirmations while an OS is running.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Communication monitored. - Disabled: Communication not monitored. |
| ConfSoftWatchdogBehavior | string | <p>Specifies an operation when the OS does not communicate due to Software Watchdog.</p> <p>Specifies when ConfSoftWatchdogEnable is Enabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. - NMI: Make NMI occur. |
| ConfSoftWatchdogTime | integer | <p>Specifies a value from 1-6000 seconds for monitoring time by the Software Watchdog.</p> <p>Specifies when ConfSoftWatchdogEnable is Enabled.</p> <p>It is judged as abnormality when unable to communicate after a specified time here.</p> <p>If none are set, specifies null.</p> |
| ConfBootWatchdogEnable | string | <p>Specifies the monitoring the period between POST completion and OS start, with use of Boot Watchdog.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Enabled: Period monitored. - Disabled: Period not monitored. |
| ConfBootWatchdogBehavior | string | <p>Specifies behavior for the case when an OS does not start within the specified time in Boot Watchdog.</p> <p>Specifies when ConfBootWatchdogEnable is Enabled.</p> <p>If none are set, specifies null.</p> <ul style="list-style-type: none"> - Continue: Continue processing. - Reset: Server rebooted. - Power Cycle: Powered ON after powering OFF the server once. |

| Parameter | | Type | Description |
|-----------|----------------------|---------|---|
| | ConfBootWatchdogTime | integer | <p>Specifies a value from 1-6000 seconds for the Boot watchdog monitoring time.</p> <p>Specifies when ConfBootWatchdogEnable is Enabled.</p> <p>It is judged as abnormality when OS cannot start after a specified time here.</p> <p>If none are set, specifies null.</p> |

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