

Hitachi Virtual Storage Software

1.12

Block CLI Reference

This document provides information and instructions on how to use the CLI for Hitachi Virtual Storage Software block. The CLI provides the UI to obtain the information and change the configuration of the VSS block storage system.

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Preface

This document provides information and instructions on how to use the CLI for Hitachi Virtual Storage Software block (VSS block).

The CLI provides the UI to obtain the information and change the configuration of VSS block storage system.

This manual applies to both the virtual machine and bare metal models of VSS block.

- Sections in this manual marked with (Virtual machine) apply to the virtual machine model.
- Sections in this manual marked with (Bare metal) apply to the bare metal model.

Please read this document carefully to understand how to use these products and maintain a copy for reference purposes.

Intended audience

This guide describes how to use the Virtual Storage Software block CLI and how to interpret command syntax. This document is intended for system administrators, VPS (Virtual Private Storage) administrators, Hitachi Vantara representatives, and authorized service providers who are involved in installing, configuring, and operating VSS block.

Readers of this document should have at least the following knowledge and experience:

- Knowledge of networks
- Knowledge of Windows and Linux
- Programming skills using CLI
- Knowledge of the hypervisor type virtualization environment

Product version

This document revision applies to Virtual Storage Software block version 1.12 (01.12.0x.xx).

The version in this document is described only by [aa.bb], and [aa.bb.cc.dd] is used only when required.

Release notes

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document. Release notes are available on the Hitachi Vantara Support Website: <https://knowledge.hitachivantara.com/Documents>.

Changes made in this revision

- Added information about support for multi-tenancy.
- Added information about support for standard input of a CLI password.
- Added NAA ID to the individually collected volume information and the list of volume information.
- Added information about the support for the spare node function.







Document conventions

This document uses the following typographic conventions:

Convention	Description
Bold	<ul style="list-style-type: none"> ▪ Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click OK. ▪ Indicates emphasized words in list items.
<i>Italic</i>	<ul style="list-style-type: none"> ▪ Indicates a document title or emphasized words in text. ▪ Indicates a variable, which is a placeholder for actual text provided by the user or for output by the system. Example: <pre>pairdisplay -g group</pre> <p>(For exceptions to this convention for variables, see the entry for angle brackets.)</p>
Monospace	Indicates text that is displayed on screen or entered by the user. Example: <code>pairdisplay -g oradb</code>

Convention	Description
< > angle brackets	<p>Indicates variables in the following scenarios:</p> <ul style="list-style-type: none"> Variables are not clearly separated from the surrounding text or from other variables. Example: <pre>Status-<report-name><file-version>.csv</pre> Variables in headings.
[] square brackets	Indicates optional values. Example: [a b] indicates that you can choose a, b, or nothing.
{ } braces	Indicates required or expected values. Example: { a b } indicates that you must choose either a or b.
vertical bar	<p>Indicates that you have a choice between two or more options or arguments. Examples:</p> <p>[a b] indicates that you can choose a, b, or nothing.</p> <p>{ a b } indicates that you must choose either a or b.</p>

This document uses the following icons to draw attention to information:

Icon	Label	Description
	Note	Calls attention to additional information.
	Tip	Provides helpful information, guidelines, or suggestions for performing tasks more effectively.
	Important	Highlights information that is essential to the completion of a task.
	Caution	Warns the user of adverse conditions and/or consequences (for example, disruptive operations, data loss, or a system crash).
	CAUTION	Warns the user of a hazardous situation that, if not avoided, could result in major or minor injury.
	WARNING	Warns the user of a hazardous situation which, if not avoided, could result in death or serious injury.

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Thank you!

Chapter 1: Overview

This chapter describes the basic system configuration for using the CLI, how to specify requests, and information common to each CLI.

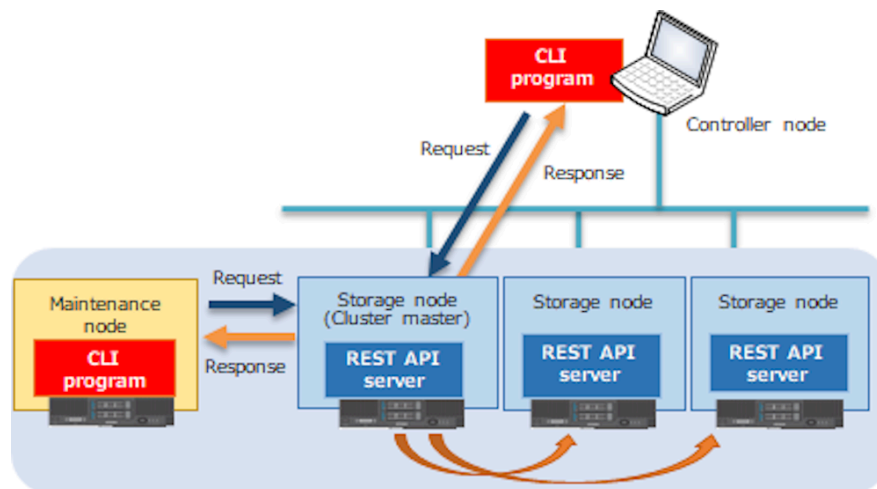
System overview

This chapter provides an overview of the CLI system, including system configuration, and prerequisites.

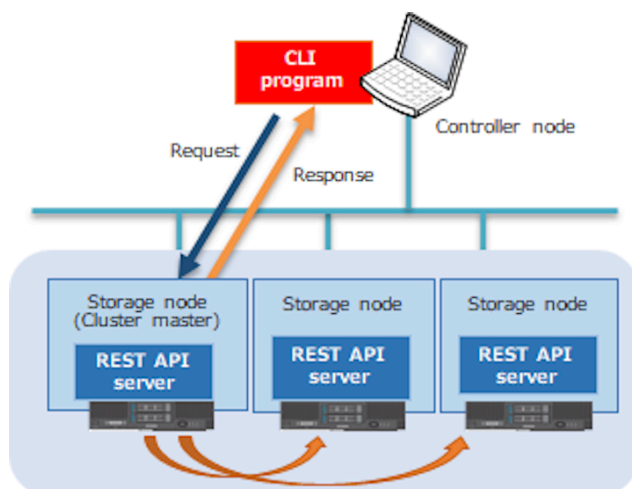
Basic system configuration

The following shows the basic system configuration.

Virtual machine



Bare metal



CLI program

The CLI program converts the CLI commands entered from the controller node or the maintenance node to REST API requests, and then sends them to the cluster master storage node to execute operations for the storage cluster.

REST API server

A component that acts as a server which accepts and executes REST API requests converted from CLI commands and returns execution results as responses to the controller node or the maintenance node. REST API server accepts a request for communications through the control port on the storage node.

Each storage node has one REST API server in the system. The REST API server of the cluster master node generally accepts processing and distributes it throughout the system.

Prerequisites

To use the CLI, install the CLI program of the same version as that of the storage software. If you use the CLI by installing a CLI program of an incorrect version, a warning message is output to the standard error output.

The CLI is operated by a shell script in Linux and by a command prompt in Windows.

Execution conditions

To operate Virtual Storage Software block resources using CLI, the following condition must be met.

- Enters the authentication user name and password.
- The user has an authentication token or a token file created by a registered user.

Command format

Virtual Storage Software block supports the following CLI command format.

```
$ hsds [master-command-option] <subcommand> [subcommand-option]
```

You can specify multiple master command options and subcommand options using a space as a separator. However, you can specify only one subcommand.

Master command option:

Option required to execute `hsds`, which is the master command. Multiple options can be specified using a space as a separator. For details, see [Master command options \(on page 21\)](#).

Subcommand:

A command used to perform Virtual Storage Software block operations, including creating volumes, or obtaining node information.

Subcommand options:

Options required to run subcommands. Multiple options can be specified using a space as a separator.

The following command formats are also supported.

- To display the entire description:
*\$ hsd*s --help
- To display details of a subcommand:
*\$ hsd*s <subcommand> --help
- To display the version information of CLI:
*\$ hsd*s --version



Caution:

Multi-byte characters cannot be specified for values of the Master command option and Subcommand option. If multi-byte characters are specified, the output results might be partly garbled.



Note:

If an option whose data type is not object array (for example `--syslog_servers` in the `audit_log_setting_set` command) is specified multiple times, the last input option value is valid.

Master command options

The following table lists the options supported as master command options. Some master command options can be specified as environment variables.

Master command option	Description	Default value	Environment variable KEY string	Remarks
--host	Specifies the host name or the IP address (IPv4) of the REST API server on Virtual Storage Software block. ¹	N/A	HSDS_HOST	Required
--user ²	Specifies the authentication user name.	N/A	HSDS_USER	Required ³
--password ²	Specifies the authentication password.	N/A	-	Optional
--auth_token	Specifies the authentication token.	N/A	-	Required ³
--auth_ticket	Specifies the authentication ticket.	N/A	-	Required ³
--help	Displays the help.	N/A	-	Optional
--version	Displays the version information.	N/A	-	Optional
--ignore_certificate_errors	Disables verification of certificates.	N/A	-	Optional
--format	Selects the output format: 'text', 'json', or 'simple-csv'	text	-	Optional
<p>1. <IP address>: The representative IP address of the storage cluster (or the corresponding host name).</p> <p>If ClusterIpv4Address in SystemConfigurationFile.csv is set, specifies the IP address (or the corresponding host name). If ClusterIpv4Address in SystemConfigurationFile.csv is not set, specifies the IP address (ControlNWIPv4 in SystemConfigurationFile.csv) (or the corresponding host name) for the Control network of any storage node.</p>				

Master command option	Description	Default value	Environment variable KEY string	Remarks
	<p>2. The password used for authentication is specified by --password. When --password is not specified, a prompt is displayed. In this case, enter a password via standard input.</p> <p>3. Authentication schemes</p> <p>Three authentication schemes are available in Virtual Storage Software block: basic authentication, session authentication, and ticket authentication.</p> <ul style="list-style-type: none"> ▪ Basic authentication: <p>For basic authentication, enter a user name and a password. If a login message is set for basic authentication, the login message is output to a standard error output as a warning banner before the command is run. For details, see <i>Setting a message to be displayed at login and during CLI Basic authentication</i> in the <i>Hitachi Virtual Storage Software Block System Administrator Guide</i>.</p> <p>You do not have to specify a token and a ticket when you use basic authentication.</p> ▪ Session authentication: <p>For session authentication, enter an authentication token.</p> <p>You do not have to specify a user name, a password, and a ticket when you use session authentication.</p> ▪ Ticket authentication: <p>For ticket authentication, enter a user name, a password, and a ticket using --user and --auth_ticket.</p> <p>You do not have to specify a token when you use ticket authentication.</p> <p>The priority of optional parameters is as follows:</p> <ol style="list-style-type: none"> 1. Command option 2. Environment variable <p>The priority of authentication schemes is as follows:</p> <ol style="list-style-type: none"> 1. Ticket authentication 2. Session authentication 3. Basic authentication 			

Environment Variables

You can omit certain options by specifying the environment variables.

For the master command options and KEY strings that can be set, see the Environment variable KEY string columns of the table in [Master command options \(on page 21\)](#).

For details about how to register in the environment variables, follow the instructions for setting environment variables on the platform (Windows or Linux) on which the CLI runs.

Option parameters

The data types supported by the CLI are shown below.

Data type	Description
boolean	Data type that represents true or false. Only lowercase letters can be specified. Example: true
integer	Data type that represents a 64-bit signed integer.
string	Data type that represents a character string.
string (uuid)	Data type that represents UUID. Example: "9852ee63-7b57-47d6-9e05-7c2c052632d9"
string (date-time)	Data type that represents a time in ISO 8601 extended format (YYYY-MM-DDThh:mm:ssZ). You can only specify UTC. Example: "2015-03-20T09:27:35Z"
array	Array of the above data types. Comma separated values are specified. Spaces are not allowed. Example: "abc,def,ghi" When specifying a character string that includes a comma, escape the comma. Example: "param\,abc,param\,def,param\,ghi"
string[]	Array of the string data type. Comma separated values are specified. Spaces are not allowed. Example: "abc,def,ghi" When specifying a character string that includes a comma, escape the comma. Example: "param\,abc,param\,def,param\,ghi"

Roles

The roles for the Virtual Storage Software block are as follows:

Security

Role for security management (browsing and setting). With this role, you can perform the following operations:

- Account management
- Log management (SNMP, Syslog, Email)
- IP network management and time setting
- Certificate management
- External authentication, login message, session management, CHAP authentication
- Encryption and key management

Storage

Role for storage cluster management (browsing and setting). With this role, you can perform the following operations:

- License management
- Storage pool, volume
- Compute port, LUN
- Snapshot
- Monitoring data management

Monitor

Role for storage cluster management (browsing only). Among the operations enabled for the storage role, only browsing is possible.

Service

Role for storage node maintenance. With this role, you can perform the following operations:

- Installation and uninstallation
- Configuration backup, restore
- Management of the configuration definition file
- Power supply management
- Updating storage software
- Fault analysis
- Storage node management (extension, maintenance, removal)

Audit

Role for audit logs (browsing and setting).

Resource

Role for managing (viewing and configuring) a virtual private storage (VPS).

None

A user can execute operations using any desired role.

APIs which do not need authentication itself are also included in this category.

To check whether authentication is required, see the *Authentication schemes* section at the bottom of each API description. If no authentication scheme is written, execute the API request without specifying an authentication scheme.

VpsSecurity

Role for VPS administrators to manage (viewing and configuring) security.

When you perform a configuration operation with this role, you can update only the resources on the VPS that you belong to. When you perform a view operation with this role, you can display only the resources on the VPS that you belong to.

With this role, you can perform the following operations:

- Account management

VpsStorage

Role for VPS administrators to manage (viewing and configuring) a storage cluster.

When you perform a configuration operation with this role, you can update only the resources on the VPS that you belong to. When you perform a view operation with this role, you can display only the resources on the VPS that you belong to.

With this role, you can perform the following operations:

- Volumes
- Compute ports
- Snapshots

VpsMonitor

Role for VPS administrators to manage (viewing) a storage cluster.

When you perform a view operation with this role, you can display only the resources on the VPS that you belong to.

Of the operations that can be performed with the VpsStorage role, only the view operation can be performed.

Return values

The following table lists values that are returned when a CLI command is run.

Return value	Execution result
0	Normal termination
1	An error other than those of the return values from 2 to 5 occurred.
2	One of the following errors is detected: <ul style="list-style-type: none"> ▪ A nonexistent subcommand is specified. ▪ A nonexistent option is specified. ▪ A non-numeric value is specified for an applicable integer-type option. ▪ An option required for a subcommand is not specified.
3	When all items are obtained when viewing a list of volumes for the low-resolution monitor, the items were displayed partially, but the process was suspended due to an error.
4	An HTTP status code of 400s is received from the REST API server.
5	An HTTP status code of 500s is received from the REST API server.

Output format

If communication with Virtual Storage Software block was successful, a response from Virtual Storage Software block is output in the JSON format.

Depending on the CLI command execution details and response from Virtual Storage Software block, the output format changes as follows.

When a command other than the file download command is run:

1. When text is specified for the format option:

The "body" contents generated in JSON format when json is specified for the format option is formatted and then output to standard output (stdout). "statusCode" is not output.

- Attribute names are capitalized and words separated by spaces.
- Prints an empty line between the elements of an object array.
- The null value in the response from the REST API server is output as None.

- Empty objects and empty arrays are output as (None).
- The empty string is output as (Empty string).

```
Integer/String/Boolean attribute name1: <value>
Attribute name2 of type Object:
  Integer/String/Boolean attribute name2-1: <value>
  Attribute name2-2 of type Object:
    Integer/String/Boolean attribute name2-1-1: <value>
Attribute name3 of the Object array type:
  Integer/String/Boolean attribute name3-1: <value>
  Integer/String/Boolean attribute name3-1: <value>
Array type attribute name4:
  <value>
  <value>
```

2. When json is specified for the format option:

A response is output to standard output (stdout) in the following JSON format.

- The null value in the response from the REST API server is output as "null".

```
{
  "statusCode": <HTTP-status-code>,
  "body": <HTTP-Response-Body¹>
}
```

1. "body" is not output if statusCode is 204.



Caution:

If the following three conditions are met when the data type of the response body is string and the string type of the attribute is determined (for example, volumeType in a CLI command that references a volume), "_NotSupported" might be output.

- A string type does not exist in a version older than the running version.
- The string type in a above is now output as a response body.
- Downgrade to the old version in a above is attempted.

To restore "_NotSupported" string type to the original string type, upgrade to a newer version that supports the string type.

3. When simple-csv is specified for the format option:

The REST API server response values are output to standard output (stdout) in the csv (comma-separated value) format.

- The null value in the response from the REST API server is output as empty string "".

```
"Attribute name1","Attribute name2","Attribute name3",...
<value1-1>,<value1-2>,<value1-3>,...
<value2-1>,<value2-2>,<value2-3>,...
```

Output the header line on the first line. Converts a word break to a space for an attribute name, and prints a string that converts the beginning of each word to uppercase, separated by commas.

Only the following subcommands are supported, and if simple-csv is specified in other subcommands, an error is returned.

- server_list
- volume_list
- hba_list
- port_list
- pool_list
- chap_user_list



Tip:

It is possible to sort / shape the output contents by specifying simple-csv for format and output as follows.

On Linux, an example of sorting compute nodes by Nickname¹:

Note: 1: When nickname does not contain "," .

```
hsds --format simple-csv server_list | (read -r; echo "$REPLY"; sort -t, -k1,1 ) |
column -s, -t
```

"Nickname"	"Id"	"Os Type"	"Number Of Paths"	"Used Capacity"	"Total Capacity"
"ComputeNode01"	"ID01"	"Linux"	0	0	0
"ComputeNode02"	"ID02"	"Linux"	0	0	0

On Windows, an example of sorting compute nodes by Nickname:

- Run at a command prompt and redirect the results to a file.

```
hsds --format simple-csv server_list > server.csv
```

- Execute the following on PowerShell:

```
type server.csv | ConvertFrom-Csv | Sort-Object -Property "Nickname" | ft
* -AutoSize
```

Nickname	Id	Os Type	Number Of Paths	Used Capacity	Total Capacity
ComputeNode01	ID01	Linux	0	0	0
ComputeNode02	ID02	Linux	0	0	0

When the file download command is run:

1. When text is specified for the format option:

A response is output to standard output (stdout) in the following plain text format:

- The attribute name capitalizes the first letter and has a space between the words.
- Outputs an empty line between the elements of an object array.
- The null value in the response value from the REST API server is output as None.
- Outputs empty objects and arrays as (None).
- Outputs an empty string as (Empty string).

```
Message: Download completed.
Output File Path: <Path to the output file>
```

2. When json is specified for the format option:

A response is output to standard output (stdout) in the following format:

- The null value in the response from the REST API server is output as "null".

```
{
  "statusCode": <HTTP-status-code>,
  "message": "Download completed.",
  "outputFilePath": <Path to the output file>
}
```

An error detected before communication or a communication failure error might be output in a format other than JSON.

The output format is one of the following:

Output format 1 other than JSON:

```
Message Id:<message-ID>
Message: <message>
Cause: <cause>
Solution: <action>
Solution Type: <error solution type 1>
Error Code: <Internal error code 1>
```

1. Output only when format is not specified, when text or simple-csv is specified for format, or when an error response from the REST API server is received.

Output format 2 other than JSON:

```
Usage: hsdv <specification-method-of-master-commands>
Try <Help-output-method> for help.

Error: <error-details>
```

The message differs depending on the version of Click in the environment where the CLI is installed. The following is an output example for Click version 7.0.

```
Message Id: KARS19504-E
Message: A communication error occurred.(Detailed Information=...
Cause: An error of the detailed information occurred.
Solution: Verify the detailed information and retry the operation.
```



Note:

- When a CLI command is run with a file specified as a parameter and if user authentication does not succeed, `statusCode 503` might (on rare occasions) be returned. This is normal.
- The CLI might become unresponsive during processing such as when a temporary network failure occurs or when the communication-destination storage node is unresponsive or failover occurs due to failures. In this case, verify whether network failures occur or the communication-target storage node has a failure. If there are any failures, contact customer support. If there is no failure, wait for a while until the processing is completed.

Command execution example

The following is an example of command execution.

Command execution (Obtains a list of volumes):

```
hsds --host 192.0.43.10 --user USER1 storage_show
```

1. When text is specified for the format option:

When a command is terminated normally:

```
Storage Device Id: 400000054037
Id: ce382b93-1d35-4e36-8a1e-269a9980ae1c
Model Name: VSSB
Internal Id: 054037
Nickname: SC01
Number Of Total Volumes: 5
Number Of Total Servers: 0
Number Of Total Storage Nodes: 3
Number Of Ready Storage Nodes: 3
Number Of Fault Domains: 1
Total Pool Raw Capacity: 297864
Total Pool Physical Capacity: 307200
Total Pool Capacity: 95088
Used Pool Capacity: 0
Free Pool Capacity: 95088
Saving Effects:
  Efficiency Data Reduction: None
  Pre Capacity Data Reduction: None
```

```

Post Capacity Data Reduction: None
Total Efficiency: 100
Data Reduction Without System Data: None
Pre Capacity Data Reduction Without System Data: None
Post Capacity Data Reduction Without System Data: None
Software Version: 01.12.00.00
Status Summary: Normal
Status: Ready
System Requirements File Version: 202100708

```

2. When json is specified for the format option:

When a command is terminated normally:

```

{
  "statusCode": 200,
  "body": {
    "storageDeviceId": "40000005403",
    "id": "ce382b93-1d35-4e36-8a1e-269a9980ae1c",
    "modelName": "VSSB",
    "internalId": "054037",
    "nickname": "SC01",
    "numberOfTotalVolumes": 5,
    "numberOfTotalServers": 0,
    "numberOfTotalStorageNodes": 3,
    "numberOfReadyStorageNodes": 3,
    "numberOfFaultDomains": 1,
    "totalPoolRawCapacity": 297864,
    "totalPoolPhysicalCapacity": 307200,
    "totalPoolCapacity": 95088,
    "usedPoolCapacity": 0,
    "freePoolCapacity": 95088,
    "savingEffects": {
      "efficiencyDataReduction": null,
      "preCapacityDataReduction": null,
      "postCapacityDataReduction": null,
      "totalEfficiency": 100,
      "dataReductionWithoutSystemData": null,
      "preCapacityDataReductionWithoutSystemData": null,
      "postCapacityDataReductionWithoutSystemData": null
    },
    "softwareVersion": "01.12.00.00",
    "statusSummary": "Normal",
    "status": "Ready",
    "systemRequirementsFileVersion": 202100708
  }
}

```

Chapter 2: Audit log management

audit_log_setting_show

Required Role: Security

Description

Obtains the audit log settings.

Syntax

```
hsds [master command option] audit_log_setting_show
```

Options and parameters

None

Responses

Normal termination

```
auditLogSetting: object (on page 410)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

audit_log_setting_set

Required Role: Security

Description

Edits the audit log settings.

Syntax

```
hsds [master command option] audit_log_setting_set
--location_name <str> (optional)
--syslog_servers <array> (required)
  index=<int32> (required)
  is_enabled=<boolean> (required)
  server_name=<str> (required)
  port=<int32> (required)
  transport_protocol=<str> (required)
```

Options and parameters

--location_name <location name>

Specify location name (1 to 32 characters) for syslog transfer.

must match /^[A-Za-z0-9!#\$%&'()*+,-.:/;<=>|?@[\\]^_`{|}~]{1,32}\$/



Caution:

Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".

- The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
- If you type "\\", the CLI program will interpret it as one escape character "\".
- To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--syslog_servers index=<syslog server ID>,is_enabled={true | false},server_name={<host name>|<IP address>},port=<port number>,transport_protocol=UDP

Specify syslog server (1 to 2 items) to which audit logs are transferred. You can set up to two servers.

When specifying multiple parameters, specify as follows:

```
--syslog_servers index=<syslog server ID 1>,is_enabled={true |
false},server_name={<host name 1>|<IP address 1>},port=<port number
1>,transport_protocol=UDP --syslog_servers index=<syslog server ID
2>,is_enabled={true | false},server_name={<host name 2>|<IP address 2>},port=<port
number 2>,transport_protocol=UDP
```

Parameters

index

Specify the ID (1 to 2) of the syslog server. If the same ID is entered twice for the syslog server to which audit logs are transferred, an error is returned.

is_enabled

Specify whether audit logs are transferred to the syslog server specified in serverName.

server_name

Specify host name or IP address (IPv4) of the syslog server (1 to 253 characters).

must match `/^[a-zA-Z0-9]([a-zA-Z0-9\-]{0,61}[a-zA-Z0-9])\.([a-zA-Z0-9]([a-zA-Z0-9\-]{0,61}[a-zA-Z0-9]))$/`

port

Specify port number (1 to 65,535) of the syslog server.

transport_protocol

Specify communications protocol.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

audit_log_create_file

Required Role: Audit or Security

Description

Creates an audit log file. This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] audit_log_create_file
```

Options and parameters

None

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

audit_log_download

Required Role: Audit or Security

Description

Downloads an audit log file. This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

If you have not created an audit log file, you may see message ID: KARS15553-E. In that case, create an audit log file.

Syntax

```
hsds [master command option] audit_log_download
```

Options and parameters

None

Responses

Normal termination

Audit log file

Abnormal termination

`errorResponse: object (on page 422)`



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 3: Common information management

version_show

Required Role: None

Description

Obtains the API version information.

Syntax

```
hsds [master command option] version_show
```

Options and parameters

None

Responses

Normal termination

```
version: object \(on page 510\)
```

Abnormal termination

```
errorResponse: object \(on page 422\)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

job_list

Required Role: None

Description

Obtains a list of information items on jobs submitted from CLI by the user.

Logs are listed in descending order of the date and time when they were created.

The following describes the relationship between the specification and output of the `startCreatedTime` and `endCreatedTime` subcommand-options.

Only information about the jobs for CLIs executable for the role the user has can be obtained.

If you have the VPS administrator role, you can obtain the information about only your own jobs.

Jobs to be obtained can be filtered by using subcommand-option "userId".

- `all`: Information about all jobs for CLIs executable for the local user is obtained.
- `self`: A list of jobs submitted by the local user is obtained (default).
- `User ID`: A list of jobs submitted by using the specified user ID is obtained.

When both `start_created_time` and `end_created_time` are omitted

- Assuming that the following are specified, outputs job information in reverse chronological order of the date and time when jobs were created:
 - The maximum value (9999-12-31T23:59:59Z) was specified as `end_created_time`.
 - 1970-01-01T00:00:01Z was specified as `start_created_time`.

When both `start_created_time` and `end_created_time` are specified

- Logs within the specified period are listed in reverse chronological order of the date and time when jobs were created.

When only `start_created_time` is specified

- Assuming that the maximum value (9999-12-31T23:59:59Z) was specified as `end_created_time`, outputs job information within the specified period in reverse chronological order of the date and time when jobs were created.

When only `end_created_time` is specified

- Assuming that 1970-01-01T00:00:01Z was specified as `start_created_time`, outputs job information within the specified period in reverse chronological order of the date and time when jobs were created.

When the range specified using `start_created_time` and `end_created_time` is invalid

- An error is returned if either of the following applies:
 - A date and time after `end_created_time` is specified as `start_created_time`, including when `end_created_time` is not specified.
 - The same date and time is specified for `start_created_time` and for `end_created_time`, including cases when `start_created_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_created_time`.
 - A date and time earlier than 1970-01-01T00:00:01Z is specified for `start_created_time` or `end_created_time`.

Syntax

```
hsds [master command option] job_list
--start_created_time <str> (optional)
--end_created_time <str> (optional)
--count <integer> (optional)
--status <str> (optional)
--state <str> (optional)
--user_id <str> (optional)
--ids <str> (optional)
```

Options and parameters**--start_created_time <time>**

Specify the start date and time (date-time), including the specified time, of job submission.

--end_created_time <time>

Specify the end date and time (date-time), excluding the specified time, of job submission.

--count <number>

Specify the maximum number (integer) of obtained job information items.

$\{ x \in \mathbb{Z} \mid 1 \leq x \leq 100 \}$ (default: "100")

--status { Initializing | Running | Completed }

Specify the progress of the job.

--state { Queued | Started | Stopping | Succeeded | Failed | Stopped | Unknown }

Specify job state.

--user_id <user ID>

Specify user ID (3 to 255 characters).

By specifying all, you can obtain information about all jobs for CLIs executable for the local user. By specifying self, you can obtain a list of jobs submitted by the local user.

must match `/^all$|^self$|^[^-A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/`

--ids <job IDs>

Specify job IDs. You can specify plural IDs up to 32 with comma (,) delimiter.

Example: `--ids <id1>,<id2>,<id3>...`

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

Responses**Normal termination**

Description A list of job information. Properties data: object[] Items

[job: object \(on page 436\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

job_show

Required Role: None

Description

Obtains a job.

A job can be obtained only when the user has a role that can run the CLI that issued the job.

If you have the VPS administrator role, you can obtain the information about only your own jobs.

Syntax

```
hsds [master command option] job_show
--job_id <str> (required)
```

Options and parameters

--job_id

Specify job ID (uuid).

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 4: Compute node connection management

chap_user_list

Required Role: Security

Description

Obtains a list of CHAP user information.

Syntax

```
hsds [master command option] chap_user_list
--target_chap_user_name <str> (optional)
--chap_user_id_target_chap_user_name <str> (optional)
```

Options and parameters

--target_chap_user_name <CHAP user name>

Specify CHAP user name used for CHAP authentication on the compute port (i.e., target side) (exact match).

--target_chap_user_name and --chap_user_id_target_chap_user_name cannot be specified simultaneously.

--chap_user_id_target_chap_user_name <CHAP user name>

The alias of --target_chap_user_name.

--target_chap_user_name and --chap_user_id_target_chap_user_name cannot be specified simultaneously.

Responses

Normal termination

Description
A list of CHAP user summary information.
Properties

```

data:object[]
  Items
  chapUserSummary: object (on page 412)

```

Abnormal termination

```

errorResponse: object (on page 422)

```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

chap_user_create

Required Role: Security

Description

Creates a CHAP user.

Syntax

```

hsds [master command option] chap_user_create
--target_chap_user_name <str> (required)
--target_chap_secret <str> (required)
--initiator_chap_user_name <str> (optional)
--initiator_chap_secret <str> (optional)

```

Options and parameters

--target_chap_user_name <CHAP user name>

Specify CHAP user name (1 to 223 characters) used for CHAP authentication on the compute port (i.e., target side).

Specify a name different from other --target_chap_user_name.

must match /^[a-zA-Z0-9\.:@_\-|+=\[\]~]{1,223}\$/

--target_chap_secret <CHAP secret>

Specify CHAP secret (12 to 32 characters) used for CHAP authentication on the compute port (i.e., target side).

must match /^[a-zA-Z0-9\.:@_\-|+=\[\]~]{12,32}\$/



Caution:

If --target_chap_secret is not specified, a prompt will appear. In such a case, enter a CHAP secret using standard input.

target_chap_secret:

The contents of a CHAP secret specified by the option remain in the command history. Enter the CHAP secret using standard input without the option.

--initiator_chap_user_name <CHAP user name>

Specify CHAP user name (1 to 223 characters) used for CHAP authentication on the initiator port of the compute node in mutual CHAP authentication.

must match /^[a-zA-Z0-9\.:@_\-|+=\[\]~]{1,223}\$/

--initiator_chap_secret <CHAP secret>

Specify CHAP secret (12 to 32 characters) used for CHAP authentication on the initiator port of the compute node in mutual CHAP authentication.

must match /^[a-zA-Z0-9\.:@_\-|+=\[\]~]{12,32}\$/



Caution:

If --initiator_chap_secret is not specified, a prompt will appear. If specified, enter a CHAP secret using standard input. Otherwise, press Enter without entering a value.

initiator_chap_secret (if omitted, press the [Enter] key) []:

The contents of a CHAP secret specified by the option remain in the command history. Enter the CHAP secret using standard input without the option.

Responses

Normal termination

job: object (on page 436)

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

chap_user_delete

Required Role: Security

Description

Deletes a CHAP user.

Syntax

```
hsds [master command option] chap_user_delete
--chap_user_id <str> (required *1)
--chap_user_id_target_chap_user_name <str> (required *1)
```

**Caution:**

*1: Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

Options and parameters**--chap_user_id <CHAP user ID>**

Specify the ID of the CHAP user (uuid).

Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

--chap_user_id_target_chap_user_name <CHAP user name>

Specify the name of the CHAP user who is allowed to access on the target side.

Specify a value instead of --chap_user_id.¹

Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

must match `/^[a-zA-Z0-9\.:@_-\+=\[\]~]{1,223}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

chap_user_show

Required Role: Security

Description

Obtains the information about a CHAP user.

Syntax

```
hsds [master command option] chap_user_show
--chap_user_id <str> (required *1)
--chap_user_id_target_chap_user_name <str> (required *1)
```

**Caution:**

*1: Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

Options and parameters**`--chap_user_id < CHAP user ID>`**

Specify the ID (uuid) of the CHAP user.

Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

`--chap_user_id_target_chap_user_name < CHAP user name>`

Specify the name of the CHAP user who is allowed to access on the target side.

Specify a value instead of `--chap_user_id`.¹

Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

must match `/^[a-zA-Z0-9\.:@_-\!+=\[\]~]{1,223}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
chapUser: object (on page 411)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

chap_user_set

Required Role: Security

Description

Edits the information about a CHAP user.

Syntax

```
hsds [master command option] chap_user_set
--chap_user_id <str> (required *1)
--chap_user_id_target_chap_user_name <str> (required *1)
--target_chap_user_name <str> (optional *2)
--target_chap_secret <str> (optional *2)
--initiator_chap_user_name <str> (optional *2)
--initiator_chap_secret <str> (optional *2)
```



Caution:

*1: Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

*2: If none of the parameters is specified, job does not succeed.

Options and parameters

`--chap_user_id <CHAP user ID>`

Specify the ID (uuid) of the CHAP user.

Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

`--chap_user_id_target_chap_user_name <CHAP user name>`

Specify the name of the CHAP user who is allowed to access on the target side.

Specify a value instead of `--chap_user_id`.¹

Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

must match `/^[a-zA-Z0-9\.:@_ \- \+ = \[\] ~]{1,223}$/code`

`--target_chap_user_name <CHAP user name>`

Specify CHAP user name (1 to 223 characters) used for CHAP authentication on the compute port (i.e., target side).

must match `/^[a-zA-Z0-9\.:@_ \- \+ = \[\] ~]{1,223}$/code`

`--target_chap_secret <CHAP secret>`

Specify CHAP secret (12 to 32 characters) used for CHAP authentication on the compute port (i.e., target side).

must match `/^[a-zA-Z0-9\.:@_ \- \+ = \[\] ~]{12,32}$/code`

**Caution:**

If `--target_chap_secret` is not specified, a prompt will appear. If specified, enter a CHAP secret using standard input. Otherwise, press Enter without entering a value.

`target_chap_secret` (if omitted, press the [Enter] key) []:

The contents of a CHAP secret specified by the option remain in the command history. Enter the CHAP secret using standard input without the option.

--initiator_chap_user_name <CHAP user name>

Specify CHAP user name (1 to 223 characters) used for CHAP authentication on the initiator port of the compute node in mutual CHAP authentication.

must match `/^[a-zA-Z0-9\.\@_\-\+=\[\]~]{1,223}$/`

--initiator_chap_secret <CHAP secret

Specify CHAP secret (12 to 32 characters) used for CHAP authentication on the initiator port of the compute node in mutual CHAP authentication.

must match `/^[a-zA-Z0-9\.\@_\-\+=\[\]~]{12,32}$/`

**Caution:**

If `--initiator_chap_secret` is not specified, a prompt will appear. If specified, enter a CHAP secret using standard input. Otherwise, press Enter without entering a value.

`initiator_chap_secret` (if omitted, press the [Enter] key) []:

The contents of a CHAP secret specified by the option remain in the command history. Enter the CHAP secret using standard input without the option.

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_auth_setting_show

Required Role: Security

Description

Obtains the authentication settings for the compute port for the target operation.

Syntax

```
hsds [master command option] port_auth_setting_show
--id <str> (required *1)
--id_name <str> (required *1)
```

**Caution:**

*1: Either --id or --id_name must be specified.

Options and parameters**--id <compute port ID>**

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name <iSCSI name>

Specify the iSCSI name for iSCSI connections of the compute port.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match /^[a-f0-9]{16}\$|^[A-F0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2})\.[a-zA-Z0-9\-\:.\]{0,211})|(eui\.[0-9a-fA-F]{16}))\$/

**Note:**

- 1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.
- 2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
portAuthSetting: object (on page 454)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_auth_setting_set

Required Role: Security

Description

Edits the authentication settings for the compute port for the target operation.

Syntax

```
hsds [master command option] port_auth_setting_set
--id <str> (required *1)
--id_name <str> (required *1)
--auth_mode <str> (optional *2)
```

```
--is_discovery_chap_auth <boolean> (optional *2)
--is_mutual_chap_auth <boolean> (optional *2)
```

**Caution:**

- *1: Either --id or --id_name must be specified.
- *2: If none of the parameters is specified, an error is returned.

Options and parameters**--id <compute port ID>**

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name <iSCSI name>

Specify the iSCSI name for iSCSI connections of the compute port.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match `/^[a-f0-9]{16}$|^ [A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))(eui\.[0-9a-fA-F]{16}))$/`

--auth_mode { CHAP | CHAPComplyingWithInitiatorSetting | None }

Specify Authentication scheme of the compute port.

- CHAP: CHAP authentication.
- CHAPComplyingWithInitiatorSetting: Complies with the setting of the compute node. If the setting is "CHAP", CHAP authentication is performed. If the setting is "None", no authentication is required.
- None: No authentication is performed.

--is_discovery_chap_auth {true | false}

Enables or disables CHAP authentication at the time of discovery in iSCSI connection. Enables CHAP authentication at the time of discovery when true is specified.

--is_mutual_chap_auth {true | false}

Enables or disables mutual CHAP authentication. Enables mutual CHAP authentication when true is specified.

**Note:**

- 1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.
- 2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_auth_setting_chap_user_list

Required Role: Security

Description

Obtains a list of information about a CHAP user who is allowed to access the compute port.

Syntax

```
hsds [master command option] port_auth_setting_chap_user_list
--id <str> (required *1)
--id_name <str> (required *1)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <compute port ID>

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name <iSCSI name>

Specify the iSCSI name for iSCSI connections of the compute port.¹

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[a-f0-9]{16}$|^ [A-F0-9]{16}$|^ ((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\:]\{0,211\})|(eui\.[0-9a-fA-F]{16}))$/`



Note:

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

<p>Description</p> <p>A list of CHAP users who are allowed to access the compute port for the target operation in CHAP authentication.</p> <p>Properties</p> <p>data:object[]</p> <p>Items</p> <p>approvedChapUser: object (on page 410)</p>

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_auth_setting_chap_user_create

Required Role: Security

Description

Allows a CHAP user to access the compute port.

Syntax

```
hsds [master command option] port_auth_setting_chap_user_create
--id <str> (required *1)
--id_name <str> (required *1)
--chap_user_id <str> (required *2)
--chap_user_id_target_chap_user_name <str> (required *2)
```

**Caution:**

*1: Either `--id` or `--id_name` must be specified.

*2: Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

Options and parameters**--id <compute port ID>**

Specify the ID (uuid) of the compute port.

Either `--id` or `--id_name` must be specified.

--id_name <iSCSI name>

Specify the iSCSI name for iSCSI connections of the compute port.¹

Specify a value instead of `--id`.²

Either `--id` or `--id_name` must be specified.

must match `/^[a-f0-9]{16}$|^ [A-F0-9]{16}$|^ ((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211})) (eui\.[0-9a-fA-F]{16}))$/`

--chap_user_id <CHAP user ID>

Specify the ID (uuid) of the CHAP user who is allowed to access the compute port in CHAP authentication.

Either `--chap_user_id` or `--chap_user_id_target_chap_user_name` be specified.

--chap_user_id_target_chap_user_name <CHAP user name>

Specify the name of the CHAP user who is allowed to access on the target side.

Specify a value instead of --chap_user_id.²

Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

must match /^[a-zA-Z0-9\.:@_-\!+=\[\]~]{1,223}\$/

**Note:**

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_auth_setting_chap_user_delete

Required Role: Security

Description

Cancels compute port access permission for a CHAP user.

Syntax

```
hsds [master command option] port_auth_setting_chap_user_delete
--id <str> (required *1)
--id_name <str> (required *1)
--chap_user_id <str> (required *2)
--chap_user_id_target_chap_user_name <str> (required *2)
```

**Caution:**

*1: Either --id or --id_name must be specified.

*2: Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

Options and parameters**--id <compute port ID>**

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name <iSCSI name>

Specify the iSCSI name for iSCSI connections of the compute port.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match /^[a-f0-9]{16}\$|^[A-F0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-.:]{0,211}))|(eui\.[0-9a-fA-F]{16}))\$/

--chap_user_id <CHAP user ID>

Specify the ID (uuid) of the CHAP user.

Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

--chap_user_id_target_chap_user_name <CHAP user name>

Specify the name of the CHAP user who is allowed to access on the target side.

Specify a value instead of --chap_user_id.²

Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

must match /^[a-zA-Z0-9\.:@_-\+=\[\]~]{1,223}\$/

**Note:**

- 1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.
- 2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_auth_setting_chap_user_show

Required Role: Security

Description

Obtains the information about a CHAP user who is allowed to access the compute port.

Syntax

```
hsds [master command option] port_auth_setting_chap_user_show
--id <str> (required *1)
--id_name <str> (required *1)
```

```
--chap_user_id <str> (required *2)
--chap_user_id_target_chap_user_name <str> (required *2)
```

**Caution:**

- *1: Either --id or --id_name must be specified.
- *2: Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

Options and parameters**--id <compute port ID>**

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name <iSCSI name>

Specify the iSCSI name for iSCSI connections of the compute port.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match `/^[a-f0-9]{16}$|^ [A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-.:]{0,211})|(eui\.[0-9a-fA-F]{16}))$/`

--chap_user_id <CHAP user ID>

Specify the ID (uuid) of the CHAP user.

Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

--chap_user_id_target_chap_user_name <CHAP user name>

Specify the name of the CHAP user who is allowed to access on the target side.

Specify a value instead of --chap_user_id.²

Either --chap_user_id or --chap_user_id_target_chap_user_name be specified.

must match `/^[a-zA-Z0-9\.:@_-\+=[\]~]{1,223}$/`

**Note:**

- 1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.
- 2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
approvedChapUser: object (on page 410)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsStorage, or VpsMonitor

Description

Obtains a list of compute port information.

Syntax

```
hsds [master command option] port_list
--protocol <str> (optional)
--storage_node_id <str> (optional)
--name <str> (optional)
--id_name <str> (optional)
--names <str[]> (optional)
--id_names <str[]> (optional)
```

Options and parameters

--protocol {FC | iSCSI}

Specify the protocol for connecting compute ports.

--storage_node_id <storage node ID>

Specify storage node ID (uuid).

--name {<WWN> | <iSCSI name>}

Specify the WWN for FC connection or iSCSI name for iSCSI connection of the compute port.¹

--name and --id_name cannot be specified simultaneously.

--id_name {<WWN> | <iSCSI name>}

The alias of --name. ¹

--name and --id_name cannot be specified simultaneously.

--names {<WWN> | <iSCSI name>}

Specify the WWN for FC connection or iSCSI name for iSCSI connection of the compute port.

You can specify plural names up to 32 with comma (,) delimiter.¹

Example: --names <name1>,<name2>,<name3>...

If you enter a space character after a comma, the space character is recognized as a part of the name specified after the comma.

Also, if you specify 33 or more names, An error is returned.

--names and --id_names cannot be specified simultaneously.

Each item must match `^[a-f0-9]{16}$|^[A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))|(eui\.[0-9a-fA-F]{16}))$/`

--id_names {<WWN> | <iSCSI name>}

The alias of --names.

You can specify maximum of 32 WWNs for FC connection or iSCSI names for iSCSI connections (up to 223 characters) with comma (,) delimiter.¹

--names and --id_names cannot be specified simultaneously.

Each item must match `^[a-f0-9]{16}$|^[A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))|(eui\.[0-9a-fA-F]{16}))$/`

**Note:**

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses**Normal termination**

Description

A list of summary information about the compute port.

Properties

data: *object[]*

Items

portSummary: *object* ([on page 456](#))

Abnormal termination

errorResponse: *object* ([on page 422](#))



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsStorage, or VpsMonitor

Description

Obtains the compute port information.

Syntax

```
hsds [master command option] port_show
--id <str> (required *1)
--id_name <str> (required *1)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters**--id <port ID>**

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name {<WWN> | <iSCSI name>}

Specify WWN of the compute port for FC connection or the iSCSI name for iSCSI connections.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match /^[a-f0-9]{16}\$|^[A-F0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2})\.[a-zA-Z0-9\-\.]
{0,211})|(eui\.[0-9a-fA-F]{16}))\$/

**Note:**

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
port: object (on page 452)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_set

Required Role: Storage

Description

Edits the compute port settings.

Syntax

```
hsds [master command option] port_set
--id <str> (required *1)
--id_name <str> (required *1)
--nickname <str> (optional *2)
--name <str> (optional *2)
--connection_type <str> (optional *2)
--is_isns_client_enabled <boolean> (optional *2)
--isns_servers <array> (optional *2)
  index=<int32>
  server_name=<str>
  port=<int32>
```



Caution:

*1: Either `--id` or `--id_name` must be specified.

*2: If none of the parameters is specified, job does not succeed.

Options and parameters

`--id <port ID>`

Specify the ID (uuid) of the compute port.

Either `--id` or `--id_name` must be specified.

`--id_name {<WWN> | <iSCSI name>}`

Specify WWN of the compute port for FC connection or the iSCSI name for iSCSI connections.¹

Specify a value instead of `--id`.²

Either `--id` or `--id_name` must be specified.

must match `/^[a-f0-9]{16}$|^[A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211})|(eui\.[0-9a-fA-F]{16}))$/`

`--nickname <port nickname>`

Specify the compute port nickname. Each compute port must have its own unique nickname.

must match `/^[a-zA-Z0-9!#$%&'\+\.= @^_{}~\|\[\]:]{1,32}$/`

--name <port iSCSI name>

Specify the iSCSI name of the compute port. For FC connection, this property cannot be specified.

The same name cannot be used for multiple compute ports.

must match `/^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\:.\]{0,211}))(eui\.[0-9a-fA-F]{16}))$/`

--connection_type PointToPoint

Specify Network topology for FC connection.

The value remains as is if nothing is specified for it.

FC settings are disabled if iSCSI connection is used.

--is_isns_client_enabled {false | true}

Specify iSNS client function for iSCSI connection. Specifying "true" enables the iSNS client function.

--isns_servers index=<ID>,server_name=<IP address>,port=<port number >

Specify iSNS server as the connection destination in the iSNS client function. (1 item)³

Parameters**index**

The ID (1 default: "1") of the iSNS server.

server_name

IP address (IPv4, 2 to 45 characters) setting of the iSNS server.

The value remains as is if nothing is specified for it.

However, either server_name or port must be specified. If neither of them is specified, an error is returned.

must match `/^(([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.)\{3\}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$)^\((((([0-9a-fA-F]{1,4}:){7}([0-9a-fA-F]{1,4}:)?)|((([0-9a-fA-F]{1,4}:){6}(:[0-9a-fA-F]{1,4}|((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])\.)|(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])){3}:)|([0-9a-fA-F]{1,4}:){5}(((:[0-9a-fA-F]{1,4}){1,2})|((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])\.)|(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])){3}:)|([0-9a-fA-F]{1,4}:){4}(((:[0-9a-fA-F]{1,4}){1,3})|((:[0-9a-fA-F]{1,4})?:((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])\.)|(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])){3}:)|([0-9a-fA-F]{1,4}:){3}(((:[0-9a-fA-F]{1,4}){1,4})|((:[0-9a-fA-F]{1,4}){0,2}:((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])\.)|(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])){3}:)|([0-9a-fA-F]{1,4}:){2}(((:[0-9a-fA-F]{1,4}){1,5})|((:[0-9a-fA-F]{1,4}){0,3}:((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])\.)|(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])){3}:)|([0-9a-fA-F]{1,4}:){1}(((:[0-9a-fA-F]{1,4}){1,6})|((:[0-9a-fA-F]{1,4}){0,4}:((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])\.)|(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9])){3}:)|((:[0-9a-fA-F]{1,4}){1,7})|((:[0-9a-fA-F]{1,4}){0,5}:((25[0-5]|2[0-4]`

```
[0-9]|1[0-9][0-9]|0?[0-9]?[0-9])(\.(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|0?[0-9]?[0-9]))
(3})):)))(\%.+)?\s*$)
```

port

TCP port number (1 to 65536) of the iSNS server.

The value remains as is if nothing is specified for it.

However, either server_name or port must be specified. If neither of them is specified, an error is returned.



Note:

- 1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.
- 2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.
- 3: The iSNS client function can be set only in iSNS connection.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 5: Compute node management

server_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains a list of compute node information.

Syntax

```
hsds [master command option] server_list
--nickname <str>      (optional)
--id_nickname <str>   (optional)
--nicknames <str[]>  (optional)
--id_nicknames <str[]> (optional)
--hba_name <str>      (optional)
--hba_id_name <str>   (optional)
--hba_id <str>        (optional)
--vps_id <str>        (optional)
--vps_id_name <str>   (optional)
```

Options and parameters

--nickname <compute node nickname>

Specify the compute node nickname (exact match).

--nickname and --id_nickname cannot be specified simultaneously.

--id_nickname <compute node nickname>

The alias of --nickname.

--nickname and --id_nickname cannot be specified simultaneously.

--nicknames <compute node nickname>

Specify a list of the compute node nicknames (exact match).

You can specify plural nicknames up to 32 with comma (,) delimiter.

Example: --nicknames <name1>,<name2>,<name3>...

If the nickname includes a comma, escape it using '\' (backslash).

Example: if the nickname is "name,1", specify "--nicknames name\\,1".

If you enter a space character after a comma, the space character is recognized as a part of the nickname specified after the comma.

Also, if you specify 33 or more names, an error is returned.

--nicknames and --id_nicknames cannot be specified simultaneously.

Each item must match /^[a-zA-Z0-9,\\.:@_]{0,228}\$/

--id_nicknames <compute node nickname>

The alias of --nicknames. You can specify maximum of 32 compute node nicknames (up to 229 characters).

--nicknames and --id_nicknames cannot be specified simultaneously.

Each item must match /^[a-zA-Z0-9,\\.:@_]{0,228}\$/

--hba_name {<WWN> | <iSCSI name>}

Specify the initiator WWN for FC connection or iSCSI name for iSCSI connection of the compute node.¹

--hba_name and --hba_id_name cannot be specified simultaneously.

--hba_id_name {<WWN>| <iSCSI name>}

The alias of --hba_name. ¹

--hba_name and --hba_id_name cannot be specified simultaneously.

--hba_id <HBA ID>

Specify the initiator ID (uuid) of the compute node.

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/



Note:

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses

Normal termination

<p>Description</p> <p>A list of summary information of the compute node.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>Items</p> <p><code>serverSummary</code>: object (on page 473)</p>

Abnormal termination

<p><code>errorResponse</code>: object (on page 422)</p>



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

server_create

Required Role: Storage or VpsStorage

Description

Registers the information of the compute node.

Syntax

```
hsds [master command option] server_create
--server_nickname <str> (required)
--os_type <str> (required)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

Options and parameters

--server_nickname <compute node nickname>

Specify the compute node nickname (1 to 229 characters). The same nickname cannot be set for other compute nodes.

must match `/^[a-zA-Z0-9,\.:@_][[a-zA-Z0-9,\.:@_\-]{0,228}]/`

--os_type { Linux | VMware | Windows }

Specify the OS type of the compute node.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this option.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^[[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}}{3}-[A-Fa-f0-9]{12}]/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this option.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[\A-Za-z0-9,\.:@_]{1,32}/`

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

server_delete

Required Role: Storage or VpsStorage

Description

Deletes the information of the compute node.

Syntax

```
hsds [master command option] server_delete
--id <str> (required *1)
--id_nickname <str> (required *1)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either --id or --id_nickname must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_]\{0,228\}\$/

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

server_set

Required Role: Storage or VpsStorage

Description

Edits the information of the compute node.

Syntax

```
hsds [master command option] server_set
--id <str> (required *1)
--id_nickname <str> (required *1)
--nickname <str> (optional)
--os_type <str> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: Either --id or --id_nickname must be specified.

Options and parameters

--id <compute node ID>

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_]\{0,228\}\$/

--nickname <nickname>

Specify the nickname (1 to 229 characters) of the compute node. The same nickname cannot be set for multiple compute nodes.

--os_type { Linux | VMware | Windows }

Specify the OS type of the compute node.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^system\$][A-Za-f0-9]{8}(-[A-Za-f0-9]{4}){3}-[A-Za-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

server_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains the information of the compute node.

Syntax

```

hsds [master command option] server_show
--id <str> (required *1)
--id_nickname <str> (required *1)

```



Caution:

*1: Either --id or --id_nickname must be specified.

Options and parameters

--id <compute node ID>

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_-\]{0,228}\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
server: object (on page 472)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

hba_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains a list of initiator information of the compute node.

Syntax

```
hsds [master command option] hba_list
--id <str> (required *1)
--id_nickname <str> (required *1)
--name <str> (optional)
--id_name <str> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either --id or --id_nickname must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of id.¹

Either --id or --id_nickname must be specified.

must match `/^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_]{0,228}$/`

--name {<initiator WWN> | <iSCSI name >}

Specify the initiator WWN for FC connection or iSCSI name for iSCSI connection of the compute node.²

--name and --id_name cannot be specified simultaneously.

--id_name {<initiator WWN> | <iSCSI name >}

The alias of --name. ²

--name and --id_name cannot be specified simultaneously.

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/system$^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[\A-Za-z0-9,\.:@_]{1,32}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses

Normal termination

Description

A list of initiator information of the compute node.

Properties

```
data: object[]
  Items

  hba: object (on page 428)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

hba_create

Required Role: Storage or VpsStorage

Description

Registers the initiator information of a compute node.

Syntax

```
hsds [master command option] hba_create
--id <str> (required *1)
--id_nickname <str> (required *1)
--protocol <str> (required)
--hba_wwn <str> (optional)
--iscsi_name <str> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: Either --id or --id_nickname must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_]\{1,228\}\$/

--protocol {FC | iSCSI}

Specify initiator connection protocol.

--hba_wwn <HBA WWN>

Specify the WWN (16 characters) of the initiator. Required if FC is specified for protocol. An error is returned if FC is specified for protocol and the WWN is not specified for hbaWwn, or iSCSI is specified for protocol and the WWN is specified for hbaWwn.

must match /^[a-f0-9]{16}\$/

--iscsi_name <iscsi name>

Specify the iSCSI name (12 to 223 characters) of the initiator. Required if iSCSI is specified for protocol. An error is returned if iSCSI is specified for protocol and iSCSI name is not specified for iscsiName, or FC is specified for protocol and the iSCSI name is specified for iscsiName.

must match /^(iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\._]{0,211})|(eui\.[0-9a-fA-F]{16})\$/

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[A-Za-z0-9,\.:@_]{1,32}\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

hba_delete

Required Role: Storage or VpsStorage

Description

Deletes the initiator information of a compute node.

Syntax

```
hsds [master command option] hba_delete
--id <str> (required *1)
--id_nickname <str> (required *1)
--hba_id <str> (required *2)
--hba_id_name <str> (required *2)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either `--id` or `--id_nickname` must be specified.

*2: Either `--hba_id` or `--hba_id_name` must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either `--id` or `--id_nickname` must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of id.¹

Either `--id` or `--id_nickname` must be specified.

must match `/^[a-zA-Z0-9,\.:@_]([a-zA-Z0-9,\.:@_ \-]{0,228})$/`

--hba_id <initiator ID>

Specify the initiator ID (uuid) of the compute node.

Either `--hba_id` or `--hba_id_name` must be specified.

--hba_id_name {<WWN > | <iSCSI name>}

Specify initiator WWN of the compute node for FC connection, or the iSCSI name for iSCSI connection.²

Specify a value instead of `--hba_id`.¹

Either `--hba_id` or `--hba_id_name` must be specified.

must match `/^[a-f0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))|(euil\.[0-9a-fA-F]{16}))$/`

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

`-- vps_id` and `--vps_id_name` cannot be specified simultaneously.

must match `/^system$|^ [A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

hba_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains the initiator information of a compute node.

Syntax

```
hsds [master command option] hba_show
--id <str> (required *1)
--id_nickname <str> (required *1)
--hba_id <str> (required *2)
--hba_id_name <str> (required *2)
```



Caution:

*1: Either `--id` or `--id_nickname` must be specified.

*2: Either `--hba_id` or `--hba_id_name` must be specified.

Options and parameters

`--id <compute node ID>`

Specify the ID (uuid) of the compute node.

Either `--id` or `--id_nickname` must be specified.

`--id_nickname <compute node nickname>`

Specify the compute node nickname.

Specify a value instead of `--id`.¹

Either `--id` or `--id_nickname` must be specified.

must match `/^[a-zA-Z0-9,\.:@_]([a-zA-Z0-9,\.:@_ -]{0,228})$/`

`--hba_id <initiator ID>`

Specify the initiator ID (uuid) of the compute node.

Either `--hba_id` or `--hba_id_name` must be specified.

`--hba_id_name {<initiator WWN> | <iSCSI name>}`

Specify initiator WWN of the compute node for FC connection, or the iSCSI name for iSCSI connection.²

Specify a value instead of `--hba_id`.¹

Either `--hba_id` or `--hba_id_name` must be specified.

must match `/^[a-f0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))|(eui\.[0-9a-fA-F]{16}))$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses

Normal termination

```
hba: object (on page 428)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

path_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, VpsMonitor

Description

Obtains the path information list of the compute node. Path information to be obtained can be filtered using the subcommand-option.

Syntax

```
hsds [master command option] path_list
--id <str> (required *1)
--id_nickname <str> (required *1)
--hba_name <str> (optional)
--hba_id_name <str> (optional)
--hba_id <str> (optional)
--port_id <str> (optional)
--port_name <str> (optional)
--port_id_name <str> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either --id or --id_nickname must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_]\{0,228\}\$/

--hba_name <Initiator WWN>

Specify the initiator WWN for FC connection or iSCSI name for iSCSI connection of the compute node.²

--hba_name and --hba_id_name cannot be specified simultaneously.

--hba_id_name {<WWN> | <iSCSI name>}

The alias of --hba_name.²

--hba_name and --hba_id_name cannot be specified simultaneously.

--hba_id <initiator ID>

Specify the initiator ID (uuid) of the compute node.

--port_id <compute port ID>

Specify the ID (uuid) of the compute port.

--port_name {<WWN> | <iSCSI name>}

Specify the WWN for FC connection or iSCSI name for iSCSI connection of the compute port.²

--port_name and --port_id_name cannot be specified simultaneously.

--port_id_name {<WWN> | <iSCSI name>}

The alias of --port_name.²

--port_name and --port_id_name cannot be specified simultaneously.

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

--vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.\:@_]{1,32}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses

Normal termination

<p>Description</p> <p>A list of path information.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>Items</p> <p><code>path: object (on page 445)</code></p>

Abnormal termination

<p><code>errorResponse: object (on page 422)</code></p>

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

path_create

Required Role: Storage or VpsStorage

Description

Adds path information to a compute node.

Syntax

```
hsds [master command option] path_create
--id <str> (required *1)
--id_nickname <str> (required *1)
--hba_id <str> (optional)
--hba_id_name <str> (optional)
--port_id <str> (optional)
--port_id_name <str> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either --id or --id_nickname must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_-\]{0,228}\$/

--hba_id <initiator ID>

Specify the initiator ID (uuid) of the compute node.

--hba_id_name {<WWN> | <iSCSI name>}

Specify initiator WWN of the compute node for FC connection, or the iSCSI name for iSCSI connection.²

Specify a value instead of --hba_id.¹

must match /^[a-f0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))(eui\.[0-9a-fA-F]{16}))\$/

--port_id <compute port ID>

Specify the ID (uuid) of the allocation destination compute port for the target operation.

--port_id_name {<WWN> | <iSCSI name>}

Specify WWN of the allocation destination compute port of the target operation for FC connection or the iSCSI name for iSCSI connections.²

Specify a value instead of --port_id.¹

must match /^[a-f0-9]{16}\$|^([A-F0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))(eui\.[0-9a-fA-F]{16}))\$/

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

**Note:**

The operation depends on whether `--port_id` (or `--port_id_name`) and `--hba_id` (or `--hba_id_name`) are specified, as follows:

- When both `--port_id` (or `--port_id_name`) and `--hba_id` (or `--hba_id_name`) are omitted: All the initiators of the applicable compute nodes are allocated to all the compute ports.
- When only `--hba_id` (or `--hba_id_name`) is specified: The specified initiator is allocated to all the compute ports.
- When only `--port_id` (or `--port_id_name`) is specified: The specified compute port is allocated to all the initiators of the applicable compute nodes.
- When both `--port_id` (or `--port_id_name`) and `--hba_id` (or `--hba_id_name`) are specified: The initiator specified in `--hba_id` (or `--hba_id_name`) is allocated to the compute port that is specified in `portId`.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

path_delete

Required Role: Storage or VpsStorage

Description

Deletes the compute node path information.

Syntax

```
hsds [master command option] path_delete
--id <str> (required *1)
--id_nickname <str> (required *1)
--hba_id <str> (required *2)
--hba_id_name <str> (required *2)
--port_id <str> (required *3)
--port_id_name <str> (required *3)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

- *1: Either --id or --id_nickname must be specified.
- *2: Either --hba_id or --hba_id_name must be specified.
- *3: Either --port_id or --port_id_name must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_]\{0,228\}\$/

--hba_id <initiator ID>

Specify the initiator ID (uuid) of the compute node.

Either --hba_id or --hba_id_name must be specified.

--hba_id_name {<WWN> | <iSCSI name>}

Specify initiator WWN of the compute node for FC connection, or the iSCSI name for iSCSI connection.²

Specify a value instead of --hba_id.¹

Either --hba_id or --hba_id_name must be specified.

must match /^[a-f0-9]{16}\$|^((iqn\. [0-9]{4}\-[0-9]{2}\. [a-zA-Z0-9\-\.\.]{0,211}))|(eui\.[0-9a-fA-F]{16}))\$/

--port_id <compute port ID>

Specify the compute port ID (uuid) of the target operation.

Either --port_id or --port_id_name must be specified.

--port_id_name {<WWN> | <iSCSI name>}

WWN of the compute port of the target operation for FC connection or the iSCSI name for iSCSI connections.²

Specify a value instead of --port_id.¹

Either --port_id or --port_id_name must be specified.

must match /^[a-f0-9]{16}\$|^ [A-F0-9]{16}\$|^((iqn\. [0-9]{4}\-[0-9]{2}\. [a-zA-Z0-9\-\.\.]{0,211}))|(eui\.[0-9a-fA-F]{16}))\$/

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^ [A-Fa-f0-9]{8}\-[A-Fa-f0-9]{4}\}{3}\-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[\-A-Za-z0-9,\.:@_]{1,32}\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

path_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains the compute node path information. This CLI is used to verify that the path is deleted correctly after the deletion. The response data is the same as the one specified by the request parameter.

Syntax

```
hsds [master command option] path_show
--id <str> (required *1)
```

```

--id_nickname <str> (required *1)
--hba_id <str> (required *2)
--hba_id_name <str> (required *2)
--port_id <str> (required *3)
--port_id_name <str> (required *3)

```

**Caution:**

- *1: Either --id or --id_nickname must be specified.
- *2: Either --hba_id or --hba_id_name must be specified.
- *3: Either --port_id or --port_id_name must be specified.

Options and parameters**--id <compute node ID>**

Specify the ID (uuid) of the compute node.

Either --id or --id_nickname must be specified.

--id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --id.¹

Either --id or --id_nickname must be specified.

must match /^[a-zA-Z0-9,\.:@_]\{0,228\}\$/

--hba_id <initiator ID>

Specify the initiator ID (uuid) of the compute node.

Either --hba_id or --hba_id_name must be specified.

--hba_id_name {<WWN> | <iSCSI name>}

Specify initiator WWN of the compute node for FC connection, or the iSCSI name for iSCSI connection.²

Specify a value instead of --hba_id.¹

Either --hba_id or --hba_id_name must be specified.

must match /^[a-f0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211})|(eui\.[0-9a-fA-F]{16}))\$/

--port_id <compute port ID>

Specify the compute port ID (uuid) of the target operation.

Either --port_id or --port_id_name must be specified.

--port_id_name {<WWN> | <iSCSI name>}

Specify WWN of the compute port of the target operation for FC connection or the iSCSI name for iSCSI connections.²

Specify a value instead of --port_id.¹

Either --port_id or --port_id_name must be specified.

must match /^[a-f0-9]{16}\$|^([A-F0-9]{16})\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.]
{0,211})|(eui\.[0-9a-fA-F]{16}))\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

2: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

Responses

Normal termination

```
path: object (on page 445)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_server_connection_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains a list of connection information between the volume and the compute node.

Syntax

```
hsds [master command option] volume_server_connection_list
--volume_id <str> (required *1)
--volume_name <str> (required *1)
--volume_id_name <str> (required *1)
--server_id <str> (required *1)
--server_nickname <str> (required *1)
--server_id_nickname <str> (required *1)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: One of --volume_id, --volume_name, --volume_id_name, --server_id, --server_nickname, and --server_id_nickname must be specified.

Options and parameters

--volume_id <volume ID>

Specify volume ID (uuid).

--volume_id, --volume_name, and --volume_id_name cannot be specified simultaneously.

--volume_name <volume name>

Specify the volume name.

Specify a value instead of --volume_id.¹

--volume_id, --volume_name, and --volume_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--volume_id_name <volume name>

The alias of --volume_name.

Specify a value instead of --volume_id.¹

--volume_id, --volume_name, and --volume_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--server_id <compute node ID>

Specify the ID (uuid) of the compute node.

--server_id, --server_nickname, and --server_id_nickname cannot be specified simultaneously.

--server_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of `--server_id`.¹

`--server_id`, `--server_nickname`, and `--server_id_nickname` cannot be specified simultaneously.

must match `/^[a-zA-Z0-9,\.:@_]([a-zA-Z0-9,\.:@_ \-]{0,228})$/`

--server_id_nickname <compute node nickname>

The alias of `--server_nickname`.

Specify a value instead of `--server_id`.¹

`--server_id`, `--server_nickname`, and `--server_id_nickname` cannot be specified simultaneously.

must match `/^[a-zA-Z0-9,\.:@_]([a-zA-Z0-9,\.:@_ \-]{0,228})$/`

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

`--vps_id` and `--vps_id_name` cannot be specified simultaneously.

must match `/^system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

`--vps_id` and `--vps_id_name` cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

Description

A list of connection information between the volume and the compute node.

Properties**data:** *object[]*

Items

volumePath: object (on page 521)**Abnormal termination**errorResponse: object (on page 422)**Note:**

When text is specified for format, it is output in the format described in [Output format](#) (on page 26).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions](#) (on page 405).

Authentication schemes

- basic authentication
- session authentication

volume_server_connection_create

Required Role: Storage or VpsStorage

Description

Sets a path between the specified volume and compute node.

Syntax

```
hsds [master command option] volume_server_connection_create
--volume_id <str> (optional)
--volume_id_name <str> (optional)
--volume_ids <str[]> (optional)
--volume_id_names <str[]> (optional)
--server_id <str> (optional)
--server_id_nickname <str> (optional)
--server_ids <str[]> (optional)
--server_id_nicknames <str[]> (optional)
--lun <int32> (optional)
--start_lun <int32> (optional)
```

```
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

Options and parameters

--volume_id <volume ID>

Specify volume ID (uuid) to be allocated.

This parameter (or --volume_id_name) is required if server_id (or --server_id_nickname) is specified.

--volume_id_name <volume name>

Specify the name of the volume to be allocated.

Specify a value instead of --volume_id.¹

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--volume_ids <id>

Specify a list of volume IDs (uuid, 1 to 1,000 items) to be allocated.

This parameter (or --volume_id_names) is required if server_ids (or --server_id_nicknames) is specified.

--volume_id_names <name>

Specify a list of the names (1 to 1,000 items) of volumes to be allocated.

Specify a value instead of --volume_ids.¹

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--server_id <compute node ID>

Specify the ID (uuid) of the allocation destination compute node.

This parameter (or --server_id_nickname) is required if --volume_id (or --volume_id_name) is specified.

--server_id_nickname <compute node nickname>

Specify the nickname of the allocation destination compute node.

Specify a value instead of --server_id.¹

must match `/^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_]{0,228}$/`

--server_ids <id>

Specify a list of IDs (uuid, 1 to 100 items) of the allocation destination compute nodes.

This parameter (or --server_id_nicknames) is required if --volume_ids (or --volume_id_names) is specified.

--server_id_nicknames <nickname>

Specify a list of the nicknames (1 to 100 items) of the allocation destination compute nodes.

Specify a value instead of `--server_ids`.¹

must match `/^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_-\]{0,228}$/`

--lun <LUN>

Specify LUN (0 to 8191). If omitted, unused LUNs are allocated automatically in ascending order.

--start_lun <LUN>

Specify the start number of the LUN (0 to 8191) to be allocated. Unused LUNs equal to or greater than the specified value are allocated. If omitted, unused LUNs are allocated automatically in ascending order.

When the sum of the number of `--volume_ids` (or `--volume_id_names`) elements minus one and `--start_lun` exceeds 8191, an error is returned.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/system$|^ [A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[\ -A-Za-z0-9,\.:@_]{1,32}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

**Note:**

The job succeeds only when this parameter is specified with the following property combinations.

- --volume_id, --server_id, --lun
- --volume_ids, --server_ids, --start_lun

If --volume_ids and --server_ids are specified, all the volumes specified in --volume_ids are allocated to all the compute nodes specified in --server_ids.

If none of the parameters is specified, job does not succeed.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_server_connection_release_connections

Required Role: Storage or VpsStorage

Description

Releases multiple connections between the volumes and compute nodes. Make sure that there are no I/Os from a compute node before running this CLI.

Syntax

```

hsds [master command option] volume_server_connection_release_connections
--volume_ids <str[]> (required *1)
--volume_id_names <str[]> (required *1)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
--server_ids <str[]> (required *2)
--server_id_nicknames <str[]> (required *2)

```

**Caution:**

*1: Either --volume_ids or --volume_id_names must be specified.

*2: Either --server_ids or --server_id_nicknames must be specified.

Options and parameters**--volume_ids <id>**

Specify a list of volume IDs (1 to 1,000 items) to be deallocated.

Either --volume_ids or --volume_id_names must be specified.

--volume_id_names <name>

Specify a list of the volume names (1 to 1,000 items) to be deallocated.

Specify a value instead of --volume_ids.¹

Either --volume_ids or --volume_id_names must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^ [A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--server_ids <id>

Specify a list of compute node IDs (1 to 100 items) whose volume is to be deallocated.

Either --server_ids or --server_id_nicknames must be specified.

--server_id_nicknames <nickname>

Specify a list of compute node nicknames (1 to 100 items) whose volumes are to be deallocated.

Specify a value instead of --server_ids.¹

Either --server_ids or --server_id_nicknames must be specified.

must match /^[a-zA-Z0-9,\.:@_]{1}([a-zA-Z0-9,\.:@_]{0,228})\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_server_connection_delete

Required Role: Storage or VpsStorage

Description

Releases the connection between the volume and the compute node. Make sure that there are no I/Os from the compute node, and then execute the CLI.

Syntax

```
hsds [master command option] volume_server_connection_delete
--volume_id <str> (required *1)
--volume_id_name <str> (required *1)
--server_id <str> (required *2)
--server_id_nickname <str> (required *2)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: Either `--volume_id` or `--volume_id_name` must be specified.

*2: Either `--server_id` or `--server_id_nickname` must be specified.

Options and parameters

`--volume_id <volume ID>`

Specify volume ID (uuid).

Either `--volume_id` or `--volume_id_name` must be specified.

`--volume_id_name <volume name>`

Specify the volume name.

Specify a value instead of `--volume_id`.¹

Either `--volume_id` or `--volume_id_name` must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

`--server_id <compute node ID>`

Specify the ID (uuid) of the compute node.

Either `--server_id` or `--server_id_nickname` must be specified.

`--server_id_nickname <compute node nickname>`

Specify the compute node nickname.

Specify a value instead of `server_id`.¹

Either `--server_id` or `--server_id_nickname` must be specified.

must match `/^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_]{0,228}$/`

`--vps_id <VPS ID>`

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_server_connection_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, VpsMonitor

Description

Obtains the connection information between the volume and the compute node.

Syntax

```
hsds [master command option] volume_server_connection_show
--volume_id <str> (required *1)
--volume_id_name <str> (required *1)
--server_id <str> (required *2)
--server_id_nickname <str> (required *2)
```



Caution:

*1: Either --volume_id or --volume_id_name must be specified.

*2: Either --server_id or --server_id_nickname must be specified.

Options and parameters

--volume_id <volume ID>

Specify volume ID (uuid).

Either --volume_id or --volume_id_name must be specified.

--volume_id_name <volume name>

Specify the volume name.

Specify a value instead of --volume_id.¹

Either --volume_id or --volume_id_name must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--server_id <compute node ID>

Specify the ID (uuid) of the compute node.

Either --server_id or --server_id_nickname must be specified.

--server_id_nickname <compute node nickname>

Specify the compute node nickname.

Specify a value instead of --server_id.¹

Either --server_id or --server_id_nickname must be specified.

must match `/^[a-zA-Z0-9,\.:@_][a-zA-Z0-9,\.:@_]{0,228}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
volumePath: object (on page 521)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 6: Drive management

drive_list

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains a list of drive information.

Syntax

```
hsds [master command option] drive_list
--status_summary <str> (optional)
--status <str> (optional)
--storage_node_id <str> (optional)
--locator_led_status <str> (optional)
```

Options and parameters

--status_summary { Normal | Warning | Error }

Specify drive status summary.

--status { Offline | Normal | TemporaryBlockage | Blockage }

Specify the drive status.

--storage_node_id <storage node ID>

Specify storage node ID (uuid).

--locator_led_status { Off | On }

Specify on/off state of the locator LED.

- Off: The LED is off.

- On: The LED is on.

Responses

Normal termination

Description

A list of drive information.

Properties

data: *object[]*

Items

[drive: object \(on page 418\)](#)



Note:

The output results of typeCode, serialNumber, and vendorName might include spaces depending on the drive type.

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

drive_show

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains the drive information.

Syntax

```
hsds [master command option] drive_show
--id <str> (required)
```

Options and parameters

--id <drive ID>
Specify drive ID (uuid) .

Responses**Normal termination**

```
drive: object (on page 418)
```

**Note:**

The output results of typeCode, serialNumber, and vendorName might include spaces depending on the drive type.

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

drive_control_locator_led

Required Role: Storage, Service

Description

Controls on and off of the locator LED of a drive.

Syntax

```
hsds [master command option] drive_control_locator_led
--id <str> (required)
--operation_type <str> (required)
```

Options and parameters**--id <drive ID>**

Specify drive ID (uuid).

--operation_type { TurnOff | TurnOn }

Specify operation for the locator LED.

- TurnOff: Turns off the LED.
- TurnOn: Turns on the LED.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

drive_remove

Required Role: Storage

Description

Removes a drive. When processing of this CLI completes, the status of the drive becomes Offline.

Syntax

```
hsds [master command option] drive_remove
--id <str> (required)
```

Options and parameters

--id <drive ID>

Specify drive ID (uuid).

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 7: Event log management

event_log_setting_show

Required Role: Security

Description

Obtains the event log settings.

Syntax

```
hsds [master command option] event_log_setting_show
```

Options and parameters

None

Responses

Normal termination

```
eventLogSetting: object (on page 424)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

event_log_setting_set

Required Role: Security

Description

Edits the event log settings.

Syntax

```
hsds [master command option] event_log_setting_set
--location_name <str> (optional)
--syslog_servers <array> (required *1)
  index=<int32> (required if --syslog_servers is specified)
  is_enabled=<boolean> (required if --syslog_servers is specified)
  server_name=<str> (required if --syslog_servers is specified)
  port=<int32> (required if --syslog_servers is specified)
  transport_protocol=<str> (required if --syslog_servers is specified)
--smtp_settings <array> (required *1)
  index=<int32> (optional)
  is_enabled=<boolean> (required if --smtp_settings is specified)
  smtp_server_name=<str> (required if --smtp_settings is specified)
  smtp_auth_account=<str> (required if --smtp_settings is specified)
  smtp_auth_password=<str> (required if --smtp_settings is specified)
  from_address=<str> (required if --smtp_settings is specified)
  to_address1=<str> (optional)
  to_address2=<str> (optional)
  to_address3=<str> (optional)
```

**Caution:**

*1: Either --syslog_servers or --smtp_settings must be specified. Specifying both is not allowed. If you specified both or neither of them, an error is returned.

Options and parameters**--location_name <location name>**

Specify location name (1 to 32 characters) for Syslog transfer.

must match /^[A-Za-z0-9!#\$%&'()*+,-.V:;<=>|?@[\\]\|^_`{|}~]{1,32}\$/

**Caution:**

Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".

- The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
- If you type "\", the CLI program will interpret it as one escape character "\".
- To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--syslog_servers index=<syslog server ID>,is_enabled={true | false},server_name={<host name>|<IP address>},port=<port number>,transport_protocol=UDP

Specify syslog server (1 to 2 items) to which event logs are transferred. You can set up to two servers.

When specifying multiple parameters, specify as follows:

```
--syslog_servers index=<syslog server ID 1>,is_enabled={true | false},server_name={<host name 1>|<IP address 1>},port=<port number 1>,transport_protocol=UDP --syslog_servers index=<syslog server ID 2>,is_enabled={true | false},server_name={<host name 2>|<IP address 2>},port=<port number 2>,transport_protocol=UDP
```

Parameters**index**

Specify the ID (1 to 2) of the syslog server. If the same ID is entered twice for the syslog server to which event logs are transferred, an error is returned.

is_enabled

Specify whether event logs are transferred to the syslog server specified in serverName.

server_name

Specify host name (1 to 253 characters) or IP address (IPv4) of the Syslog server.

must match `/^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))$/`

port

Specify port number (1 to 65,535) of the Syslog server.

transport_protocol

Specify communications protocol.

--smtp_settings [index=<ID>],is_enabled={true | false},smtp_server_name=<IP address>,smtp_auth_account=<account>,smtp_auth_password=<password>,from_address=<E-mail address>,to_address1=<E-mail address>,to_address2=<E-mail address>,to_address3=<E-mail address>

Specify a parameter for editing the event log transfer destination in SMTP settings (1 item).

One of toAddress1, toAddress2, or toAddress3 must be specified.

If nothing is specified, an error is returned.

Parameters

index

Specify the ID (1, default: "1") of the SMTP server.

is_enabled

Specify whether event logs are transferred using the SMTP setting.

smtp_server_name

Specify host name (up to 253 characters) or IP address (IPv4) of the SMTP server.

must match `/^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])$/`

smtp_auth_account

Specify SMTP authentication account (up to 255 characters).

must match `/^[a-zA-Z0-9a-zA-Z!\$%'\(\)\-\.~_@]+$/`

smtp_auth_password

Specify SMTP authentication password (up to 255 characters).

must match `/^[a-zA-Z0-9a-zA-Z!\$%'\(\)\-\.~_@]+$/`



Caution:

If `--smtp_settings` is specified and `smtp_auth_password` is not specified, a prompt will appear. In such cases, enter a password using standard input.

`smtp_auth_password:`

The contents of a password specified by the option remain in the command history. Therefore, enter the password using standard input without the option.

from_address

Specify source E-mail address (up to 255 characters).

must match `/^[a-zA-Z0-9a-zA-Z@!#\$\%&'\+|-|*V^{\}_.]+$/`

to_address1

Specify destination E-mail address 1 (up to 255 characters).

must match `/^[a-zA-Z0-9a-zA-Z@!#\$\%&'\+|-|*V^{\}_.]+$/`

to_address2

Specify destination E-mail address 2 (up to 255 characters).

must match `/$|^([0-9a-zA-Z@!#$%&`+|-|*|^|\{|\}|_|\.)+$`

to_address3

Specify destination E-mail address 3 (up to 255 characters).

must match `/$|^([0-9a-zA-Z@!#$%&`+|-|*|^|\{|\}|_|\.)+$`

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

event_log_list

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains a list of event logs. Logs are listed in descending order of the date and time when events were detected.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both `start_time` and `end_time` are omitted

- Assuming that the following are specified, outputs event logs in reverse chronological order of the date and time when the event was detected:
 - The time when the REST API server received the request was specified as `end_time`.
 - 1970-01-01T00:00:01Z was specified as `start_time`.

When both `start_time` and `end_time` are specified

- Logs within the specified period are listed in reverse chronological order of the date and time when the event was detected.

When only `start_time` is specified

- Assuming that the time when the REST API server received the request is specified as `end_time`, logs within the specified period are listed in reverse chronological order of the data and time when the event was detected.

When only `end_time` is specified

- Assuming that 1970-01-01T00:00:01Z was specified as `start_time`, outputs event logs within the specified period in reverse chronological order of the date and time when the event was detected.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when the following date and time are specified:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.

Syntax

```
hsds [master command option] event_log_list
--severity <str> (optional)
--severity_ge <str> (optional)
--start_time <str> (optional)
--end_time <str> (optional)
--max_events <int> (optional)
```

Options and parameters

--severity { Info | Warning | Error | Critical }

Specify the severity of the event. Only events with the specified severity are extracted.

If you specify both parameters at the same time, an error is returned.

--severity_ge { Info | Warning | Error | Critical }

Specify the severity of the event. Events with the specified severity or higher are extracted.

Info < Warning < Error < Critical < Unknown

Unknown events are output regardless of the selected severity level. Either severity or severityGe can be specified.

If you specify both parameters at the same time, an error is returned.

--start_time <time>

Specify the start date and time (date-time) of the event log you obtain.

The data of the specified time is included in the obtained event log.

--end_time <time>

Specify the end date and time (date-time) of the event log you obtain.

The data of the specified time is included in the obtained event log.

--max_events <maximum number>

Specify maximum number (1 to 1,000, default: 1,000) of event log records that can be obtained.

Responses

Normal termination

Description Event log list. Properties data: <i>object[]</i> Items eventLog: object (on page 423)

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

event_log_show

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains the event log.

Syntax

```
hsds [master command option] event_log_show
--id <str> (required)
```

Options and parameters

--id <event log ID>
Specify event log ID (uuid).

Responses**Normal termination**

```
eventLog: object (on page 423)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

smtp_server_root_certificate_import

Required Role: Security

Description

Imports a root certificate (to be used in communication with the SMTP server) to a storage cluster.

PEM- and DER-format certificate files are supported. If TLS communication with the SMTP server is enabled in the storage cluster setting for the SMTP server specified in `target_server`, a root certificate is applied immediately.

You can run this CLI only for the cluster master node (primary). If you call this CLI for a node other than the cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] smtp_server_root_certificate_import
--root_certificate <file> (required)
--target_server <int32> (required)
```

Options and parameters**--root_certificate <root certificate file>**

Specify root certificate file used in communication with the SMTP server.

--target_server <SMTP server ID>

Specify identification number (1) of the target SMTP server.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

smtp_server_root_certificate_download

Required Role: Security

Description

Obtains a root certificate (to be used in communication with the SMTP server) which is imported to a storage cluster.

A root certificate is output as a DER file.

If you call this CLI when no root certificate is imported, an error is returned.

You can run this CLI only for the cluster master node (primary). If you call this CLI for a node other than the cluster master node (primary), an error is returned.

If you have not imported the root certificate for the SMTP server, you may see message ID: KARS15553-E. In that case, import the root certificate of the SMTP server.

Syntax

```
hsds [master command option] smtp_server_root_certificate_download
--target_server <int32> (required)
```

Options and parameters

--target_server < SMTP server ID>

Specify identification number (1) of the target SMTP server.

Responses**Normal termination**

Root certificate file corresponding to the server specified as --target_server.

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 8: Failure analysis

dump_file_create_file

Required Role: Service

Description

Requests creation of a dump log file of the storage node that issued the CLI.

Specify the IP address or the host name of the control port for the storage node for which you want to create a dump log file as the connection destination.

To create dump log files for all the storage nodes in the storage cluster, issue the CLI for all the storage nodes in the storage cluster, and then create dump log files.

It is recommended that you use ticket authentication for this CLI. Another authentication scheme can be used if there is no ticket, but authentication might not succeed depending on the failure condition of the storage node.

Syntax

```
hsds [master command option] dump_file_create_file
--label <str> (optional)
--mode <str> (optional)
```

Options and parameters

--label <label>

Specify label name (up to 64 characters, default: "") assigned to the file name as dump log file identifying information.

must match `/^$|^[a-zA-Z0-9!#$%&'\-\.@^_`{}~]{1,64}$/`

--mode {Base (default) | Memory | Monitor | All }

Specify information to be included in the dump log files. For modes to be selected, see *Procedure for collecting Virtual Storage Software block dump log files* in the *Hitachi Virtual Storage Software Block System Administrator Guide*.

- Base: Obtains log files required for initial analysis. Information common to all storage nodes, such as configuration information, is obtained only by cluster master node (primary).
- Memory: Obtains memory dump files.
- Monitor: Obtains monitor information. This mode can be specified only for cluster master node (primary) or cluster master node (secondary).
- All: Obtains all the log files. Information common to all storage nodes, such as configuration information and monitor information, is obtained only by cluster master node (primary).

Responses**Normal termination**

```
dumpStatus: object (on page 420)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication
- ticket authentication

dump_file_download

Required Role: Service

Description

Downloads a dump log file of the storage node specified as the connection destination.

This parameter is intended for dump log files specified for `--file_name`.

If `--file_name` is not specified, a dump log file with the latest creation completion time is targeted.

For the connection destination, specify the IP address or the host name of the control port for the storage node for which you want to download a dump log file.

If you specified `--index_of_split_files`, the target dump log files are downloaded separately.

To download dump log files for all the storage nodes in the storage cluster, issue the CLI for all the storage nodes in the storage cluster, and then download dump log files.

It is recommended that you use ticket authentication for this CLI. Another authentication scheme can be used if there is no ticket, but authentication might not succeed depending on the failure condition of the storage node.

If download does not complete within an hour, verify the size of the file whose name starts with "hsds_log_" or "Error_hds_log_", which is created in the current directory. If the file size has not changed, verify that no error has occurred in the network connection to the destination storage node.

Verify that the free disk space on the controller node is not less than the dump log file size by running `dump_status_list`, and then execute the CLI.



Note:

(Virtual machine) The CLI cannot be executed on a maintenance node.

For how to verify whether an error has occurred in a network connection, contact customer support.

If you have not created a dump log file for the storage node, you may see message ID: KARS15553-E. In that case, perform a request to create a dump log file for the storage node.

Syntax

```
hsds [master command option] dump_file_download
--file_name <str> (optional)
--index_of_split_files <int> (optional)
```

Options and parameters

`--file_name <name>`

Specifies the name of the target dump log file (1 to 255 characters).

must match `/^[a-zA-Z0-9!#$%&'\-\.@^_`{\}~]{1,255}$/`

--index_of_split_files <index>

Index (1 to 369) of the split dump log files. Specify this parameter in the range from 1 to the number that the dump log files are split.

You can view the number that the dump log files are split in numberOfSplitFiles by using the following CLI: dump_status_list

Responses**Normal termination**

Dump log file.

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication
- ticket authentication

dump_file_delete

Required Role: Service

Description

Deletes a dump log file of the storage node to which the API was issued.

This parameter is intended for dump log files specified for file_name.

For the connection destination, specify the IP address or the host name of the control port for the storage node for which you want to delete a dump log file.

It is recommended that you use ticket authentication for this CLI. Another authentication scheme can be used if there is no ticket, but authentication might not succeed depending on the failure condition of the storage node.

Syntax

```
hsds [master command option] dump_file_delete
--file_name <str> (required)
```

Options and parameters

--file_name <name>

Specify the name of the target dump log file (1 to 255 characters).

must match `/^[a-zA-Z0-9!#$%&'\-\.@^_`{|}~]{1,255}$/`

Responses

Normal termination

None

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication
- ticket authentication

dump_status_show

Required Role: Service

Description

Verifies the latest creation status of the dump log file of the storage node specified as the connection destination.

The status of the dump log file with the latest creation completion time is returned.

For the connection destination, specify the IP address or the host name of the control port for the storage node for which you want to confirm the creation status of the dump log file.

It is recommended that you use ticket authentication for this CLI. Another authentication scheme can be used if there is no ticket, but authentication might not succeed depending on the failure condition of the storage node.

Syntax

```
hsds [master command option] dump_status_show
```

Options and parameters

None

Responses

Normal termination

```
dumpStatus: object (on page 420)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication
- ticket authentication

dump_status_list

Required Role: Service

Description

Verifies the listed creation statuses of dump log files of the storage node specified as the connection destination.

For the connection destination, specify the IP address or the host name of the control port for the storage node for which you want to confirm the creation status of the dump log file.

It is recommended that you use ticket authentication for this CLI. Another authentication scheme can be used if there is no ticket, but authentication might not succeed depending on the failure condition of the storage node.

Syntax

```
hsds [master command option] dump_status_list
```

Options and parameters

None

Responses

Normal termination

`dumpStatusList: object (on page 421)`

Abnormal termination

`errorResponse: object (on page 422)`



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication
- ticket authentication

ticket_create

Required Role: Service or Security

Description

Issues an authentication ticket. You can use this authentication ticket if a failure occurred in the API or CLI for which authentication ticket (including dump file creation) was permitted and Basic authentication and session authentication cannot be performed.

Syntax

```
hsds [master command option] ticket_create
--max_age_days <int32> (optional)
```

Options and parameters

--max_age_days <days>

Specify valid period of the ticket (1 to 365, unit: number of days). Date and time of ticket issuance + valid period becomes the expiration time.

If omitted, the ticket expiration date and time are the same as that for the password of the user who issued the ticket.

However, if the user's password does not have an expiration time, the ticket will be valid for 365 days.

Responses

Normal termination

```
ticket: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication

ticket_revoke_all

Required Role: Security

Description

Discards all the authentication tickets issued before this CLI is run. If the discarded authentication tickets are not reflected in some of the storage nodes due to a failure or other reason, such storage nodes are notified via an event log.

Syntax

```
hsds [master command option] ticket_revoke_all
```

Options and parameters

None

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 9: Login message management

login_message_show

Required Role: None

Description

Obtains the message to be displayed in the GUI login window and CLI warning banner.

Syntax

```
hsds [master command option] login_message_show
```

Options and parameters

None

Responses

Normal termination

```
loginMessage: object (on page 442)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

login_message_set

Required Role: Security

Description

Edits the message to be displayed in the GUI login window and CLI warning banner.

Syntax

```
hsds [master command option] login_message_set
--message <str> (required)
```

Options and parameters

--message <message>

Specify message body to be displayed (up to 6144 characters) in the GUI login window and CLI warning banner. Specify an empty string "" if nothing is to be displayed.

must match /^[a-zA-Z0-9!"#\$%&"'()*+,-.:\.;<=>|?@[\\]^_`{|}~\t\r\n]{0,6144}\$/



Caution:

Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".

- The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
- If you type "\\ ", the CLI program will interpret it as one escape character "\".
- To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 10: High resolution monitor



Note: Performance information described in this chapter includes internal I/Os such as volume migration.

control_port_detail_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) of the control port specified in subcommand-option ids.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a control port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] control_port_detail_performance_list
--ids <str[]> (required)
```

Options and parameters

--ids <control port ID>

Specify the ID of the control port.

You can specify plural IDs up to 32 with comma (,) delimiter.

Example: --ids <id1>,<id2>,<id3>...

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

Responses

Normal termination

```
controlPortPerformanceListResponse: object (on page 415)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

control_port_detail_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified control port.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a control port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] control_port_detail_performance_show
--id <str> (required)
```

Options and parameters

--id <control port ID>

Specify the ID (uuid) of the control port.

Responses

Normal termination

`controlPortPerformanceListResponse`: object (on page 415)

Abnormal termination

`errorResponse`: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format](#) (on page 26).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions](#) (on page 405).

Authentication schemes

- basic authentication
- session authentication

drive_detail_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) of the drive specified in subcommand-option ids.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a drive is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] drive_detail_performance_list
--ids <str[]> (required)
```

Options and parameters

--ids <id>

Specify drive ID. You can specify plural IDs up to 32 with comma (,) delimiter.

Example: --ids <id1>,<id2>,<id3>...

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

Responses

Normal termination

```
drivePerformanceListResponse: object (on page 419)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

drive_detail_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified drive.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a drive is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] drive_detail_performance_show
--id <str> (required)
```

Options and parameters**--id <drive ID>**

Specify drive ID (uuid).

Responses**Normal termination**

drivePerformanceListResponse: object (on page 419)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

internode_port_detail_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) of the internode port specified in subcommand-option ids.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or an internode port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] internode_port_detail_performance_list
--ids <str[]> (required)
```

Options and parameters

--ids <id>

Specify the ID of the internode port.

You can specify plural IDs up to 32 with comma (,) delimiter.

Example: --ids <id1>,<id2>,<id3>...

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

Responses

Normal termination

```
internodePortPerformanceListResponse: object (on page 432)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

internode_port_detail_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) of the specified internode port.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or an internode port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] internode_port_detail_performance_show
--id <str> (required)
```

Options and parameters

--id <internode port ID>

Specify the ID (uuid) of the internode port.

Responses

Normal termination

```
internodePortPerformanceListResponse: object (on page 432)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_detail_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) of the compute port specified in subcommand-option ids.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a compute port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] port_detail_performance_list
--ids <str[]> (required *1)
```

```
--names <str[]> (required *1)
--id_names <str[]> (required *1)
```

**Caution:**

*1: Only one of --ids, --names, or --id_names must be specified.

Options and parameters**--ids <id>**

Specify the ID of the compute port. You can specify plural IDs up to 32 with comma (,) delimiter.

Example: --ids <id1>,<id2>,<id3>...

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

Either --ids or --names must be specified.

--names {<WWN> | <iSCSI name>}

Specify list of WWNs of the compute port for FC connection or the iSCSI names for iSCSI connections.

You can specify plural WWNs for FC connection or iSCSI names for iSCSI connection (up to 223 characters) up to 32 with comma (,) delimiter.¹

Specify a value instead of --ids.²

Each item must match `/^[a-f0-9]{16}$|^[A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))|(eu\.[0-9a-fA-F]{16}))$/`

--id_names {<WWN> | <iSCSI name>}

The alias of --names.

You can specify plural WWNs for FC connection or iSCSI names for iSCSI connection (up to 223 characters) up to 32 with comma (,) delimiter.¹

Specify a value instead of --ids.²

Each item must match `/^[a-f0-9]{16}$|^[A-F0-9]{16}$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))|(eu\.[0-9a-fA-F]{16}))$/`

**Note:**

- 1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.
- 2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
portPerformanceListResponse: object (on page 455)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_detail_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified compute port.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a compute port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] port_detail_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <compute port ID>

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name {<WWN> | <iSCSI name>}

Specify WWN of the compute port for FC connection or the iSCSI name for iSCSI connections.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match /^[a-f0-9]{16}\$|^([A-F0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.]
{0,211}))|(eui\.[0-9a-fA-F]{16}))\$)/



Note:

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
portPerformanceListResponse: object (on page 455)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_detail_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) of the storage node specified in subcommand-option ids.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage node is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] storage_node_detail_performance_list
--ids <str> (required)
```

Options and parameters

--ids <id>

Specify plural IDs up to 32 with comma (,) delimiter.

Example: --ids <id1>,<id2>,<id3>...

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

Responses**Normal termination**

storageNodePerformanceListResponse: object (on page 495)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_detail_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified storage node.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage node is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] storage_node_detail_performance_show
--id <str> (required)
```

Options and parameters

--id <storage node ID>
Specify storage node ID (uuid).

Responses

Normal termination

storageNodePerformanceListResponse: object (on page 495)

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_detail_performance_list

Required Role: Storage, Monitor, Resource, VpsStorage, or VpsMonitor

Description

Obtains the performance information (monitor information) of the volume specified by subcommand-option ids.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a volume is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] volume_detail_performance_list
--ids <str[]> (required *1)
--names <str[]> (required *1)
--id_names <str[]> (required *1)
```

```
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Only one of --ids, --names, or --id_names must be specified.

Options and parameters**--ids <volume id>**

Specify the volume ID. You can specify plural IDs up to 32 with comma (,) delimiter.

Example: --ids <id1>,<id2>,<id3>...

An error is returned when the following conditions are met:

- 33 or more IDs are specified.
- A character string other than UUID is specified (including when a space character exists before or after a comma, or when the string is an empty string).

--names <volume name>

Specify a list of the volume names (exact match). You can specify plural names (up to 32) by delimiting them with commas (,).

When names include commas, escape the commas with \ (Backslash).

Specify a value instead of --ids.¹

Each item must match /^[A-Za-z0-9,\.:@_]{1,32}\$/

--id_names <volume name>

The alias of --names. You can specify maximum of 32 volume names (up to 32 characters) by delimiting them with commas (,).

Specify a value instead of --ids.¹

Each item must match /^[A-Za-z0-9,\.:@_]{1,32}\$/

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{3}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
volumePerformanceListResponse: object (on page 523)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_detail_performance_show

Required Role: Storage, Monitor, Resource, VpsStorage, or VpsMonitor

Description

Obtains the performance information (monitor information) about the specified volume.

The performance information about high resolution monitors is internally collected at five second intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a volume is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The high resolution monitor can obtain information only for five seconds until the REST API server receives a request. Basically, only the monitor information of the latest cycle is returned. However, depending on the timing for synchronizing NTP servers, monitor information of the latest cycle and the one immediately prior to the latest cycle might be returned.

Syntax

```
hsds [master command option] volume_detail_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <volume ID>

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

volumePerformanceListResponse: object (on page 523)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 11: License management

license_setting_show

Required Role: Storage, Monitor, Resource

Description

Obtains the license settings.

Syntax

```
hsds [master command option] license_setting_show
```

Options and parameters

None

Responses

Normal termination

`licenseSetting: object (on page 442)`

Abnormal termination

`errorResponse: object (on page 422)`



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

license_setting_set

Required Role: Storage

Description

Edits the license settings.

Syntax

```
hsds [master command option] license_setting_set
--remaining_days <int32> (optional)
--total_pool_capacity_rate <int32> (optional)
```

Options and parameters**--remaining_days <number of remaining days>**

Specify number of remaining days (-1 to 60). A warning is issued if the number of remaining days becomes less than the specified number of days.

-1 means that no warning is issued.

--total_pool_capacity_rate <capacity rate warning>

Specify capacity rate warning (-1 to 100). A warning is issued if the current total logical capacity of all storage pools exceeds the specified capacity rate in the total logical capacity of all storage pools permitted by the license.

-1 means that no warning is issued.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```


**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

license_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of license information.

Syntax

```
hsds [master command option] license_list
--program_product_name <str> (optional)
--status <str> (optional)
--status_summary <str> (optional)
```

Options and parameters

--program_product_name <program product name>

Specify the name (1 to 63 characters) of the program product.

--status {Active | Warning | Overwritten | GracePeriod | Invalid}

Specify status of the license.

--status_summary {Normal | Warning | Error}

Specify license status summary.

Responses**Normal termination**

Description

A list of license information.

Properties

```
data:object[]
  Items
  license: object (on page 440)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

license_install

Required Role: Storage

Description

Registers a license.

Syntax

```
hsds [master command option] license_install
--key_code <str> (required)
```

Options and parameters

--key_code <license key>

Specify license key.

must match /^[A-Z0-9]{75}\$/

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

license_uninstall

Required Role: Storage

Description

Deletes a license.

Syntax

```
hsds [master command option] license_uninstall
--id <str> (required)
```

Options and parameters

--id <license ID>

Specify the ID (uuid) of the license.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

license_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the license information.

Syntax

```
hsds [master command option] license_show
--id <str> (required)
```

Options and parameters

--id <license ID>

Specify the ID (uuid) of the license.

Responses

Normal termination

```
license: object (on page 440)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 12: Low resolution monitor



Note: Performance information described in this chapter includes internal I/Os such as volume migration.

control_port_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of control port performance information (monitor information). Information about control ports existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a control port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of control ports is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some control ports are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the control ports is output as enumerateContext. You can obtain the next volume by executing this CLI again with enumerateContext specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of control ports you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the control ports might return than the value set in the count parameter. If you want to obtain a large number of the control port information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of control ports whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using enumerateContext. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using enumerateContext.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of control ports, or no collection of information, the number of control ports at a certain point of time might be smaller than the number output for count.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.
- Due to addition or deletion of control ports, or no collection of information, the number of control ports at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] control_port_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true: The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of control port records to be obtained.

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of control port performance information (monitor information) at the specified time and the information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of control port performance information (monitor information) at the specified time.</p> <p>Items</p> <p>controlPortPerformanceListResponseData: object (on page 416)</p> <p>totalCount: <i>integer</i></p> <p>The total number of control ports whose performance information exists within the specified period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some control ports remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid)nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

control_port_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified control port.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a control port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When the range specified by start_time and end_time is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] control_port_performance_show
--id <str> (required)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```

Options and parameters**--id <control port ID>**

Specify the ID (uuid) of the control port.

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified `end_time`.

- false (default): The specified time is not included.
- true: The specified time is included.

Responses**Normal termination**

```
controlPortPerformanceListResponse: object (on page 415)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

drive_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of drive performance information (monitor information). Information about drives existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a drive is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of drives is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some drives are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the drives is output as enumerate_context. You can obtain the next volume by executing this CLI again with enumerate_context specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of drives you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the drives might return than the value set in the count parameter. If you want to obtain a large number of the drive information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of drives whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using enumerate_context. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using enumerate_context.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of drives, or no collection of information, the number of drives at a certain point of time might be smaller than the number output for count.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.
- Due to addition or deletion of drives, or no collection of information, the number of drives at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] drive_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number of drive records to be obtained (0 to 32,768, default: "0").

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of drive performance information (monitor information) at the specified time and the information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of drive performance information (monitor information) at the specified time.</p> <p>Items</p> <p>drivePerformanceListResponseData: object (on page 420)</p> <p>totalCount: <i>integer</i></p> <p>The total number of drives whose performance information exists within the specified period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some drives remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid) nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>
--

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

drive_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified drive.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a drive is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both `start_time` and `end_time` are specified

- The monitored information within the specified time period is returned.

When only `start_time` is specified

- It is assumed that the time when the REST API server received the request was specified as `end_time`.

When only `end_time` is specified

- It is assumed that the time which is one hour earlier than `end_time` was specified as `start_time`. However, if `end_time` is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] drive_performance_show
--id <str> (required)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```

Options and parameters**--id <drive ID>**

Specify drive ID (uuid).

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified `--end_time`.

- false (default): The specified time is not included.
- true : The specified time is included.

Responses**Normal termination**

`drivePerformanceListResponse`: object (on page 419)

Abnormal termination

`errorResponse`: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

internode_port_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of internode port performance information (monitor information). Information about internode ports existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or an internode port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of internode ports is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some internode ports are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the internode ports is output as enumerateContext. You can obtain the next volume by executing this CLI again with enumerateContext specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of internode ports you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the internode ports might return than the value set in the count parameter. If you want to obtain a large number of the internode port information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of internode ports whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using enumerateContext. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using enumerateContext.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of internode ports, or no collection of information, the number of internode ports at a certain point of time might be smaller than the number output for count.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.
- Due to addition or deletion of internode ports, or no collection of information, the number of internode ports at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] internode_port_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true: The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number of internode port records to be obtained (0 to 32,768 , default: "0").

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of internode port performance information (monitor information) at the specified time and the information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of internode port performance information (monitor information) at the specified time.</p> <p>Items</p> <p>internodePortPerformanceListResponseData: object (on page 432)</p> <p>totalCount: <i>integer</i></p> <p>The total number of internode ports whose performance information exists within the specified period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some internode ports remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid) nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>
--

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

internode_port_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified internode port.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or an internode port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both `start_time` and `end_time` are specified

- The monitored information within the specified time period is returned.

When only `start_time` is specified

- It is assumed that the time when the REST API server received the request was specified as `end_time`.

When only `end_time` is specified

- It is assumed that the time which is one hour earlier than `end_time` was specified as `start_time`. However, if `end_time` is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] internode_port_performance_show
--id <str> (required)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```

Options and parameters**--id <internode port ID>**

Specify the ID (uuid) of the internode port.

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified `--end_time`.

- false (default): The specified time is not included.
- true: The specified time is included.

Responses**Normal termination**

```
internodePortPerformanceListResponse: object (on page 432)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_capacity_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of storage pool capacity information (monitor information). Information about storage pools existing at the time of CLI execution is obtained.

The capacity information is internally collected on a one-minute cycle. Because of this, problems listed below might occur. In that case, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage pool is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no capacity information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of storage pools is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some storage pools are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the pools is output as enumerate_context. You can obtain the next volume by executing this CLI again with enumerate_context specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of storage pools you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the storage pools might return than the value set in the count parameter. If you want to obtain a large number of the storage pool information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of storage pools whose capacity records were existing when the CLI was executed. The number might be changed with each CLI operation using enumerate_context. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using enumerate_context.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of storage pools, or no collection of information, the number of storage pools at a certain point of time might be smaller than the number output for count.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.
- Due to addition or deletion of storage pools, or no collection of information, the number of storage pools at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] pool_capacity_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of storage pool records to be obtained.

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of storage pool capacity information (monitor information) at the specified time and the information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of storage pool capacity information (monitor information) at the specified time.</p> <p>Items</p> <p>poolCapacityListResponseData: object (on page 450)</p> <p>totalCount: <i>integer</i></p> <p>The total number of storage pools whose capacity information exists within the specified period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some storage pools remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid) nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_capacity_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the capacity information (monitor information) about the specified storage pool.

The capacity information is internally collected on a one-minute cycle. Because of this, problems listed below might occur. In that case, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage pool is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no capacity information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

<When the range specified by start_time and end_time is invalid>

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] pool_capacity_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters**--id <storage pool ID>**

Specify the ID (uuid) of the storage pool.

Either --id or --id_name must be specified.

--id_name <storage pool name>

Specify the name of the storage pool.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match /^[^A-Za-z0-9_]{1,32}\$/

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

Description

A list of storage pool capacity information (monitor information) at the specified time.

Properties

data: *object[]*

Items

[poolCapacityListResponseData: object \(on page 450\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of storage pool performance information (monitor information). Information about storage pools existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.

- Immediately after Virtual Storage Software block is started or a storage pool is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of storage pools is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some storage pools are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the pools is output as enumerate_context. You can obtain the next volume by executing this CLI again with enumerate_context specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of storage pools you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the storage pools might return than the value set in the count parameter. If you want to obtain a large number of the storage pool information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of storage pools whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using enumerate_context. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using enumerate_context.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of storage pools, or no collection of information, the number of storage pools at a certain point of time might be smaller than the number output for count.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.
- Due to addition or deletion of storage pools, or no collection of information, the number of storage pools at a certain point of time might be smaller than the number output for count.

When the range specified by start_time and end_time is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] pool_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of storage pool records to be obtained.

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of storage pool performance information (monitor information) at the specified time.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p style="padding-left: 20px;">Items</p> <p style="padding-left: 40px;">poolPerformanceListResponseData: object (on page 451)</p> <p>totalCount: <i>integer</i></p> <p>The total number of storage pools whose performance information exists within the specified period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some storage pools remain to be listed in performanceObjects.</p>

enumerateContext: *string* (uuid) nullable

A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified storage pool.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage pool is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

<When the range specified by start_time and end_time is invalid>

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] pool_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <storage pool ID>

Specify the ID (uuid) of the storage pool.

Either --id or --id_name must be specified.

--id_name <storage pool name>

Specify the name of the storage pool.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[^A-Za-z0-9_]{1,32}$/`

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination****Description**

A list of storage pool performance information (monitor information) at the specified time.

Properties

data: *object[]*
 Items
[poolPerformanceListResponseData: object \(on page 451\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of compute port performance information (monitor information). Information about compute ports existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.

- Immediately after Virtual Storage Software block is started or a compute port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of compute ports is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some compute ports are not obtained, `hasNext` in the response data shows true, and the token used to obtain the rest of the compute ports is output as `enumerateContext`. You can obtain the next volume by executing this CLI again with `enumerateContext` specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of compute ports you obtain. If lengthening the obtainment period (`start_time/end_time`), fewer number of the compute ports might return than the value set in the count parameter. If you want to obtain a large number of the compute port information at once, set (`start_time/end_time`) briefly during the obtainment period.

`totalCount` in the response data is the total number of compute ports whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using `enumerateContext`. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using `enumerateContext`.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both `start_time` and `end_time` are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of compute ports, or no collection of information, the number of compute ports at a certain point of time might be smaller than the number output for count.

When only `start_time` is specified

- It is assumed that the time when the REST API server received the request was specified as `end_time`.

When only `end_time` is specified

- It is assumed that the time which is one hour earlier than `end_time` was specified as `start_time`. However, if `end_time` is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.
- Due to addition or deletion of compute ports, or no collection of information, the number of compute ports at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] port_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

`--start_time <time>`

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true: The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of compute port records to be obtained.

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of compute port performance information (monitor information) at the specified time and the information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of compute port performance information (monitor information) at the specified time.</p> <p>Items</p> <p>portPerformanceListResponseData: object (on page 455)</p> <p>totalCount: <i>integer</i></p> <p>The total number of compute ports whose performance information exists within the specified period.</p>

hasNext: *boolean*

Indicates if some compute ports remain to be listed in performanceObjects.

enumerateContext: *string* (uuid) nullable

A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.

Abnormal termination

errorResponse: [object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

port_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified compute port.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned. To verify whether the information is the latest one, compare the timestamp contained in the response data with that obtained last.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.

- Immediately after Virtual Storage Software block is started or a compute port is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When the range specified by start_time and end_time is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] port_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <compute port ID>

Specify the ID (uuid) of the compute port.

Either --id or --id_name must be specified.

--id_name {<WWN> | <iSCSI name>}

Specify WWN of the compute port for FC connection or the iSCSI name for iSCSI connections.¹

Specify a value instead of --id.²

Either --id or --id_name must be specified.

must match /^[a-f0-9]{16}\$|^([A-F0-9]{16}\$|^((iqn\.[0-9]{4}\-[0-9]{2}\.[a-zA-Z0-9\-\.\.]{0,211}))(eui\.[0-9a-fA-F]{16}))\$/

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true: The specified time is included.

**Note:**

1: For this option, specify a WWN or iSCSI name as a case-sensitive exact match.

2: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
portPerformanceListResponse: object (on page 455)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the storage cluster performance information (monitor information).

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both `start_time` and `end_time` are specified

- The monitored information within the specified time period is returned.

When only `start_time` is specified

- It is assumed that the time when the REST API server received the request was specified as `end_time`.

When only `end_time` is specified

- It is assumed that the time which is one hour earlier than `end_time` was specified as `start_time`. However, if `end_time` is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] storage_performance_show
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

Responses**Normal termination**

Description

A list of storage cluster performance information (monitor information) at the specified time.

Properties

data: *object[]*

Items

[storagePerformanceListResponseData: object \(on page 496\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_performance_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of storage node performance information (monitor information). Information about storage nodes existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage node is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of storage nodes is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some storage nodes are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the nodes is output as enumerate_context. You can obtain the next volume by executing this CLI again with enumerate_context specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of storage nodes you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the storage nodes might return than the value set in the count parameter. If you want to obtain a large number of the storage node information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of storage nodes whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using `enumerate_context`. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using `enumerate_context`.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both `start_time` and `end_time` are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of storage nodes, or no collection of information, the number of storage nodes at a certain point of time might be smaller than the number output for count.

When only `start_time` is specified

- It is assumed that the time when the REST API server received the request was specified as `end_time`.

When only `end_time` is specified

- It is assumed that the time which is one hour earlier than `end_time` was specified as `start_time`. However, if `end_time` is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.
- Due to addition or deletion of storage nodes, or no collection of information, the number of storage nodes at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] storage_node_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of storage node records to be obtained.

If nothing is specified or 0 is specified, all records are output.

Responses**Normal termination**

<p>Description</p> <p>A list of storage node performance information (monitor information) at the specified time and the information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i> Items</p> <p>storageNodePerformanceListResponseData: object (on page 495)</p> <p>totalCount: <i>integer</i></p> <p>The total number of storage nodes whose performance information exists within the specified period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some storage nodes remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid) nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>
--

Abnormal termination

<p>errorResponse: <i>object</i> (on page 422)</p>

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_performance_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the performance information (monitor information) about the specified storage node.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a storage node is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When the range specified by start_time and end_time is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] storage_node_performance_show
--id <str> (required)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```

Options and parameters**--id <storage node ID>**

Specify storage node ID (uuid).

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

RESPONSES**Normal termination**

[storageNodePerformanceListResponse: object \(on page 495\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_capacity_performance_list

Required Role: Storage, Monitor, Resource, VpsStorage, or VpsMonitor

Description

Obtains a list of volume capacity information (monitor information). Information about volumes existing at the time of CLI execution is obtained.

The capacity information is internally collected on a one-minute cycle. Because of this, problems listed below might occur. In that case, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a volume is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no capacity information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of volumes is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some volumes are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the volumes is output as enumerate_context. You can obtain the next volume by executing this CLI again with enumerate_context specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of volume records you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the volumes might return than the value set in the count parameter. If you want to obtain a large number of the volume information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of volumes whose capacity records were existing when the CLI was executed. The number might be changed with each CLI operation using `enumerate_context`. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using `enumerate_context`.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both `start_time` and `end_time` are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of volumes, or no collection of information, the number of volumes at a certain point of time might be smaller than the number output for count.

When only `start_time` is specified

- It is assumed that the time when the REST API server received the request was specified as `end_time`.

When only `end_time` is specified

- It is assumed that the time which is one hour earlier than `end_time` was specified as `start_time`. However, if `end_time` is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.
- Due to addition or deletion of volumes, or no collection of information, the number of volumes at a certain point of time might be smaller than the number output for count.

When the range specified by `start_time` and `end_time` is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than `end_time` is specified as `start_time`, including when `end_time` is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for `start_time` or `end_time`.
 - When all the following conditions are satisfied:
 - Specify true for `start_time_excluding`, or false for `end_time_including`.
 - The same date and time is specified for `start_time` and `end_time`, including the case when `start_time` is not specified and 1970-01-01T00:00:01Z is specified for `end_time`.

Syntax

```
hsds [master command option] volume_capacity_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify `--start_time_excluding`, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified `--start_time`.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify `--end_time_including`, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of volume records to be obtained.

If nothing is specified or 0 is specified, all records are output.

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^([A-Fa-f0-9]{8}-([A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12})$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

Responses**Normal termination**

<p>Description</p> <p>A list of capacity information of a volume (monitor information) at the specified time, and information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of capacity information of a volume (monitor information) at the specified time.</p>

<p>Items</p> <p>volumeCapacityListResponseData: object (on page 521)</p> <p>totalCount: <i>integer</i></p> <p>The total number of volumes whose capacity information exists within the specified time period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some volumes remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid) nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_capacity_performance_show

Required Role: Storage, Monitor, Resource, VpsStorage, or VpsMonitor

Description

Obtains the capacity information (monitor information) about of the specified volume.

The capacity information is internally collected on a one-minute cycle. Because of this, problems listed below might occur. In that case, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a volume is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no capacity information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the `start_time` and `end_time` subcommand-options:

When both `start_time` and `end_time` are omitted

- It is assumed that the time when the REST API server received the request was specified as `end_time`.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as `start_time`. However, if the `end_time` is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as `start_time`.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When the range specified by start_time and end_time is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] volume_capacity_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <volume ID>

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

Description

A list of capacity information of a volume (monitor information) at the specified time.

Properties

data: *object[]*

Items

[volumeCapacityListResponseData: object \(on page 521\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_performance_list

Required Role: Storage, Monitor, Resource, VpsStorage, or VpsMonitor

Description

Obtains a list of volume performance information (monitor information). Information about volumes existing at the time of CLI execution is obtained.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a volume is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

If the number of volumes is large, in order to obtain all the information, it is necessary to obtain it separately in plural times. If some volumes are not obtained, hasNext in the response data shows true, and the token used to obtain the rest of the volumes is output as enumerate_context. You can obtain the next volume by executing this CLI again with enumerate_context specified as the subcommand-option.

Also, by setting a count parameter, you can determine the number of volume records you obtain. If lengthening the obtainment period (start_time/end_time), fewer number of the volumes might return than the value set in the count parameter. If you want to obtain a large number of the volume information at once, set (start_time/end_time) briefly during the obtainment period.

totalCount in the response data is the total number of volumes whose performance records were existing when the CLI was executed. The number might be changed with each CLI operation using enumerate_context. Similarly, as the information that is returned is the update at the time of CLI execution, you might obtain a record of a different timestamp value in a series of CLI operations using enumerate_context.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.
- Due to addition or deletion of volumes, or no collection of information, the number of volumes at a certain point of time might be smaller than the number output for count.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.
- Due to addition or deletion of volumes, or no collection of information, the number of volumes at a certain point of time might be smaller than the number output for count.

When the range specified by start_time and end_time is invalid

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] volume_performance_list
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

Options and parameters

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <count>

Specify the number (0 to 32,768, default: "0") of volume records to be obtained.

If nothing is specified or 0 is specified, all records are output.

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^\-A-Za-z0-9,\.\:@_]{1,32}$/`

Responses

Normal termination

<p>Description</p> <p>A list of volume performance information (monitor information) at the specified time and information about performanceObjects.</p> <p>Properties</p> <p>data: <i>object[]</i></p> <p>A list of volume performance information (monitor information) at the specified time.</p> <p>Items</p> <p>volumePerformanceListResponseData: object (on page 523)</p> <p>totalCount: <i>integer</i></p> <p>The total number of volumes whose performance information exists within the specified time period.</p> <p>hasNext: <i>boolean</i></p> <p>Indicates if some volumes remain to be listed in performanceObjects.</p> <p>enumerateContext: <i>string</i> (uuid) nullable</p> <p>A token used to obtain the next value of performanceObjects for the applicable information. A null value is output if the information is the last one.</p>
--

Abnormal termination

<p>errorResponse: object (on page 422)</p>
--



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_performance_show

Required Role: Storage, Monitor, Resource, VpsStorage, or VpsMonitor

Description

Obtains the performance information (monitor information) about the specified volume.

Performance information is collected internally at one minute intervals. Because of this, the following problems might occur. In such cases, if you want to obtain the latest information, wait for another cycle, and then call the CLI again.

- Depending on the timing, the same information as the last time might be returned.
- If the storage cluster's time changes drastically, past information might be returned, or information might not be returned because it is not collected yet.
- Immediately after Virtual Storage Software block is started or a volume is added or deleted, performance information might not be returned because it is not collected yet.
- Some information might not be obtained or duplicate information might be collected in one cycle due to high load, including spikes.

If the information could not be obtained, any of the following is returned:

- If the information that could not be obtained is an array element, an array without the element is returned.
- If the information that could not be obtained is an attribute, a null value is returned.
- If no performance information, including the one that satisfies the subcommand-option specification conditions, is found or obtained, an empty data object, "data": [] is returned.

The following describes data to be output according to the specification of the start_time and end_time subcommand-options:

When both start_time and end_time are omitted

- It is assumed that the time when the REST API server received the request was specified as end_time.
- It is assumed that the time which is one minute earlier than the time when the REST API server received the request was specified as start_time. However, if the end_time is 1970-01-01T00:01:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

When both start_time and end_time are specified

- The monitored information within the specified time period is returned.

When only start_time is specified

- It is assumed that the time when the REST API server received the request was specified as end_time.

When only end_time is specified

- It is assumed that the time which is one hour earlier than end_time was specified as start_time. However, if end_time is 1970-01-01T01:00:00Z or earlier, it is assumed that 1970-01-01T00:00:01Z is specified as start_time.

<When the range specified by start_time and end_time is invalid>

- An error is returned when any of the following conditions is satisfied:
 - A date and time later than end_time is specified as start_time, including when end_time is not specified.
 - A date and time which is earlier than 1970-01-01T00:00:01Z is specified for start_time or end_time.
 - When all the following conditions are satisfied:
 - Specify true for start_time_excluding, or false for end_time_including.
 - The same date and time is specified for start_time and end_time, including the case when start_time is not specified and 1970-01-01T00:00:01Z is specified for end_time.

Syntax

```
hsds [master command option] volume_performance_show
--id <str> (required *1)
--id_name <str> (required *1)
--start_time <str> (optional)
--start_time_excluding <boolean> (optional)
--end_time <str> (optional)
--end_time_including <boolean> (optional)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <volume ID>

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--start_time <time>

Specify the start date and time (date-time) of the monitor information to be obtained.

If you specify --start_time_excluding, you can specify whether to include or exclude the specified time. By default, the specified time is included.

--start_time_excluding {false | true}

Specify determines whether to include information of the specified --start_time.

- false (default): The information is included.
- true: The information is not included.

--end_time <time>

Specify the end date and time (date-time) of the monitor information to be obtained.

If you specify --end_time_including, you can specify whether to include or exclude the specified time. By default, the specified time is excluded. If it is omitted, it is the request receipt time.

--end_time_including {false | true}

Specify whether to include the specified --end_time.

- false (default): The specified time is not included.
- true : The specified time is included.

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
volumePerformanceListResponse: object (on page 523)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 13: Power management

storage_shutdown

Required Role: Service

Description

Stops the storage cluster. Restart can be specified in the options.

You can run this CLI only for the cluster master node (primary) if you specify "true" for --force. If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] storage_shutdown
--force <boolean> (optional)
--reboot <boolean> (optional)
--config_parameter_setting_mode <boolean> (optional)
```

Options and parameters

--force {false | true}

Specify "true" for this option only when instructed to do so in a manual or by customer support.

Specifies whether to perform the operation forcibly. When true is specified, the operation is performed forcibly (default: "false").

When true is specified for --reboot or --config_parameter_setting_mode, true cannot be specified here. If true is specified, an error is returned.

--reboot {false | true}

Specify whether to restart the storage cluster. Specify false to stop it, or true to restart it (default: "false").

When true is specified for --force, true cannot be specified. If true is specified, an error is returned.

--config_parameter_setting_mode {false | true}

Specify "true" for this option only when instructed to do so in a manual or by customer support.

(Virtual machine) This option is ignored if it is specified.

(Bare metal) Specifies whether to start the storage cluster in the configuration parameter setting mode after shutdown. Specify false if you do not want to start the storage cluster in the configuration parameter setting mode. Specify true to start it in the configuration parameter setting mode. (Default: false)

When true is specified for --force, true cannot be specified here. If true is specified, an error is returned.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 14: Secure communication management

server_certificate_import

Required Role: Security

Description

Imports the server certificate.

This CLI can be executed only for the cluster master node (primary). If this CLI is called from other nodes, an error is returned.

Syntax

```
hsds [master command option] server_certificate_import
--server_certificate <file> (required)
--secret_key <file> (required)
```

Options and parameters

--server_certificate <certificate file>

Specify the server certificate file (public key) to be transferred to the storage cluster.

--secret_key <certificate file>

Specify the server certificate file (private key) to be transferred to the storage cluster.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```


**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

web_server_access_setting_show

Required Role: Security

Description

Obtains the web server access settings.

Syntax

```
hsds [master command option] web_server_access_setting_show
```

Options and parameters

None

Responses**Normal termination**

```
webServerAccessSetting: object (on page 528)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

web_server_access_setting_set

Required Role: Security

Description

Edits the web server access settings.

When the whitelist function is enabled (or if a transmission source list is set while it is enabled), the transmission source IP address is verified to see if it is included in the transmission source list (if it is not included, the job does not succeed).

Syntax

```
hsds [master command option] web_server_access_setting_set
--is_enabled <boolean> (optional)
--client_names <str[]> (optional)
```

Options and parameters

If nothing is specified, an error is returned.

--is_enabled {true | false}

Enables or disables the whitelist function for the web server.

Enables the function when the value is true. Disables the function if the value is false.

The setting remains as is if nothing is specified.

--client_names <transmission source list>

Specify transmission source list (1 to 10 items) which is set in the whitelist for the web server.

An error is returned if:

- A character string which is not an IPv4 address is specified.
- A net mask is specified.

clientNames which were originally set are overwritten if this parameter is specified.

The setting remains as is if nothing is specified.

must match `/^[^([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 15: Session management

session_list

Required Role: Security or VpsSecurity

Description

Obtains a list of session information the user created.

Syntax

```
hsds [master command option] session_list
--vps_id <str> (optional)
```

Options and parameters

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

must match `/^system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$`

Responses

Normal termination

Description

A list of session information

Properties

data:object[]

Items

[session: object \(on page 474\)](#)

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

session_create

Required Role: None

Description

Generates a session.

Syntax

```
hsds [master command option] session_create
--alive_time <int64> (optional)
```

Options and parameters**--alive_time <time>**

Specify the time until a session times out (1 to 300, unit: seconds).

If omitted, the value specified for max_idle_seconds in user authentication setting is applied.

Responses**Normal termination**

```
createdSession: object (on page 416)
```

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication

session_delete

Required Role: None

Description

Abandons a generated session. A user having the Security role can specify all session IDs in this CLI. A user having a role other than "Security" and "VpsSecurity" can specify only their own session IDs. If the user specifies a session ID not related to the user, an error is returned irrespective of whether the specified session ID exists.

Syntax

```
hsds [master command option] session_delete
--session_id <str> (required)
```

Options and parameters

--session_id <Session ID>
Specify session ID (uuid).

Responses**Normal termination**

None

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

session_show

Required Role: None

Description

Obtains the session information. A user having the Security role can specify all session IDs in this CLI. A user having a role other than "Security" and "VpsSecurity" can specify only their own session IDs. If the user specifies a session ID not related to the user, an error is returned irrespective of whether the specified session ID exists.

Syntax

```
hsds [master command option] session_show
--session_id <str> (required)
```

Options and parameters

--session_id <Session ID>
Specify session ID (uuid).

Responses**Normal termination**

[session: object \(on page 474\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 16: Snapshot management

master_volume_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains the P-VOL information used to create this volume when snapshotAttribute of the target volume is S-VOL or P/S VOL. If this CLI is called when snapshotAttribute is a hyphen (-) or P-VOL, an error is returned.

Syntax

```
hsds [master command option] master_volume_show
--id <str> (required *1)
--id_name <str> (required *1)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <volume ID>

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
masterVolume: object (on page 443)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

snapshot_volume_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains a list of S-VOL information items created from this volume when snapshotAttribute of the target volume is P-VOL or P/S VOL. If this CLI is called when snapshotAttribute is a hyphen (-) or S-VOL, an error is returned.

Syntax

```
hsds [master command option] snapshot_volume_list
--id <str> (required *1)
--id_name <str> (required *1)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either --id or --id_name must be specified.

Options and parameters**--id <volume ID>**

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

Description

A list of S-VOL information items and information about data.

Properties

`data:object[]`

A list of S-VOL information items.

Items

[snapshotVolume: object \(on page 476\)](#)

totalCount:*integer*

The total number of records.

hasNext:*boolean*

Indicates whether there is information dropped from the data.

enumerateContext:*string* (uuid) nullable

A token used to obtain the remaining items for the next batch. A null value is output if there are no more items to be obtained.

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_create_snapshot

Required Role: Storage or VpsStorage

Description

Creates a Snapshot.

Syntax

```
hsds [master command option] volume_create_snapshot
--name <string> (optional)
```

```

--master_volume_id <string> (required *1)
--master_volume_id_name <string> (required *1)
--snapshot_volume_id <string> (required *1)
--snapshot_volume_id_name <string> (required *1)
--operation_type <string> (optional)
--upper_limit_for_iops <int64> (optional)
--upper_limit_for_transfer_rate <int64> (optional)
--upper_alert_allowable_time <int32> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)

```

**Caution:**

*1: Specify one of --master_volume_id, --master_volume_id_name, --snapshot_volume_id, and --snapshot_volume_id_name. If two or more are specified, an error is returned.

Options and parameters**--name <volume name>**

Specify volume name (1 to 32 characters). Set a name unique throughout the volumes.

If omitted, "Volume<volumeNumber>" is registered based on volumeNumber of the created volume. However, if the "Volume<volumeNumber>" already exists, "Volume<volumeNumber>_<unique-value>" is registered. This unique value is the smallest in the range of 1 to 1048576 that does not overlap with an existing volume name when the volume is created.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/

--master_volume_id <volume ID>

Specify the ID (uuid) of the volume becoming P-VOL.

This parameter must be specified when nothing, Prepare, or PrepareAndFinalize is specified for operationType. Otherwise, an error is returned.

--master_volume_id_name <volume name>

Specify the name of the volume becoming P- VOL.

Specify a value instead of --master_volume_id.¹

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/

--snapshot_volume_id <volume ID>

The ID of the volume that is an S-VOL. You can specify only volumes whose snapshotAttribute and snapshotStatus are S-VOL and Prepared, respectively. If you specify Finalize for operationType, this parameter must be specified. Otherwise, an error is returned.

--snapshot_volume_id_name <volume name>

Specify the name of the volume which is S-VOL.

Specify a value instead of --snapshot_volume_id.¹

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/

--operation_type { Prepare | Finalize | PrepareAndFinalize }

Specify operation type.

- Prepare: Creates an empty S-VOL corresponding to the volume specified for --master_volume_id as a preliminary operation.
- Finalize: Starts recording difference data in relation to the volume specified for --master_volume_id using the S-VOL created in the preliminary operation.
- PrepareAndFinalize (default): Performs both Prepare and Finalize operations.

--upper_limit_for_iops <IOPS>

Specify the upper limit for volume performance (in IOPS) (-1 or 100 to 2147483647).

To enable the upper limit for volume performance (in IOPS), specify values from 100 to 2147483647. To disable the upper limit for volume performance (in IOPS), specify -1. If you specify values from 0 to 99, jobs will be unsuccessful.

If you make both of --upper_limit_for_iops and --upper_limit_for_transfer_rate settings unavailable, the setting of --upper_alert_allowable_time is also made unavailable.

If this option is omitted, following value is specified.

- If the volume belongs to a virtual private storage (VPS): Default value set for the VPS
- If the volume does not belong to a VPS: -1

--upper_limit_for_transfer_rate <transfer rate>

Specify the upper limit of volume performance (in MiB/s)(-1 or 1 to 2097151).

To set the upper limit of volume performance (in MiB/s), specify a value in the range from 1 to 2097151. To set no upper limit, specify -1. If you specify 0, jobs will be unsuccessful.

If you make both of --upper_limit_for_iops and --upper_limit_for_transfer_rate settings unavailable, the setting of --upper_alert_allowable_time is also made unavailable.

If this option is omitted, following value is specified.

- If the volume belongs to a virtual private storage (VPS): Default value set for the VPS
- If the volume does not belong to a VPS: -1

--upper_alert_allowable_time <time>

Specify the alert threshold value (in seconds)(-1 or 1 to 600) for the upper limit of volume performance.

The VPS administrator cannot specify this property.

To set the alert threshold, specify a value in the range from 1 to 600. To set no alert threshold, specify -1. If you specify 0, jobs will be unsuccessful.

A message is output to the event log when restriction of the upper limit of performance specified by `--upper_limit_for_iops` or `--upper_limit_for_transfer_rate` continues for the specified length of time.

This option can be specified if either `--upper_limit_for_iops` or `--upper_limit_for_transfer_rate`, or both, is set.

If this option is omitted, following value is specified.

- If the volume belongs to a virtual private storage (VPS): Default value set for the VPS
- If the volume does not belong to a VPS: -1

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`



Note:

- 1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_delete_snapshot

Required Role: Storage or VpsStorage

Description

Deletes a snapshot. You can delete a volume other than P-VOL, S-VOL or P/S-VOL only by the CLI for deleting a volume, not by this CLI.

By running the CLI with the S-VOL specified for `--snapshot_volume_id` or `--snapshot_volume_id_name`, you can delete the S-VOL. If you want to delete P/S-VOLs, perform deletion after deleting all the S-VOLs and P/S-VOLs created from the P-VOLs to be deleted.

When the snapshot status of the S-VOL is "Error" and deletion is unsuccessful with the S-VOL specified for `--snapshot_volume_id` or `--snapshot_volume_id_name`, specify the P-VOL corresponding to the S-VOL for `--master_volume_id` or `--master_volume_id_name` and "true" for `--snapshot_tree`, and then perform the deletion. When performing the deletion, note the following:

- You should verify the S-VOLs and P/S-VOLs created from the specified P-VOL beforehand so that you can confirm that all the S-VOLs and P/S-VOLs have been deleted after performing the deletion. For how to confirm which are the S-VOLs and P/S-VOLs created from the P-VOL, see the *Hitachi Virtual Storage Software Block Storage Administrator Guide*.
- If a system configuration change operation conflicts when the CLI is run, the job might be unsuccessful. In this case, retry the operation.

Syntax

```
hsds [master command option] volume_delete_snapshot
--master_volume_id <str> (required *1)
--master_volume_id_name <str> (required *1)
--snapshot_volume_id <str> (required *1)
--snapshot_volume_id_name <str> (required *1)
--snapshot_tree <boolean> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: Either `--master_volume_id`, `--master_volume_id_name`, `--snapshot_volume_id`, or `--snapshot_volume_id_name` must be specified, but they cannot be specified together. If you omit this parameter, or specify two or more parameters, an error is returned.

Options and parameters

--master_volume_id <volume ID>

Specify the ID (uuid) of the volume which is P-VOL. Only the volume of which `snapshotAttribute` is P-VOL can be specified. At the time of `--master_volume_id` specified, specifying `--snapshot_tree` becomes essential.

--master_volume_id_name <volume name>

Specify the name of the volume which is P-VOL. Only the volume of which `snapshotAttribute` is P-VOL can be specified. At the time of `--master_volume_id_name` specified, specifying `--snapshot_tree` becomes essential.

Specify a value instead of `--master_volume_id`.¹

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--snapshot_volume_id <volume ID>

Specify the ID (uuid) of the volume which is S-VOL. Only the volume of which `snapshotAttribute` is S-VOL can be specified. Deletes the volume which is S-VOL of the parameter specified.

--snapshot_volume_id_name <volume name>

Specify the name of the volume which is S-VOL. Only the volume of which `snapshotAttribute` is S-VOL can be specified.

Specify a value instead of `--snapshot_volume_id`.¹

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--snapshot_tree {false | true}

Specify whether to delete all S-VOLs and P/S VOLs that are created from the P-VOL specified by --master_volume_id based on dependencies.

- When --master_volume_id or --master_volume_id_name is specified:
 - true: Deletes all S-VOLs and P/S-VOLs created from the --master_volume_id specified P-VOL.
 - false (default) or unspecified: Returns HTTP status code 400 (Bad Request).
- When --snapshot_volume_id or --snapshot_volume_id_name is specified:
 - true: Returns HTTP status code 400 (Bad Request).
 - false (default) or unspecified: Deletes the S-VOLs for which snapshotVolumeld is specified.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^system\$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[A-Za-z0-9,\.:@_]{1,32}\$/

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_restore_snapshot

Required Role: Storage or VpsStorage

Description

Restores the volume from the snapshot.

Performing restoration changes the snapshotStatus of the restoration-source S-VOL to Prepared. The snapshotStatus changes to Restoring first, and then to Prepared.

Syntax

```
hsds [master command option] volume_restore_snapshot
--snapshot_volume_id <str> (required *1)
--snapshot_volume_id_name <str> (required *1)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either --snapshot_volume_id or --snapshot_volume_id_name must be specified.

Options and parameters**--snapshot_volume_id <volume ID>**

Specify the ID (uuid) of the volume which is S-VOL. Restores S-VOL of the parameter specified to P-VOL.

Either --snapshot_volume_id or --snapshot_volume_id_name must be specified.

--snapshot_volume_id_name <volume name>

Specify the name of the volume which is S-VOL. Restores S-VOL (as specified by the parameter) to P-VOL.

Specify a value instead of --snapshot_volume_id.¹

Either --snapshot_volume_id or --snapshot_volume_id_name must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^ [A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 17: Software update

storage_stop_software_update

Required Role: Service

Description

Requests the stop of updating the storage software.

When this CLI is executed, a job requesting the stop of updating the storage software is submitted. When the stop request is completed, the state of the job changes to Succeeded, and the state of the storage software update job to be stopped changes to Stopping. Depending on the timing of executing the CLI, it might take time until the state of the target storage software update job changes to Stopping.

When the target storage software update job could be stopped, the state of this job changes to Stopped. However, depending on the timing when the CLI is executed, the target storage software update job might be executed to the end without being stopped.

In this case, the state of the target storage software update job changes to Succeeded (instead of Stopped) when the storage software update is successful or Failed when it is not successful.

The storage software update job to be stopped can be found using the attribute, `affectedResources` in the response data of the CLI.

Syntax

```
hsds [master command option] storage_stop_software_update
```

Options and parameters

None

Responses

Normal termination

job: object (on page 436)

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_update_software

Required Role: Service

Description

Updates the storage software.

This CLI can be executed only for the cluster master node (primary). If this CLI is called from other nodes, an error is returned.

Syntax

```
hsds [master command option] storage_update_software
--mode <str> (required)
```

Options and parameters**--mode Non-disruptive**

Specify modes for updating the software:

- Non-disruptive: I/Os are not stopped.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_upload_software_update_file

Required Role: Service

Description

Transfers (uploads) the update file of the storage software to the storage cluster.

You can run this CLI only for the cluster master node (primary). If you call this CLI for a node other than the cluster master node (primary), an error is returned.

Make sure that the controller node has at least 4GiB of free memory, and then run the command.

**Note:**

(Virtual machine) The command cannot be executed on the maintenance node.

Syntax

```
hsds [master command option] storage_upload_software_update_file
--software_update_file <file> (required)
```

Options and parameters**--software_update_file <file>**

Specify the update file of the storage software to be transferred to the storage cluster.

Responses**Normal termination**

None

Abnormal termination

ErrorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_software_update_file_show

Required Role: Service

Description

Obtains the information of the update file of the storage software which performed transfer (upload) in the storage cluster.

If the update file of the storage software is not transferred to the storage cluster, returns an error.

In the case of the file that an update file of the storage software transferred to the storage cluster is unauthorized, returns an error.

This CLI can be executed only for the cluster master node (primary). If this CLI is called from other nodes, an error is returned.

Syntax

```
hsds [master command option] storage_software_update_file_show
```

Options and parameters

None

Responses

Normal termination

```
softwareUpdateFile: object (on page 481)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 18: Storage cluster management

fault_domain_list

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains a list of fault domain information.

Syntax

```
hsds [master command option] fault_domain_list
--protection_domain_id <str> (optional)
```

Options and parameters

--protection_domain_id <Protection domain ID>
Specify protection domain ID (uuid).

Responses

Normal termination

Description

A list of fault domain information.

Properties

data:object[]

Items

[faultDomainSummary: object \(on page 426\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

fault_domain_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains fault domain information.

Syntax

```
hsds [master command option] fault_domain_show
--id <str> (required)
```

Options and parameters

--id <Fault domain ID>
Specify fault domain ID (uuid).

Responses**Normal termination**

`faultDomain: object (on page 425)`

Abnormal termination

`errorResponse: object (on page 422)`

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

health_status_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the health status.

Syntax

```
hsds [master command option] health_status_show
```

Options and parameters

None

Responses**Normal termination**

```
healthStatus: object \(on page 429\)
```

Abnormal termination

```
errorResponse: object \(on page 422\)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

snmp_setting_set

Required Role: Security

Description

Edits the SNMP settings.

If you run this CLI without specifying already set values as parameters, settings of corresponding attributes in SNMP settings are deleted.

Syntax

```
hsds [master command option] snmp_setting_set
--is_snmpagent_enabled <boolean> (required)
--snmp_version <str> (required)
--snmpv2c_sending_trap_settings <array>
  community=<str> (required if --snmpv2c_sending_trap_settings is specified)
  send_trap_to=<str> (required if --snmpv2c_sending_trap_settings is specified)
--snmpv2c_request_authentication_settings <array>
  community=<str> (required if --snmpv2c_request_authentication_settings is
specified)
  requests_permitted=<str> (required if --snmpv2c_request_authentication_settings is
specified)
--storage_system_name <str> (required)
--contact <str> (required)
--location <str> (required)
```

Options and parameters**--is_snmpagent_enabled {true | false}**

Enables or disables SNMP.

--snmp_version v2c

Specify SNMP version.

--snmpv2c_sending_trap_settings community=<community name>,send_trap_to={<ip address>|<host name>}

Specify parameters (1 to 3 items) for editing SNMP trap transmission destination settings.

When specifying multiple parameters, specify as follows:

```
--snmpv2c_sending_trap_settings community=<community name
1>,send_trap_to={<ip address 1>|<host name 1>} --snmpv2c_sending_trap_settings
community=<community name 2>,send_trap_to={<ip address 2>|<host name 2>}
```

If `--snmpv2c_sending_trap_settings` is omitted, all `--snmpv2c_sending_trap_settings` settings are deleted.

Parameters

community

Specify community name (up to 180 characters) to be used when reporting SNMP traps.

send_trap_to

Specify IP address (IPv4) or host name of the SNMP trap transmission destination (up to 253 characters).

Specify the value by enclosing the value in [].

Example: `send_trap_to=[192.168.2.1]`

```
--snmpv2c_request_authentication_settings community=<community
name>,requests_permitted={<ip address>|<host name>}
```

Specify parameters (1 to 3 items) for editing the setting of whether to permit SNMP requests.

When specifying multiple parameters, specify as follows:

```
--snmpv2c_request_authentication_settings community=<community name
1>,requests_permitted={<ip address 1>|<host name 1>} --
snmpv2c_request_authentication_settings community=<community name
2>,requests_permitted={<ip address 2>|<host name 2>}
```

If `--snmpv2c_request_authentication_settings` is omitted, all `--snmpv2c_request_authentication_settings` settings are deleted.

Parameters

community

Specify name (up to 180 characters) of the community which accepts requests.

must match `/^[A-Za-z0-9!#$%&'()*+,-.:@_`{|}~]*$ /^[A-Za-z0-9!#$%&'()*+,-.:@_`{|}~][A-Za-z0-9!#$%&'()*+,-.:@_`{|}~]{0,178}[A-Za-z0-9!#$%&'()*+,-.:@_`{|}~]*$ /`

requests_permitted

Specify IP address (IPv4) or host name of the SNMP manager (up to 253 characters) which accepts requests. For an empty array, all SNMP managers accept requests.

Specify the value by enclosing the value in [].

Example: `requests_permitted=[snmp.example.com]`

Specify [] for an empty array.

Example: requests_permitted=[]

must match /^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.?([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))\$/

--storage_system_name <system name>

Specify system name (up to 180 characters). Output as "sysName" in the SNMP agent MIB.

must match /^[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]^[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]{0,178}[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]\$/

--contact {<administrator name> | <contact>}

Specify administrator name or contact (up to 180 characters). Output as "sysContact" in the SNMP agent MIB.

must match /^[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]^[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]{0,178}[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]\$/

--location <location>

Specify installation location (up to 180 characters). Output as "sysLocation" in the SNMP agent MIB.

must match /^[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]^[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]{0,178}[A-Za-z0-9!#\$%&'()*+,-.=@\[\]_`{|}~]\$/

Responses

Normal termination

job: object (on page 436)

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

protection_domain_list

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains a list of protection domain information.

Syntax

```
hsds [master command option] protection_domain_list
```

Options and parameters

None

Responses

Normal termination

Description

A list of summary information about protection domain.

Properties

data: *object[]*

Items

[protectionDomainSummary: object \(on page 461\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

protection_domain_set

Required Role: Storage or Service

Description

Edits the protection domain settings.

Syntax

```
hsds [master command option] protection_domain_set
--id <str> (required)
--async_processing_resource_usage_rate <str> (required)
```

Options and parameters

--id <protection domain ID>

Specify protection domain ID (uuid).

--async_processing_resource_usage_rate {VeryHigh | High | Middle | Low}

Specify resource usage rate of the internal processing I/O. Controls the resource usage rate of the internal processing I/O.

To select VeryHigh, prerequisites must be met. For details, contact customer support.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

protection_domain_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the protection domain information.

Syntax

```
hsds [master command option] protection_domain_show
--id <str> (required)
```

Options and parameters

--id <protection domain ID>
Specify protection domain ID (uuid).

Responses**Normal termination**

```
protectionDomain: object (on page 459)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

protection_domain_resume_drive_data_relocation

Required Role: Storage or Service

Description

Requests resumption of drive data relocation.

driveDataRelocationStatus of the target protection domain changes to "Stopped" if the drive data relocation conditions are not met when the state of the CLI job becomes "Succeeded".

Syntax

```
hsds [master command option] protection_domain_resume_drive_data_relocation
--id <str> (required)
```

Options and parameters

--id <Protection domain ID>

Specify protection domain ID (uuid).

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

protection_domain_suspend_drive_data_relocation

Required Role: Storage or Service

Description

Requests suspension of drive data relocation.

When the suspension request is completed, driveDataRelocationStatus of the target protection domain changes to "Suspended" after job status becomes "Succeeded". Depending on the timing when the CLI is executed, it might take time until driveDataRelocationStatus of the target protection domain becomes "Suspended".

Syntax

```
hsds [master command option] protection_domain_suspend_drive_data_relocation
--id <str> (required)
```

Options and parameters

--id <Protection domain ID>

Specify protection domain ID (uuid).

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

snmp_setting_show

Required Role: Security

Description

Obtains the SNMP settings.

Syntax

```
hsds [master command option] snmp_setting_show
```

Options and parameters

None

Responses**Normal termination**

```
snmpSetting: object (on page 479)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the storage cluster information.

Syntax

```
hsds [master command option] storage_show
```

Options and parameters

None

Responses

Normal termination

```
storage: object (on page 482)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

bmc_root_certificate_delete (Bare metal)

Required Role: Security

DESCRIPTION

Deletes the root certificate that is used for communication with the BMC of the storage node from the storage cluster.

You can run this CLI only for the cluster master node (primary).

If you run this CLI for a node other than the cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] bmc_root_certificate_delete
```

Options and parameters

None

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

bmc_root_certificate_import (Bare metal)

Required Role: Security

DESCRIPTION

Imports the root certificate that is used for communication with the BMC of the storage node into the storage cluster. Certificate files in PEM and DER formats are supported.

You can run this CLI only for the cluster master node (primary).

If you run this CLI for a node other than the cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] bmc_root_certificate_import
--root_certificate <file> (required)
```

Options and parameters

--root_certificate <root certificate file>

Specify the root certificate file to be imported into the storage cluster and used for communication with the BMC of the storage node.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

bmc_root_certificate_download (Bare metal)

Required Role: Security or Service

DESCRIPTION

Obtains the root certificate imported into the storage cluster for use in communication with the BMC of the storage node.

The obtained root certificate is output as a DER-format file.

Using the CLI with no root certificate imported returns an error.

You can run this CLI only for the cluster master node (primary).

If you run this CLI for a node other than the cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] bmc_root_certificate_download
```

Responses

Normal termination

Root certificate that is used for connection with the BMC.

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

spare_node_list (Bare metal)

Required Role: Service

DESCRIPTION

Obtains a list of spare node information.

Syntax

```
hsds [master command option] spare_node_list
--fault_domain_id <str> (optional)
```

Options and parameters

--fault_domain_id <fault domain ID>
Specify fault domain ID (uuid).

Responses**Normal termination**

```
spareNodeList: object (on page 482)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

spare_node_create (Bare metal)

Required Role: Service

DESCRIPTION

Registers spare node information.

Syntax

```
hsds [master command option] spare_node_create
--fault_domain_id <str> (required)
--control_port_ipv4_address <str> (required)
--setup_user_password <str> (required)
--bmc_name <str> (required)
--bmc_user <str> (required)
--bmc_password <str> (required)
```

Options and parameters

--fault_domain_id <fault domain ID>

Specify the ID (uuid) of the fault domain that the nodes belong to.

--control_port_ipv4_address <address>

Specify the IP address (IPv4)(7 to 15 chars) of the control port.

must match `/^[^([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.\.){3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`

--setup_user_password <password>

Specify a setup user password (1 to 256 chars).

must match `/^[^[-A-Za-z0-9!#$%&"'\(\)*+,\.\/:;<=>=?@|\[\]\\\^_`{|}~]{1,256}$/`



Caution:

- If `--setup_user_password` is not specified, a prompt will appear. In such a case, enter a password using standard input.

setup_user_password:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "t", "r", and "n" in the specified string as tab and line feed codes.
 - If you type "\", the CLI program will interpret it as one escape character "\".
 - To enter the strings "t", "r", and "n", enter "\t", "\r", and "\n", respectively.

--bmc_name <BMC name>

Specify the host name or IP address (IPv4)(1 to 253 chars) of the BMC.

must match `/^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])$/`

--bmc_user <user name>

Specify the user name for BMC connection (1 to 512 chars).

must match `/^[a-zA-Z0-9!#$%&'()*+,-.\/:;<=>?@\[\]\|^`{|}~]{1,512}$/`



Caution:

Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".

- The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
- If you type "\", the CLI program will interpret it as one escape character "\".
- To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--bmc_password <password>

Specify the password for BMC connection (1 to 512 chars).

must match `/^[a-zA-Z0-9!#$%&'()*+,-.\/:;<=>?@\[\]\|^`{|}~]{1,512}$/`



Caution:

- If --bmc_password is not specified, a prompt will appear. In such a case, enter a password using standard input.

bmc_password:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\", the CLI program will interpret it as one escape character "\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

spare_node_delete (Bare metal)

Required Role: Service

DESCRIPTION

Deletes spare node information.

Syntax

```
hsds [master command option] spare_node_delete
--id <str> (required)
```

Options and parameters

--id <spare node ID>

Specify the ID (uuid) of a spare node.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

spare_node_show (Bare metal)

Required Role: Service

DESCRIPTION

Obtains information about a spare node.

Syntax

```
hsds [master command option] spare_node_show
--id <str> (required)
```

Options and parameters

--id <spare node ID>

Specify the ID (uuid) of a spare node.

Responses

Normal termination

```
spareNode: object (on page 481)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

spare_node_set (Bare metal)

Required Role: Service

DESCRIPTION

Allows you to edit information about a spare node.

Syntax

```
hsds [master command option] spare_node_set
--id <str> (required)
--fault_domain_id <str> (optional)
--control_port_ipv4_address <str> (optional)
--setup_user_password <str> (optional)
--bmc_name <str> (optional)
--bmc_user <str> (optional)
--bmc_password <str> (optional)
```


Options and parameters

If you omit to specify some optional options, values of them are not changed. If none of the following is specified, an error is returned.

--id <spare node ID>

Specify the ID of the spare node that the nodes belong to.

--fault_domain_id <fault domain ID>

Specify the ID (uuid) of the fault domain that the nodes belong to.

--control_port_ipv4_address <address>

Specify the IP address (IPv4)(7 to 15 chars) of the control port.

must match `^(([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`

--setup_user_password <password>

Specify a setup user password (1 to 256 chars).

must match `^[^\-A-Za-z0-9!#$%&'()*+,\.\/:;<>=?@\[\]\|\^_`{|}~]{1,256}$/`

**Caution:**

- If `--setup_user_password` is not specified, a prompt will appear. In such a case, enter a password using standard input.

`setup_user_password` (if omitted, press the [Enter] key) []:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\\", the CLI program will interpret it as one escape character "\\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--bmc_name <BMC name>

Specify the host name or IP address (IPv4)(1 to 253 chars) of the BMC.

must match `^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))$/`

--bmc_user <user name>

Specify the user name for BMC connection (1 to 512 chars).

must match /^[a-zA-Z0-9!#\$%&'()*+,-.\/:;<=>|?@[\\]\^_`{|}~]{1,512}\$/



Caution:

Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".

- The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
- If you type "\\", the CLI program will interpret it as one escape character "\".
- To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--bmc_password <password>

Specify the password for BMC connection (1 to 512 chars).

must match /^[a-zA-Z0-9!#\$%&'()*+,-.\/:;<=>|?@[\\]\^_`{|}~]{1,512}\$/



Caution:

- If --bmc_password is not specified, a prompt will appear. In such a case, enter a password using standard input.

bmc_password (if omitted, press the [Enter] key) []:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\\", the CLI program will interpret it as one escape character "\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

Responses

Normal termination

job: object (on page 436)

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 19: Storage controller management

storage_controller_list

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains a list of storage controller information.

Syntax

```
hsds [master command option] storage_controller_list
```

Options and parameters

None

Responses

Normal termination

Description

A list of storage controller information.

Properties

data:object[]

Items

storageController: object (on page 485)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_controller_configure

Required Role: Service

Description

Edit the settings for the storage controller.

Syntax

```
hsds [master command option] storage_controller_configure
--storage_controller_id <str> (optional)
--is_detailed_logging_mode <boolean> (required)
```

Options and parameters**--storage_controller_id <storage controller ID>**

The ID of the storage controller. If omitted, configure the settings for all storage controllers.

--is_detailed_logging_mode <true | false>

Enable or disable the detailed logging mode. Specify true for such parameters only when instructed to do so by customer support.

**Caution:**

Enabling the detailed logging mode degrades I/O performance.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_controller_show

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains the storage controller information.

Syntax

```
hsds [master command option] storage_controller_show
--id <str> (required)
```

Options and parameters

--id <storage controller ID>

Specify storage controller ID (uuid).

Responses**Normal termination**

```
storageController: object (on page 485)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 20: Storage node management

storage_stop_removing_storage_node

Required Role: Service

Description

Requests storage node removal to stop. When this CLI is executed, a job requesting the stop of storage node removal is performed. When the stop request is completed, the state of this job becomes "Succeeded", and the state of the storage node removal job to be stopped becomes "Stopping". Depending on the timing when the CLI is executed, it might take time until the state of the target storage node removal job becomes "Stopping".

When the target storage node removal job is stopped successfully, the state of the job becomes "Stopped". Depending on the timing when the CLI is executed, the target storage node removal job might not be stopped and might be executed to the end. In this case, the state of the target storage node removal job does not become "Stopped", and instead becomes "Succeeded" if storage node removal is successful, or "Failed" if removal did not succeed.

You can verify the storage node removal job to be stopped in attribute "affectedResources" in the response data for the CLI.

Syntax

```
hsds [master command option] storage_stop_removing_storage_node
```

Options and parameters

None

Responses

Normal termination

<code>job: object (on page 436)</code>
--

Abnormal termination

ErrorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_list

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains a list of information about storage nodes.

Syntax

```

hsds [master command option] storage_node_list
--fault_domain_id <str> (optional)
--name <str> (optional)
--cluster_role <str> (optional)
--protection_domain_id <str> (optional)

```

Options and parameters

--fault_domain_id <fault domain ID>

Specify fault domain ID (uuid).

--name <storage node name>

Specify storage node name (partial match).

--cluster_role { Master | Worker }

Specify the role of a storage node in a storage cluster.

--protection_domain_id <Protection domain ID>

Specify protection domain ID (uuid).

Responses

Normal termination

Description

A list of storage node information.

Properties

data: *object[]*

Items

storageNode: object (on page 489)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_delete

Required Role: Service

Description

Deletes a storage node.

Syntax

```
hsds [master command option] storage_node_delete
--id <str> (required)
```

Options and parameters

--id <storage node ID>
Specify storage node ID (uuid).

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the information about storage nodes.

Syntax

```
hsds [master command option] storage_node_show
--id <str> (required)
```

Options and parameters

--id <storage node ID>
Specify storage node ID (uuid).

Responses

Normal termination

```
storageNode: object (on page 489)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_block_for_maintenance

Required Role: Service

Description

Places the storage node into the blockade state for maintenance operation.

Syntax

```
hsds [master command option] storage_node_block_for_maintenance
--id <str> (required)
```

Options and parameters

--id <storage node ID>
Specify storage node ID (uuid).

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_recover

Required Role: Service

Description

Restores the storage node from the blockade state caused by maintenance operation.

Syntax

```
hsds [master command option] storage_node_recover
--id <str> (required)
```

Options and parameters

--id <storage node ID>
Specify storage node ID (uuid).

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_replace (Bare metal)

Required Role: Service

Description

Replaces a storage node.

Syntax

```
hsds [master command option] storage_node_replace
--id <str> (required)
--setup_user_password <str> (required)
```

Options and parameters

--id <storage node ID>

Specify storage node ID (uuid).

--setup_user_password <password>

Specify the setup user password (1 to 256 characters).

must match /^[^A-Za-z0-9!#\$%&'()*+,.V.;<>=|?@[\\]\|\^_`{|}~}{1,256}\$/

**Caution:**

- If `--setup_user_password` is not specified, a prompt will appear. In such cases, enter a password using standard input.

setup_user_password:

The contents of the password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\\", the CLI program will interpret it as one escape character "\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_add (Bare metal)

Required Role: Service

Description

Adds a storage node.

You can run this CLI only for the cluster master node (primary).

If you run this CLI for a node other than the cluster master node (primary), an error is returned.

Syntax

```
hds [master command option] storage_node_add
--configuration_file <file> (required)
--setup_user_password <str> (required)
```

Options and parameters

--configuration_file <file>

Specify the configuration definition file to be transferred to the storage cluster.

--setup_user_password <password>

Specify the setup user password (1 to 256 characters).

must match /^[!@-A-Za-z0-9!#\$%&'()*+,\.\/:;<>=?@[!]\|\^_`{|}~]{1,256}\$/



Caution:

If `--setup_user_password` is not specified, a prompt will appear. In such cases, enter a password using standard input.

setup_user_password:

The contents of the password specified by the option remain in the command history. Enter the password using standard input without the option.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```




Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_bmc_access_setting_list (Bare metal)

Required Role: Service

DESCRIPTION

Obtains a list of BMC connection information about storage nodes.

Syntax

```
hsds [master command option] storage_node_bmc_access_setting_list
```

Options and parameters

None

Responses

Normal termination

storageNodeBmcAccessSettingList: [object \(on page 493\)](#)

Abnormal termination

errorResponse: [object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_bmc_access_setting_show (Bare metal)

Required Role: Service

DESCRIPTION

Obtains the BMC connection information about a storage node.

Syntax

```
hsds [master command option] storage_node_bmc_access_setting_show  
--id <str> (required)
```

Options and parameters

--id <storage node ID>

Specify the storage node ID (uuid).

Responses

Normal termination

`storageNodeBmcAccessSetting: object (on page 492)`

Abnormal termination

`errorResponse: object (on page 422)`

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_bmc_access_setting_set (Bare metal)

Required Role: Service

DESCRIPTION

Allows you to edit BMC connection information about a storage node.

Syntax

```
hsds [master command option] storage_node_bmc_access_setting_set
--id <str> (required)
--bmc_name <str> (required)
--bmc_user <str> (required)
--bmc_password <str> (required)
```

Options and parameters**--id <storage node ID>**

Specify the storage node ID (uuid).

--bmc_name <BMC name>

Specify the host name or IP address (IPv4)(1 to 253 chars) of the BMC.

must match `/^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))$/`

--bmc_user <user name>

Specify the user name for BMC connection (1 to 512 chars).

must match `/^[a-zA-Z0-9!"#$%&'()*+,-.\/:;<=>?@[\\]\|^_`{|}~]{1,512}$/`

**Caution:**

Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".

- The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
- If you type "\\", the CLI program will interpret it as one escape character "\".
- To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--bmc_password <password>

Specify the password for BMC connection (1 to 512 chars).

must match /^[a-zA-Z0-9!#\$%&'()*+,-.\/:;<=>?@[\\]\^_`{|}~]{1,512}\$/

**Caution:**

- If --bmc_password is not specified, a prompt will appear. In such a case, enter a password using standard input.

bmc_password:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\\", the CLI program will interpret it as one escape character "\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

Responses**Normal termination**

`job: object (on page 436)`

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 21: Storage pool management

pool_list

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains a list of storage pool information.

Syntax

```
hsds [master command option] pool_list
--name <str> (optional)
--id_name <str> (optional)
--names <str> (optional)
--id_names <str[]> (optional)
```

Options and parameters

--name <storage pool name>

Specify storage pool name (exact match).

--name and --id_name cannot be specified simultaneously.

--id_name <storage pool name>

The alias of --name.

--name and --id_name cannot be specified simultaneously.

--names <storage pool names>

Specify a list of storage pool name (exact match).

You can specify plural names up to 32 with comma (,) delimiter.

Example: --names <name1>,<name2>,<name3>...

If you enter a space character after a comma, the space character is recognized as a part of the name specified after the comma.

Also, if you specify 33 or more names, an error is returned.

--names and --id_names cannot be specified simultaneously.

Each item must match `/^[^A-Za-z0-9_]{1,32}$/`

--id_names <storage pool names>

The alias of --names. You can specify maximum of 32 storage pool names (up to 32 characters).

--names and --id_names cannot be specified simultaneously.

Each item must match `/^[^A-Za-z0-9_]{1,32}$/`

Responses

Normal termination

<p>Description</p> <p>A list of storage pool information.</p> <p>Properties</p> <p>data: object[]</p> <p>Items</p> <p><code>pool</code>: object (on page 447)</p>
--

Abnormal termination

<p><code>errorResponse</code>: object (on page 422)</p>



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_show

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains the storage pool information.

Syntax

```
hsds [master command option] pool_show
--id <str> (required *1)
--id_name <str> (required *1)
```

**Caution:**

*1: Either --id or --id_name must be specified.

Options and parameters**--id <storage pool ID>**

Specify the ID (uuid) of the storage pool.

Either --id or --id_name must be specified.

--id_name <storage pool name>

Specify the name of the storage pool.

Specify a value instead of id.¹

Either --id or --id_name must be specified.

must match `/^[^A-Za-z0-9_]{1,32}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
pool: object (on page 447)
```

Abnormal termination

```
errorResponse: object (on page 422)
```


**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_set

Required Role: Storage

Description

Edit storage pool settings.

Syntax

```
hsds [master command option] pool_set
--id <str> (required *1)
--id_name <str> (required *1)
--rebuild_capacity_policy <str> (required)
--number_of_tolerable_drive_failures <int32> (optional)
```

**Caution:**

*1: Either --id or --id_name must be specified.

Options and parameters**--id <pool ID>**

Specify the ID (uuid) of the storage pool.

Either --id or --id_name must be specified.

--id_name <storage pool name>

Specify the name of the storage pool.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match /^[^-A-Za-z0-9_]{1,32}\$/

--rebuild_capacity_policy { Fixed | Variable }

Specify the rebuild capacity policy.

- Fixed: Secures capacity required for Rebuild as a fixed Rebuild-dedicated capacity.
- Variable: Secures a part of user data capacity as rebuild capacity when the storage pool usage is low, and uses the capacity entirely as user data capacity when the storage pool usage increases.

--number_of_tolerable_drive_failures <number>

Specify the number of drive failures (0 to 23) that can be tolerated.

If Fixed is specified for --rebuild_capacity_policy, this option must be specified. Also, if Variable is specified for --rebuild_capacity_policy, this option cannot be specified.

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

pool_expand

Required Role: Storage

Description

Expands the storage pool capacity.

Syntax

```
hsds [master command option] pool_expand
--id <str> (required *1)
--id_name <str> (required *1)
--drive_ids <str[]> (required)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <pool ID>

Specify the ID (uuid) of the storage pool.

Either --id or --id_name must be specified.

--id_name <storage pool name>

Specify the name of the storage pool.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[^A-Za-z0-9_]{1,32}$/`

--drive_ids <drive IDs>

Specify a list of IDs (uuid, 1 to 1,024 items) of the drives to be added to the storage pool. An error is returned when an empty array ([]) is specified.



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_capacity_setting_list

Required Role: Storage, Monitor, or Resource

Description

Obtains a list of capacity management settings of a storage node.

Syntax

```
hsds [master command option] storage_node_capacity_setting_list
```

Options and parameters

None

Responses**Normal termination**

```
Description
```

A list of capacity management settings of a storage node

Properties

data:object[]

Items

[storageNodeCapacitySetting: object \(on page 493\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_capacity_setting_show

Required Role: Storage, Monitor, or Resource

Description

Obtains the capacity management settings of a storage node.

Syntax

```
hsds [master command option] storage_node_capacity_setting_show
--id <str> (required)
```

Options and parameters

--id <Storage node ID>

Specify storage node ID (uuid).

Responses

Normal termination

```
storageNodeCapacitySetting: object (on page 493)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_capacity_setting_set

Required Role: Storage

Description

Edits the capacity management settings of a storage node.

Syntax

```
hsds [master command option] storage_node_capacity_setting_set
--id <str> (required)
--is_enabled <boolean> (required)
```

Options and parameters

--id <Storage node ID>
Specify storage node ID.

--is_enabled {false | true}
Enables or disables the capacity balancing.

If enabled, capacity balancing applies to the storage node. If disabled, capacity balancing does not apply to the storage node.

Even if capacity balancing is enabled, snapshot volumes (P-VOL, P/S-VOL, or S-VOL) are not moved between storage nodes by capacity balancing.

For details, contact customer support.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 22: System management

storage_master_node_primary_flag_show

Required Role: None

Description

Obtains the information indicating whether the storage node that received the CLI request is the cluster master node (primary). For the cluster master node (primary), OK is returned. For other nodes, an error is returned.

Syntax

```
hsds [master command option] storage_master_node_primary_flag_show
```

Options and parameters

None

Responses

Normal termination

```
storageMasterNodePrimaryFlag: object (on page 488)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

control_port_list

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains a list of control port information.

Syntax

```
hsds [master command option] control_port_list
--storage_node_id <str> (optional)
```

Options and parameters

--storage_node_id <storage node ID>
Specify storage node ID (uuid).

Responses

Normal termination

<p>Description</p> <p>A list of control port information.</p> <p>Properties</p> <p>data:object[]</p> <ul style="list-style-type: none"> Items <code>controlPort</code>: object (on page 413)

Abnormal termination

<p><code>errorResponse</code>: object (on page 422)</p>



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

control_port_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the control port information.

Syntax

```
hsds [master command option] control_port_show
--id <str> (required)
```

Options and parameters

--id <control port ID>
Specify control port ID (uuid).

Responses**Normal termination**

```
controlPort: object (on page 413)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

internode_port_list

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains a list of internode port information.

Syntax

```
hsds [master command option] internode_port_list
--storage_node_id <str> (optional)
```

Options and parameters

--storage_node_id <Storage node ID>
Specify storage node ID (uuid).

Responses**Normal termination**

<p>Description</p> <p>A list of internode port information.</p> <p>Properties</p> <p>data:object[]</p> <p>Items</p> <p><u>internodePort: object (on page 429)</u></p>
--

Abnormal termination

<p><u>errorResponse: object (on page 422)</u></p>

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

internode_port_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the internode port information.

Syntax

```
hsds [master command option] internode_port_show
--id <str> (required)
```

Options and parameters

--id <internode port ID>
Specify internode port ID (uuid).

Responses**Normal termination**

```
internodePort: object (on page 429)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_resume_suppressed_start_processing

Required Role: Service

Description

Resumes the starting processing forcibly for the storage cluster whose starting was suppressed.

A storage node that is not started is blocked and the storage cluster is started.

This CLI may succeed if the storage cluster cannot be forcibly started. Check the success or failure of the storage cluster startup process after resuming by referring to the event log.

Syntax

```
hsds [master command option] storage_resume_suppressed_start_processing
```

Options and parameters

None

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_auto_recovery_setting_show

Required Role: Service

Description

Obtains the setting of whether to enable or disable the auto-recovery function and the status of the function.

Syntax

```
hsds [master command option] storage_auto_recovery_setting_show
```

Options and parameters

None

Responses**Normal termination**

```
storageAutoRecoverySetting: object (on page 485)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_auto_recovery_setting_set

Required Role: Service

Description

Enables or disables the auto-recovery function.

When the auto-recovery function is enabled, if there is no history of recovery within the judgment time until transition to permanent blockage, the temporarily blocked storage node is automatically detected and recovery processing is executed. A maintenance recovery job is submitted for recovery.

Syntax

```
hsds [master command option] storage_auto_recovery_setting_set
--is_enabled <boolean> (required *1)
--storage_node_persistent_blocking_threshold_time <int32> (required *1)
```

**Caution:**

*1: Either `--is_enabled` or `--storage_node_persistent_blocking_threshold_time` be specified.

Options and parameters**--is_enabled {true | false}**

Enables or disables the auto-recovery function. Specifying "true" enables the auto-recovery function.

Either `--is_enabled` or `--storage_node_persistent_blocking_threshold_time` be specified.

--storage_node_persistent_blocking_threshold_time <persistent blockage status determination time>

Specify the persistent blockage status determination time (0 to 8784).

The time to determine if the temporarily blocked storage node that was recovered previously is changed to persistent blockage status (unit: hours).

If a temporarily blocked storage node was recovered previously at least once in the period specified for this parameter, the storage node is changed to persistent blockage status. When the value is 0, the storage node is not changed to persistent blockage status.

Either `--is_enabled` or `--storage_node_persistent_blocking_threshold_time` be specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_network_setting_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the storage cluster network settings.

Syntax

```
hsds [master command option] storage_network_setting_show
```


Options and parameters

None

Responses**Normal termination**

```
storageNetworkSetting: object (on page 488)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_network_setting_list

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains a list of storage node network settings.

Syntax

```
hsds [master command option] storage_node_network_setting_list
--storage_node_id <str> (optional)
```

Options and parameters

--storage_node_id <storage node ID>
Specify storage node ID (uuid).

Responses

Normal termination

Description

A list of storage node network settings.

Properties

data: *object[]*

Items

[storageNodeNetworkSetting: object \(on page 493\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_node_network_setting_show

Required Role: Security, Storage, Monitor, Service, or Resource

Description

Obtains the storage node network settings.

Syntax

```
hsds [master command option] storage_node_network_setting_show
--id <str> (required)
```

Options and parameters

--id <storage node ID>
Specify storage node ID (uuid).

Responses**Normal termination**

```
storageNodeNetworkSetting: object (on page 493)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

storage_time_setting_show

Required Role: Security, Storage, Monitor, Service, Audit, or Resource

Description

Obtains the storage cluster time settings.

Syntax

```
hsds [master command option] storage_time_setting_show
```

Options and parameters

None

Responses

Normal termination

```
storageTimeSetting: object (on page 496)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

system_requirements_file_import

Required Role: Service

Description

Imports a system requirements file.

Specify a system requirements file that describes authorized hardware and system requirements.

You can run this CLI only for the cluster master node (primary). If you call this CLI for a node other than the cluster master node (primary), an error is returned.

An import succeeds only when the version of the specified system requirements file is later than the version of the system requirements file existing in the storage cluster.

An import is skipped and an event log is output when the version of the specified system requirements file is equal to or older than the version of the system requirements file existing in the storage cluster.

Syntax

```
hsds [master command option] system_requirements_file_import
--system_requirements_file < file> (required)
```

Options and parameters**--system_requirements_file <system requirements file>**

Specify system requirements file to be imported to the storage cluster.

Specify a system requirements file that describes system requirements to be updated.

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

configuration_file_create (Bare metal)

Required Role: Service

Description

Restores a configuration definition file.

Syntax

```
hsds [master command option] configuration_file_create
```

Options and parameters

None

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

configuration_file_download (Bare metal)

Required Role: Service

Description

Downloads a restored configuration definition file.

You can run this CLI only for the cluster master node (primary).

If you run this CLI for a node other than the cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] configuration_file_download
```

Options and parameters

None

Responses**Normal termination**

Configuration definition file

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

configuration_backup_file_create

Required Role: Service

Description

Creates a configuration backup file.

(Virtual machine) This command can be run only on the maintenance node. For details, contact customer support.

(Bare metal) This command can be run only on the controller node. For details, contact customer support.

Running this subcommand displays the progress in the standard error output. Progress might not appear evenly depending on the processing situation. The display might not be updated for a maximum of ten minutes.

This command can be run with only the cluster master node (primary) specified for --host.

**Caution:**

(Virtual machine) This CLI command internally communicates with VMware vCenter Server. For whether to perform server certificate validation when the command communicates with VMware vCenter Server, the results of configuration by the change_certificate_action command are reflected, regardless of whether the "--ignore_certificate_errors" is specified. For details about the change_certificate_action command, contact customer support.

Syntax

(Virtual machine)

```
hsds [master command option] configuration_backup_file_create
--vcenter_user <str> (optional *1)
--vcenter_password <str> (optional *2)
```

(Bare metal)

```
hsds [master command option] configuration_backup_file_create
```

**Caution:**

(Virtual machine)

*1: Either `--vcenter_user` or the environment variable `HSDS_VCENTER_USER` must be specified.

*2: Either `--vcenter_password` or the environment variable `HSDS_VCENTER_PASSWORD` must be specified.

Options and parameters**--vcenter_user <user name of the VMware vCenter server>**

(Virtual machine) User name of the connection destination VMware vCenter server. You can specify the environment variable `HSDS_VCENTER_USER` instead of this option. If you specify both this option and the environment variable `HSDS_VCENTER_USER`, this option takes priority and the environment variable is ignored.

(Bare metal) Do not specify this option as it is unavailable.

--vcenter_password <password of the VMware vCenter server>

(Virtual machine) Password of the connection destination VMware vCenter server. You can specify the environment variable `HSDS_VCENTER_PASSWORD` instead of this option. If you specify both this option and the environment variable `HSDS_VCENTER_PASSWORD`, this option takes priority and the environment variable is ignored.

(Bare metal) Do not specify this option as it is unavailable.

Responses**Normal termination**

Configuration backup file

Abnormal termination

```
errorResponse: object (on page 422)
```


**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

configuration_parameter_setting_mode (Bare metal)

Required Role: Security

Description

Enables or disables the configuration parameter setting mode.

**Caution:**

Run this subcommand only when instructed to do so in the manual.

Syntax

```
hsds [master command option] configuration_parameter_setting_mode
--mode <str> (required)
--system_configuration_file <file> (optional *1)
--targets <str> (optional *1)
```

**Caution:**

- If you include the --host option in this command line, do not specify the representative IP address for the storage cluster or the FQDN that corresponds to the representative IP address. Specify the control port IP address for a connected storage node or the FQDN that corresponds to that IP address.
- *1: Either --system_configuration_file or --targets must be specified.

Options and parameters**--mode {enable | disable}**

Enable or disable the configuration parameter setting mode.

--system_configuration_file <configuration file>

Specify a configuration file that provides the IP addresses of the control ports of the storage nodes to be enabled or disabled.

Either --system_configuration_file or --targets must be specified.

--targets <IP addresses | FQDNs>

Specify the IP addresses or FQDNs, separated by commas (,), of the control ports of the storage nodes to be enabled or disabled.

Either --system_configuration_file or --targets must be specified.

This parameter is ignored if --system_configuration_file is specified.

Responses**Normal termination**

Whether each of the specified storage nodes is in the configuration parameter setting mode is output.

```
Host-name-1[control-port-IP-address-1 | FQDN] Configuration parameter setting
mode : {True | False}
Host-name-2[control-port-IP-address-2 | FQDN] Configuration parameter setting
mode : {True | False}
Host-name-3[control-port-IP-address-3 | FQDN] Configuration parameter setting
mode : {True | False}
...
```

Abnormal termination

For each of the storage nodes for which the status of the configuration parameter setting mode was changed successfully, the command outputs whether the mode status is "True".

For each of the storage nodes for which the status of the configuration parameter setting mode could not be changed, the command outputs "Error" as the mode status. The command also outputs an error message, the cause of the error, and the solution for the error.

```
Host-name-1[control-port-IP-address-1 | FQDN] Configuration parameter setting
mode : {True | False | Error}
Message: <message>
Cause: <cause>
Solution: <action>
Host-name-2[control-port-IP-address-2 | FQDN] Configuration parameter setting
mode : {True | False | Error}
Message: <message>
Cause: <cause>
Solution: <action>
Host-name-3[control-port-IP-address-3 | FQDN] Configuration parameter setting
```

```
mode : {True | False | Error}
Message: <message>
Cause: <cause>
Solution: <action>
...
```



Note:

This CLI is output only in the text format.

If you use --targets to specify the storage nodes, the host names are not displayed in Normal termination.

Authentication schemes

- ticket authentication

configuration_parameter_setting_mode_status (Bare metal)

Required Role: Security

Description

Obtains whether a storage node is in the configuration parameter setting mode.



Caution:

Run this subcommand only when instructed to do so in the manual.

Syntax

```
hsds [master command option] configuration_parameter_setting_mode_status
--system_configuration_file <file> (optional *1)
--targets <str> (optional *1)
```



Caution:

- If you include the --host option in this command line, do not specify the representative IP address for the storage cluster or the FQDN that corresponds to the representative IP address. Specify the control port IP address for a connected storage node or the FQDN that corresponds to that IP address.
- *1: Either --system_configuration_file or --targets must be specified.

Options and parameters

--system_configuration_file <configuration file>

Specify a configuration file that provides the IP addresses of the control ports of the storage nodes to be enabled or disabled.

Either `--system_configuration_file` or `--targets` must be specified.

--targets <IP addresses | FQDNs>

Specify a comma-separated list of IP addresses or FQDNs of storage nodes from which the status of the configuration parameter setting mode is to be obtained.

Either `--system_configuration_file` or `--targets` must be specified.

This parameter is ignored if `--system_configuration_file` is specified.

Responses

Normal termination

Whether each of the specified storage nodes is in the configuration parameter setting mode is output.

```

Host-name-1[control-port-IP-address-1 | FQDN] Configuration parameter setting
mode : {True | False}
Host-name-2[control-port-IP-address-2 | FQDN] Configuration parameter setting
mode : {True | False}
Host-name-3[control-port-IP-address-3 | FQDN] Configuration parameter setting
mode : {True | False}
...

```

Abnormal termination

For each of the storage nodes from which the status of the configuration parameter mode was obtained successfully, the command outputs whether the mode status is "True".

For each of the storage nodes for which the status of the configuration parameter setting mode could not be obtained, the command outputs "Error" as the mode status. The command also outputs an error message, the cause of the error, and the solution for the error.

```

Host-name-1[control-port-IP-address-1 | FQDN] Configuration parameter setting
mode : {True | False | Error}
Message: <message>
Cause: <cause>
Solution: <action>
Host-name-2[control-port-IP-address-2 | FQDN] Configuration parameter setting
mode : {True | False | Error}
Message: <message>
Cause: <cause>

```

```

Solution: <action>
Host-name-3[control-port-IP-address-3 | FQDN] Configuration parameter setting
mode : {True | False | Error}
Message: <message>
Cause: <cause>
Solution: <action>
...

```

**Note:**

This CLI is output only in the text format.

If you use --targets to specify the storage nodes, the host names are not displayed in Normal termination.

Authentication schemes

- ticket authentication

storage_restore_from_configuration_backup_file

Description**Caution:**

Run this subcommand only when instructed to do so by customer support.

storage_restoration_status_show

Description**Caution:**

Run this subcommand only when instructed to do so by customer support.

set_stationary_point (Bare metal)

Description**Caution:**

Run this subcommand only when instructed to do so by customer support.

configuration_modify (Bare metal)

Required Role: Security

Description

Modifies and sets configuration information in the bare metal model.



Caution:

Run this subcommand only when instructed to do so in the manual.

Syntax

```
hsds [master command option] configuration_modify
--dry_check <boolean> (optional)
--new_system_configuration_file <file> (required)
--current_system_configuration_file <file> (required)
```

Options and parameters

--dry_check {true | false}

By specifying "true", you can verify that parameters that cannot be changed are not updated by this subcommand for modifying and setting configuration information.

By specifying "false" or not specifying this option, you can modify or set configuration information.

--new_system_configuration_file <configuration file>

Specify an edited configuration file.

--current_system_configuration_file <configuration file>

Specify a configuration file that is not edited yet.

Responses

Normal termination

When you specified "true" for the --dry_check option

```
Status: Success
Message:
<Content of the modified configuration file>
[OK] Specified parameters are changeable.
```

When you specified "false" for the --dry_check option or when you did not specify the --dry_check option

```
Stage 1/4 Checking nodes status is the configuration parameter setting mode.
Stage 2/4 Setting configuration parameters.
```

```
Stage 3/4 Checking that the configuration parameters have been set.  
          This stage may wait up to 60 minutes.  
Stage 4/4 Changing the storage node configuration.  
Status: Success  
Message: The configuration modify was successful.
```

Abnormal termination

An error message, cause of the error, and solution for the error are output as follows:

```
Message: <message>  
Cause: <cause>  
Solution: <action>
```



Note:

This CLI is output only in the text format.

Authentication schemes

- ticket authentication

Chapter 23: User role management

external_auth_server_root_certificate_import

Required Role: Security

Description

Imports a root certificate (to be used in communication with the user's external authentication server) to a storage cluster.

PEM- and DER-format authentication files are supported. The root certificate is applied immediately if TLS communication with the server is enabled in the storage cluster settings for the external authentication server specified as "targetServer".

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] external_auth_server_root_certificate_import
--root_certificate <file> (required)
--target_server <str> (required)
```

Options and parameters

--root_certificate <root certificate file>

Specify root certificate file (used in communication with the external authentication server) to be imported to the storage cluster.

--target_server {primary1 | secondary1}

Specify target external authentication server in user authentication.

Responses

Normal termination

<code>job: object (on page 436)</code>
--

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

external_auth_server_root_certificate_download

Required Role: Security

Description

Obtains a root certificate (to be used in communication with the user's external authentication server) which is imported to a storage cluster.

A root certificate is output as a DER file.

If this CLI is called when no root certificate is imported, an error is returned.

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

If you have not imported the root certificate for the external authentication server, you may see message ID: KARS15553-E. If this is the case, import the root certificate of the external authentication server.

Syntax

```
hsds [master command option] external_auth_server_root_certificate_download
--target_server <str> (required)
```

Options and parameters

--target_server {primary1 | secondary1}

Specify target external authentication server in user authentication.

Responses**Normal termination**

Root certificate file corresponding to the server specified as --target_server.

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

external_auth_server_setting_show

Required Role: Security

Description

Obtains the settings of the external authentication server.

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] external_auth_server_setting_show
```

Options and parameters

None

Responses**Normal termination**

```
externalAuthServerSetting: object (on page 425)
```

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

external_auth_server_setting_set

Required Role: Security

Description

Edits the settings of the external authentication server.

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] external_auth_server_setting_set
--is_enabled <boolean> (optional)
--auth_protocol <str> (optional)
--mapping_mode <str> (optional)
--primary_ldap_server_url <str> (optional)
--secondary_ldap_server_url <str> (optional)
--is_start_tls_enabled <boolean> (optional)
--base_dn <str> (optional)
--bind_dn <str> (optional)
--bind_dn_password <str> (optional)
--user_id_attribute <str> (optional)
--user_tree_dn <str> (optional)
--user_object_class <str> (optional)
--external_group_name_attribute <str> (optional)
--user_group_tree_dn <str> (optional)
--user_group_object_class <str> (optional)
--timeout_seconds <int32> (optional)
```

```
--retry_interval_milliseconds <int32> (optional)
--max_retries <int32> (optional)
```

Options and parameters

--is_enabled {true | false}

Enables or disables external authentication.

--auth_protocol LDAP

Specify authentication protocol used for external authentication.

--mapping_mode {User | Group}

Specify unit of mapping to the LDAP server.

- User: Mapping for each user. Grants permission to individual users in the LDAP server.
- Group: Mapping for each user group. Grants permission to individual user groups in the LDAP server.

--primary_ldap_server_url <URL>

Specify URL (up to 267 characters) of the primary LDAP server.

Specify it as "ldap(s)://{<IPv4-address> | <host-name>}:<port-number>". "":<port-number>/" can be omitted.

Specify an empty string "" to initialize it.

must match `/^[^$]^ldaps?:\V((([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.) {3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])|([a-zA-Z0-9]([a-zA-Z0-9\-\{0,61}[a-zA-Z0-9])\.) *([a-zA-Z0-9]([a-zA-Z0-9\-\{0,61}[a-zA-Z0-9]))):([1-9]||[1-9][0-9]{1,3})[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}|655[0-2][0-9]|6553[0-5]))?/?$/`

--secondary_ldap_server_url <URL>

Specify URL (up to 267 characters) of the secondary LDAP server.

Specify it as "ldap(s)://{<IPv4-address> | <host-name>}:<port-number>". "":<port-number>/" can be omitted.

Specify an empty string "" to initialize it.

must match `/^[^$]^ldaps?:\V((([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.) {3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])|([a-zA-Z0-9]([a-zA-Z0-9\-\{0,61}[a-zA-Z0-9])\.) *([a-zA-Z0-9]([a-zA-Z0-9\-\{0,61}[a-zA-Z0-9]))):([1-9]||[1-9][0-9]{1,3})[1-5][0-9]{4}|6[0-4][0-9]{3}|65[0-4][0-9]{2}|655[0-2][0-9]|6553[0-5]))?/?$/`

--is_start_tls_enabled {true | false}

Enables or disables StartTLS communication for LDAP authentication.

--base_dn <base distinguished name>

Specify Base Distinguished Name (up to 8,192 characters) used as the point from where a user or user group will be searched for LDAP authentication. Specify a

distinguished name that includes all the users and user groups to be LDAP authenticated.

Specify it following the RFC 4514 stipulations.

--bind_dn <bind distinguished name>

Specify Bind Distinguished Name (up to 8,192 characters) used for performing a search on a tree specified in base_dn.

Specify it following the RFC 4514 stipulations.

--bind_dn_password <password>

Specify password (up to 8,192 characters) for Distinguished Name specified in bind_dn.



Caution:

If --bind_dn_password is not specified, a prompt will appear. If specified, enter a password using standard input. Otherwise, press Enter without entering a value.

bind_dn_password (if omitted, press the [Enter] key) []:

The contents of the password specified by the option remain in the command history. Enter the password using standard input without the option.

--user_id_attribute <attribute type>

Specify LDAP Attribute Type (up to 8,192 characters) mapped as the user ID. Specify it following the RFC 4514 stipulations.

For example, specify "sAMAccountName" when using the Windows logon ID when linked with an AD server.

The following conditions must be met.

- The value of the specified attribute is of the character type and it has the character length that can be used as userId.
- It is unique in the search range of base_dn or user_tree_dn.

--user_tree_dn <base distinguished name>

Specify Base Distinguished Name (up to 8,192 characters) used as the point from where a user will be searched for LDAP authentication. Specify it following the RFC 4514 stipulations.

Search with user_tree_dn has priority when it is specified at the same time as base_dn.

The default of this item is an empty string. If the value is an empty string, a string of "OU=users," followed by base_dn is handled as user_tree_dn.

--user_object_class <object class>

Specify LDAP object class (up to 8,192 characters) to be mapped as a user. Only the LDAP entry which is the applicable object class is mapped.

--external_group_name_attribute <attribute type>

Specify LDAP Attribute Type (up to 8,192 characters) mapped as external_group_name in the user group.

Specify it following the RFC 4514 stipulations.

To enable a search as external_group_name, it must be unique in the search range of base_dn or user_group_tree_dn.

--user_group_tree_dn <base distinguished name>

Specify Base Distinguished Name (up to 8,192 characters) used as the point from where a user group will be searched for LDAP authentication. Specify it following the RFC 4514 stipulations.

Search with user_group_tree_dn has priority when it is specified at the same time as base_dn.

The default of this item is an empty string. If the value is an empty string, a string of "OU=userGroups," followed by base_dn is handled as user_group_tree_dn.

--user_group_object_class <object class>

Specify LDAP object class (up to 8,192 characters) to be mapped as a user group. Only the LDAP entry which is the applicable object class is mapped.

--timeout_seconds <second>

Specify timeout time (-1 to 65,535, in seconds) applied to the connection to the LDAP server. -1 means that a session never times out. The default is -1. It is recommended that you use the default value without changing it.

--retry_interval_milliseconds <millisecond>

Specify retry interval (1 to 3,000, in milliseconds) in communication with the LDAP server. The default is 100. It is recommended that you use the default value without changing it.

--max_retries <count>

Specify number (0 to 65,535) of retries in communication with the LDAP server. 0 means that no retry is performed. The default is 3. It is recommended that you use the default value without changing it.

Responses**Normal termination**

externalAuthServerSetting: object (on page 425)

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

external_auth_server_setting_verify_connectivity

Required Role: Security or Service

Description

Verifies the connection with the external authentication server. As the connection destination, use the external authentication server which is already set.

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] external_auth_server_setting_verify_connectivity
```

Options and parameters

None

Responses**Normal termination**

```
externalAuthServerConnectionVerification: object (on page 425)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_auth_setting_show

Required Role: None

Description

Obtains the user authentication settings.

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] user_auth_setting_show
```

Options and parameters

None

Responses**Normal termination**

```
userAuthSetting: object (on page 507)
```


Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_auth_setting_set

Required Role: Security

Description

Edits the user authentication settings.

This CLI can be executed only for a cluster master node (primary). If this CLI is executed for any node other than a cluster master node (primary), an error is returned.

Syntax

```
hsds [master command option] user_auth_setting_set
--min_length <int32> (optional)
--min_number_of_upper_case_chars <int32> (optional)
--min_number_of_lower_case_chars <int32> (optional)
--min_number_of_numerals <int32> (optional)
--min_number_of_symbols <int32> (optional)
--number_of_password_history <int32> (optional)
--requires_initial_password_reset <boolean> (optional)
--min_age_days <int32> (optional)
--max_age_days <int32> (optional)
--max_attempts <int32> (optional)
--lockout_seconds <int32> (optional)
--max_lifetime_seconds <int32> (optional)
--max_idle_seconds <int32> (optional)
```

Options and parameters**--min_length <length>**

Specify minimum password length (1 to 256).

This setting is applied only to users whose authentication is local.

--min_number_of_upper_case_chars <number>

Specify minimum number (0 to 256) of uppercase alphabetical characters contained in a password.

If you specify a value to make (sum of --min_number_of_upper_case_chars, --min_number_of_lower_case_chars, --min_number_of_numerals, and --min_number_of_symbols) greater than --min_length, an error is returned.

This setting is applied only to users whose authentication is local.

--min_number_of_lower_case_chars <number>

Specify minimum number (0 to 256) of lowercase alphabetical characters contained in a password.

If you specify a value to make (sum of --min_number_of_upper_case_chars, --min_number_of_lower_case_chars, --min_number_of_numerals, and --min_number_of_symbols) greater than --min_length, an error is returned.

This setting is applied only to users whose authentication is local.

--min_number_of_numerals <number>

Specify minimum number (0 to 256) of numerals (0 to 9) contained in a password.

If you specify a value to make (sum of --min_number_of_upper_case_chars, --min_number_of_lower_case_chars, --min_number_of_numerals, and --min_number_of_symbols) greater than --min_length, an error is returned.

This setting is applied only to users whose authentication is local.

--min_number_of_symbols <number>

Specify minimum number (0 to 256) of symbols (excluding alphanumeric characters) contained in a password.

If you specify a value to make (sum of --min_number_of_upper_case_chars, --min_number_of_lower_case_chars, --min_number_of_numerals, and --min_number_of_symbols) greater than --min_length, an error is returned.

This setting is applied only to users whose authentication is local.

--number_of_password_history <number>

Specify number (1 to 10)of generations from generation 1 (when the password was changed) for which use of a previously used password is prohibited. 1 means that this limit is disabled (the user can set the same password as a past one).

This setting is applied only to users whose authentication is local.

--requires_initial_password_reset {true | false}

Specify whether a new user is forced to change the default password before the initial login. If true, a new user is forced to change the default password before the initial login.

This setting is applied only to users whose authentication is local.

--min_age_days <number of days>

Specify number of days(0 to 10) after which you can change the password again after you changed the password last. 0 means that the expiration time is disabled (the user can change the password immediately).

This setting is applied only to users whose authentication is local.

An error is returned if both --min_age_days and --max_age_days are not 0 and --min_age_days ≥ --max_age_days.

--max_age_days <number of days>

Specify number (0 to 365) of days during which you can use the password after you changed the password last. The password is invalid after this period has elapsed. 0 means that this limit is disabled (the user can use the password indefinitely).

This setting is applied only to users whose authentication is local.

An error is returned if both --min_age_days and --max_age_days are not 0 and --min_age_days ≥ --max_age_days.

--max_attempts <number>

Specify number (0 to 10) of consecutive login failures until the account is locked. 0 means that the function is disabled (the user can be unsuccessful an unlimited number of times).

This setting is applied only to users whose authentication is local.

--lockout_seconds <seconds>

Specify duration (60 to 600, unit: seconds) after the account is locked due to consecutive login failures until the account is unlocked.

This setting is applied only to users whose authentication is local.

--max_lifetime_seconds <seconds>

Specify token lifetime (1,800 to 604,800, unit: seconds). After authentication, authentication by the authentication token is enabled during this period.

--max_idle_seconds <seconds>

Specify time until the session times out (300 to 86,400, unit: seconds). The session is disabled if the REST API server is not accessed using the session during this specified time after the server is accessed using the session.

Responses

Normal termination

userAuthSetting: object (on page 507)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_group_list

Required Role: Security or VpsSecurity

Description

Obtains a list of user groups.

Syntax

```
hsds [master command option] user_group_list
--vps_id <str> (optional)
```

Options and parameters**--vps_id <VPS ID>**

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

must match `/^system$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}$/`

Responses

Normal termination

Description

A list of user group summary information.

Properties

data:object[]

Items

[userGroupSummary: object \(on page 509\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_group_create

Required Role: Security or VpsSecurity

Description

Creates a user group.

Syntax

```
hsds [master command option] user_group_create
--user_group_id <str> (required)
--role_names <str[]> (required)
--external_group_name <str> (optional)
```

```
--vps_id <str> (optional)
--scope <str[]> (optional)
```

Options and parameters

--user_group_id <User group ID>

Specify user group ID (1 to 64 characters) .

must match `/^[a-zA-Z0-9!#$%&'\-\.@\^_`{\}~]{1,64}$/code`

--role_names <role name>

Specify role of the user group.

For system administrators, specify one to six items. You can specify the "Security", "Storage", "Monitor", "Service", "Audit", or "Resource" role.

For VPS administrators, specify one to three items. You can specify the "VpsSecurity", "VpsStorage", or "VpsMonitor" role.

At least one role must be specified. If no role was specified, an error is returned.

--external_group_name <external group name>

Specify name (1 to 4096 characters) of the group registered with an external authorization server when the external authorization server is linked.

When assigning a role to a group in an external authorization server, specify a group name in the external authorization server for this attribute. If omitted, this user group is not linked to the external authorization server.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target. If the user who runs the CLI is a system administrator, it will be "system".

must match `/^system$|^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/code`

--scope <VPS IDs>

An array of the IDs (1 to 65 items) of virtual private storages (VPSs) that the user group can access.

This item can be omitted. If this property is omitted, a single-element array consisting of only the ID of the VPS that the user who runs the CLI belongs to is automatically set. If the user who runs the CLI is a system administrator, "system" is set.

Because a system administrator can access multiple VPSs, if this parameter has the "system" element, multiple IDs of VPSs can be specified. A VPS administrator, who can access only one VPS, can specify only one ID.

The ID of the VPS specified with `--vps_id` cannot be omitted. If it is not included, an error is returned.

If the `--vps_id` property is omitted and its setting is automatically specified, the ID of the VPS that the user who runs the CLI belongs to must be included. If it is not included, an error is returned.

In the case of a system administrator group where the ID of the VPS that the user group belongs to is "system", any VPSs can be specified. In the case of a VPS administrator group where the ID of the VPS that the user group belongs to is not "system", only one array element can be specified. If two or more elements are specified, an error is returned.

must match `/^system$|^([A-Za-f0-9]{8}-[A-Za-f0-9]{4}){3}-[A-Za-f0-9]{12}$/`

Responses

Normal termination

```
userGroup: object (on page 507)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_group_delete

Required Role: Security or VpsSecurity

Description

Deletes a user group.

Syntax

```
hsds [master command option] user_group_delete
--user_group_id <str> (required)
```

Options and parameters**--user_group_id <user group ID>**

Specify user group ID (1 to 64 characters).

must match `/^[a-zA-Z0-9!#$%&'\-\.@^_`{\}~]{1,64}$/`

Responses**Normal termination**

None

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_group_show

Required Role: Security or VpsSecurity

Description

Obtains the user group information.

Syntax

```
hsds [master command option] user_group_show
--user_group_id <str> (required)
```


Options and parameters**--user_group_id <user group ID>**

Specify user group ID (1 to 64 characters).

must match /^[a-zA-Z0-9!#\$%&'\-\.@\^_`{\}~]{1,64}\$/

Responses**Normal termination**

```
userGroup: object (on page 507)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_group_set

Required Role: Security or VpsSecurity

Description

Edits the user group information.

Syntax

```
hsds [master command option] user_group_set
--user_group_id <str> (required)
--role_names <str[]> (optional)
--scope <str[]> (optional)
```

Options and parameters**--user_group_id <user group ID>**

Specify user group ID (1 to 64 characters).

must match `/^[a-zA-Z0-9!#$%&'\-\.@\^_`{\}~]{1,64}$/`

--role_names <role name>

Specify role of the user group.

For system administrators, specify one to six items. You can specify the "Security", "Storage", "Monitor", "Service", "Audit", or "Resource" role.

For VPS administrators, specify one to three items. You can specify the "VpsSecurity", "VpsStorage", or "VpsMonitor" role.

At least one role must be specified. If no role is specified, an error is returned.

--scope <VPS IDs>

An array of the IDs (1 to 65 items) of virtual private storages (VPSs) that the user group can access.

Because a system administrator can access multiple VPSs, if this parameter has the "system" element, multiple IDs of VPSs can be specified. A VPS administrator, who can access only one VPS, can specify only one ID.

The ID of the VPS that the user group belongs to cannot be omitted. If it is not included, an error is returned.

In the case of a system administrator group (if the ID of the VPS that the user group belongs to is "system"), any VPSs can be specified. In the case of a VPS administrator group (if the ID of the VPS that the user group belongs to is not "system"), only one array element can be specified. If two or more elements are specified, an error returned.

must match `/ ^system$|^ [A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

Responses**Normal termination**

userGroup: object (on page 507)

Abnormal termination

errorResponse: object (on page 422)

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_list

Required Role: Security or VpsSecurity

Description

Obtains a list of users.

If external authentication is enabled and "mappingMode" is set to "Group", the users on the external authentication server are not included in the output list and only the users whose "authentication" is "local" are included in the output list.

Syntax

```
hsds [master command option] user_list
--vps_id <str> (optional)
```

Options and parameters**--vps_id <VPS ID>**

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

must match /^system\$|^[A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{4}-[A-Fa-f0-9]{12}\$/

Responses**Normal termination**

Description

A list of user information.

Properties

data:object[]

Items

[user: object \(on page 505\)](#)

Abnormal termination

[errorResponse: object \(on page 422\)](#)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_create

Required Role: Security or VpsSecurity

Description

Creates a user.

Syntax

```
hsds [master command option] user_create
--user_id <str> (required)
--password <str> (optional)
--user_group_ids <str[]> (required)
--authentication <str> (optional)
--is_enabled_console_login <boolean> (optional)
```

Options and parameters

--user_id <user ID>

Specify user ID (6 to 255 characters).

must match `/^[^A-Za-z0-9!#$%&'\.@\^_`{}~]{6,255}$/`

If `--is_enabled_console_login` is set to true, the user ID must be 6 to 28 characters and match the following:

`/^[A-Za-z_][A-Za-z0-9._]{5,27}$/`

--password <password>

Specify user password (1 to 256 characters). The specifiable values can be restricted by policy. The regular expressions described here show the case where the input restrictions by policy are the least strict.

Either of the following conditions must be met in combination with `--authentication`:

- Nothing is specified for `--authentication`, or `local` is specified for `--authentication` and `--password` is specified.
- `external` is specified for `--authentication`, and `--password` is not specified.

An error is returned when none of the conditions is satisfied.

must match `/^[^A-Za-z0-9!#$%&'()*+,-.\/:;<=>=?@[\]\\\^_`{}|~]{1,256}$/`



Caution:

- If `--password` is not specified, a prompt will appear. If specified, enter a password using standard input. Otherwise, press Enter without entering a value.

password (if omitted, press the [Enter] key) []:

The contents of the password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing `"\"`. To avoid the inconvenience of escaping, set a value that does not include `"\"`.
 - The CLI program interprets `"\t"`, `"\r"`, and `"\n"` in the specified string as tab and line feed codes.
 - If you type `"\"`, the CLI program will interpret it as one escape character `"\"`.
 - To enter the strings `"\t"`, `"\r"`, and `"\n"`, enter `"\\t"`, `"\\r"`, and `"\\n"`, respectively.

--user_group_ids <user group IDs>

Specify a list of user group IDs (1 to 8 items, 1 to 64 characters) to which the user belongs.

The user will be created on the virtual private storages (VPSs) that the specified user groups belong to.

In the following cases, an error is returned:

- The IDs of all the VPSs that the specified user groups belong to are not the same.
- Access permission for the VPSs that the specified user group belongs to are not assigned.
- The maximum allowable number of users on the VPSs that the specified user group belongs to is exceeded.

must match /^[a-zA-Z0-9!#\$%&'\-\.@^_`{\}~]{1,64}\$/

--authentication {local | external}

Specify authentication type.

- local (default): Authenticated locally.
- external: Authenticated by the external authentication server.

--is_enabled_console_login {true | false}

(Virtual machine) This option will be ignored if specified.

(Bare metal) Specify whether the use of console interface is permitted.

- true: The console interface can be used.
- false: The console interface cannot be used.

If this option is set to true when the specified user group belongs to a virtual private storage (VPS) is other than "system", an error is returned.

Responses

Normal termination

```
user: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_delete

Required Role: Security or VpsSecurity

Description

Deletes a user.

If you do not have access permission for the virtual private storage (VPS) that the specified user belongs to, an error is returned.

Syntax

```
hsds [master command option] user_delete
--user_id <str> (required)
```

Options and parameters**--user_id <user ID>**

Specify user ID (5 to 255 characters).

must match `/^[^A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/code`

Responses**Normal termination**

None

Abnormal termination

`errorResponse: object (on page 422)`

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_show

Required Role: None

Description

Obtains the user information.

If you have the Security or VpsSecurity role, in this CLI, you can specify the user ID of any user in your accessible range. If you do not have the Security or VpsSecurity role, you can specify only your own user ID. If you specify a user ID other than your own, an error is returned regardless of whether the specified user ID exists.

If you specify, for --user_id, a user name on the external authentication server in the CLI when external authentication is enabled and "mappingMode" is set to "Group", an error is returned.

If "self" is specified for --user_id, information about the user who was authenticated when this CLI was issued is returned.

Syntax

```
hsds [master command option] user_show
--user_id <str> (required)
```

Options and parameters**--user_id <user ID>**

Specify user ID (up to 255 characters).

must match `/^self$|^[^-A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/code>`

Responses

Normal termination

```
user: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_set

Required Role: Security or VpsSecurity

Description

Edits the user information.

When the password is changed for the CLI, if requiresInitialPasswordReset of the user authentication setting is true, the password of the user expires.

The expired password can be recovered by using the password changing API(PATCH /v1/objects/users/<userId>/password) or CLI(user_password_set) of the local user.

If you do not have access permission for the virtual private storage (VPS) that the specified user belongs to, an error is returned.

Syntax

```
hsds [master command option] user_set
--user_id <str> (required)
--password <str> (required *1)
--is_enabled <boolean> (required *1)
```

**Caution:**

*1: Either `--password` or `--is_enabled` must be specified.

Options and parameters**--user_id <user ID>**

Specify user ID (5 to 255 characters).

must match `/^[^A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/`

--password <new password>

Specify new password (1 to 256 characters).

The specifiable values can be restricted by policy. The regular expressions described here show the case where the input restrictions by policy are the least strict.

Either `--password` or `--is_enabled` must be specified. If neither of them is specified, an error is returned.

must match `/^[^A-Za-z0-9!#$%&"\()*+,\.V:;<>=|\?@[\]\\\^_`{}|~]{1,256}$/`

**Caution:**

- If `--password` is not specified, a prompt will appear. If specified, enter a password using standard input. Otherwise, press Enter without entering a value.

password (if omitted, press the [Enter] key) []:

The contents of the password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\"", the CLI program will interpret it as one escape character "\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--is_enabled {true | false}

Enables or disables the user.

Either `--password` or `--is_enabled` must be specified. If neither of them is specified, an error is returned.

Responses

Normal termination

```
user: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_add_user_group

Required Role: Security or VpsSecurity

Description

Adds a user to a user group.

If you do not have access permission for the virtual private storage (VPS) that the specified user belongs to, an error is returned.

Syntax

```
hsds [master command option] user_add_user_group
--user_id <str> (required)
--user_group_ids <str[]> (required)
```

Options and parameters

--user_id <user ID>

Specify user ID (5 to 255 characters).

must match `/^[^A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/code`

--user_group_ids <user group IDs>

Specify a list of user group IDs (1 to 8 items, 1 to 64 characters) to which a user is to be added.

If you specify a user group whose "externalGroupName" is not a null value, an error is returned.

If the IDs of all virtual private storages (VPSs) that the specified user group belongs to and the IDs of all VPSs that the target user belongs to do not match, an error is returned.

must match /^[a-zA-Z0-9!#\$%&'-\.\@\^_`\{\}~]{1,64}\$/

Responses**Normal termination**

```
user: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_delete_user_group

Required Role: Security or VpsSecurity

Description

Deletes a user from a user group.

If you do not have access permission for the virtual private storage (VPS) that the specified user belongs to, an error is returned.

Syntax

```
hsds [master command option] user_delete_user_group
--user_id <str> (required)
--user_group_ids <str[]> (required)
```

Options and parameters

--user_id <user ID>

Specify user ID.

must match `/^[^A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/code>`

--user_group_ids <user group IDs>

Specify list of user group IDs (1 to 8 items, 1 to 64 characters) from which a user is to be deleted.

must match `/^[a-zA-Z0-9!#$%&'\.@\^_`{}~]{1,64}$/code>`

Responses

Normal termination

```
user: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

user_password_set

Required Role: None

Description

Changes the password of the local user.

You can execute this CLI only for a user whose "authentication" is set to "local". If you execute the CLI for a user whose "authentication" is set to "external", an error is returned.

For security reasons, an error is returned even if an invalid password is specified as the current password or a non-existent user is specified as --user_id.

Syntax

```
hsds [master command option] user_password_set
--user_id <str> (required)
--current_password <str> (optional)
--new_password <str> (optional)
```

Options and parameters

--user_id <user ID>

Specify user ID (5 to 255 characters).

must match /^[^A-Za-z0-9!#\$%&'\.@\^_`{}~]{5,255}\$/

--current_password <current password>

Specify current password (1 to 256 characters).

must match /^[^A-Za-z0-9!#\$%&"\(\)*!+,\.\/:;<=&=?@[\]\\\^_`{}|~]{1,256}\$/



Caution:

- When --current_password is not specified, a prompt is displayed. In this case, enter a password via standard input.

current_password:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing "\". To avoid the inconvenience of escaping, set a value that does not include "\".
 - The CLI program interprets "\t", "\r", and "\n" in the specified string as tab and line feed codes.
 - If you type "\" , the CLI program will interpret it as one escape character "\".
 - To enter the strings "\t", "\r", and "\n", enter "\\t", "\\r", and "\\n", respectively.

--new_password <new password>

Specify new password (1 to 256 characters).

The specifiable values can be restricted by policy. The regular expressions described here show the case where the input restrictions by policy are the least strict.

must match `/^[^-A-Za-z0-9!#$%&'()*+,\.V:;<>=|?@[\\]\|^_`{|}~]{1,256}$/`



Caution:

- When `--new_password` is not specified, a prompt is displayed. In this case, enter a password via standard input.

new_password:

The contents of a password specified by the option remain in the command history. Enter the password using standard input without the option.

- Note the following when specifying a location name containing `"\"`. To avoid the inconvenience of escaping, set a value that does not include `"\"`.
 - The CLI program interprets `"t"`, `"r"`, and `"n"` in the specified string as tab and line feed codes.
 - If you type `"\"`, the CLI program will interpret it as one escape character `"\"`.
 - To enter the strings `"t"`, `"r"`, and `"n"`, enter `"\t"`, `"\r"`, and `"\n"`, respectively.

Responses

Normal termination

```
user: object (on page 505)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Chapter 24: Virtual Private Storage (VPS) management

vps_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

DESCRIPTION

Obtains a list of information about a virtual private storage (VPS).

If you have the Security, Storage, Monitor, or Service role, this CLI command also outputs VPS summary information, in addition to a list of VPS information.

If you have the VpsSecurity, VpsStorage, or VpsMonitor role, only your own VPS information is output.

Syntax

```
hsds [master command option] vps_list
```

Options and parameters

None

Responses

Normal termination

```
virtualPrivateStorageList: object (on page 514)
```

Abnormal termination

```
errorResponse: object (on page 422)
```


**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

vps_create

Required Role: Resource

DESCRIPTION

Creates a virtual private storage (VPS).

Syntax

```
hsds [master command option] vps_create
--name <str> (required)
--upper_limit_for_number_of_user_groups <int32> (optional)
--upper_limit_for_number_of_users <int32> (optional)
--upper_limit_for_number_of_sessions <int32> (optional)
--upper_limit_for_number_of_servers <int32> (required)
--volume_settings <array> (required)
  pool_id=<str> (required)
  upper_limit_for_number_of_volumes=<int32> (required)
  upper_limit_for_capacity_of_volumes=<int64> (required)
  upper_limit_for_capacity_of_single_volume=<int64> (optional)
  upper_limit_for_iops_of_volume=<int64> (optional)
  upper_limit_for_transfer_rate_of_volume=<int64> (optional)
  upper_alert_allowable_time_of_volume=<int32> (optional)
```

Options and parameters**--name <VPS name>**

Specify a VPS name (1 to 32 chars).

The string "system" cannot be specified, and an existing VPS cannot be named.

must match `/(?!system$)[\l-A-Za-z0-9,\.:@_]{1,32}$/`

--upper_limit_for_number_of_user_groups <number>

Specify the maximum number of user groups (0 to 256) that can belong to the VPS. If this property is omitted, 256 is assumed to be specified.

--upper_limit_for_number_of_users <number>

Specify the maximum number of users (0 to 256) that can belong to the VPS. If this property is omitted, 256 is assumed to be specified.

--upper_limit_for_number_of_sessions <number>

Specify the maximum number of sessions (0 to 436) that can be established for the VPS. If this property is omitted, 436 is assumed to be specified.

--upper_limit_for_number_of_servers <number>

Specify the maximum allowable number of compute nodes (0 to 1024) on the VPS.

**--volume_settings pool_id=<pool ID>,
upper_limit_for_number_of_volumes=<number>,
upper_limit_for_capacity_of_volumes=<capacity>,
upper_limit_for_capacity_of_single_volume=<capacity>,
upper_limit_for_iops_of_volume=<iops>,
upper_limit_for_transfer_rate_of_volume=<transfer rate>,
upper_alert_allowable_time_of_volume=<time>**

Specify the volume settings for the VPS.

Parameters**pool_id**

Specify the ID of the storage pool to be used on the virtual private storage (VPS).

upper_limit_for_number_of_volumes

Specify the upper limit of the number of volumes (0 to 32768) on the VPS.

For details about the values to be specified for --upper_limit_for_number_of_volumes, contact customer support.

upper_limit_for_capacity_of_volumes

Specify the upper limit of the total volume capacity (MiB)(0 to 9223372036854775807) of the VPS.

For details about the values to be specified for --upper_limit_for_capacity_of_volumes, contact customer support.

upper_limit_for_capacity_of_single_volume

Specify the upper limit of the capacity (MiB)(-1 to 6871947674) of a single volume of the VPS.

To place no limit on the capacity of a single volume, specify -1.

For details about the values to be specified for `--upper_limit_for_capacity_of_single_volume`, contact customer support.

upper_limit_for_iops_of_volume

Specify the upper limit of volume performance (in IOPS)(-1 or 100 to 2147483647) of the VPS.

This is used as the default value for the upper limit of performance (in IOPS) of volumes created on the VPS. To set the upper limit of volume performance (in IOPS), specify a value in the range from 100 to 2147483647. To set no upper limit, specify -1. If you specify values from 0 to 99, jobs will be unsuccessful.

The VPS administrator who creates volumes can set a value that is no more than this value as the upper limit of performance (in IOPS) for each volume. If you make both of the `--upper_limit_for_iops_of_volume` and `--upper_limit_for_transfer_rate_of_volume` settings unavailable, the setting of `--upper_alert_allowable_time_of_volume` is also made unavailable. If this property is omitted, -1 is assumed to be specified.

upper_limit_for_transfer_rate_of_volume

Specify the upper limit of volume performance (in MiB/s)(-1 or 1 to 2097151) for the VPS.

This is used as the default value for the upper limit of performance (in MiB/s) of volumes created on the VPS. To set the upper limit of volume performance (in MiB/s), specify a value in the range from 1 to 2097151. To set no upper limit, specify -1. If you specify 0, jobs will be unsuccessful.

The VPS administrator who creates volumes can set a value that is no more than this value as the upper limit of performance (in MiB/s) for each volume. If you make both of the `--upper_limit_for_iops_of_volume` and `--upper_limit_for_transfer_rate_of_volume` settings unavailable, the setting of `--upper_alert_allowable_time_of_volume` is also made unavailable. If this property is omitted, -1 is assumed to be specified.

upper_alert_allowable_time_of_volume

Specify the alert threshold value (in seconds)(-1 or 1 to 600) for the upper limit of volume performance for the VPS.

This is used as the default value for the alert threshold for the upper limit of performance of volumes created on the VPS. To set the alert threshold, specify a value in the range from 1 to 600. To set no alert threshold, specify -1. If you specify 0, jobs will be unsuccessful.

A message is output to the event log when restriction of the upper limit of performance specified by `--upper_limit_for_iops_of_volume` or `--upper_limit_for_transfer_rate_of_volume` continues for the specified

length of time. This property can be specified if either --upper_limit_for_iops_of_volume or --upper_limit_for_transfer_rate_of_volume, or both, is set. If this property is omitted, -1 is assumed to be specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

vps_delete

Required Role: Resource

DESCRIPTION

Deletes a virtual private storage (VPS).

Syntax

```
hsds [master command option] vps_delete
--id <str> (required *1)
--id_name <str> (required *1)
```

**Caution:**

*1: Either --id or --id_name must be specified.

Options and parameters**--id <VPS ID>**

Specify the ID of the operation-target virtual private storage (VPS).

Either --id or --id_name must be specified.

must match /^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

--id_name <VPS name>

Specify the name of the operation-target virtual private storage (VPS).

Either --id or --id_name must be specified.

must match /^(?!system\$)[\-\A-Za-z0-9,\.\:@_]{1,32}\$/

Responses**Normal termination**

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

vps_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

DESCRIPTION

Obtains information about a virtual private storage (VPS).

If you have the VpsSecurity, VpsStorage, or VpsMonitor role, you are not allowed to view a VPS that is not included in a scope.

Syntax

```
hsds [master command option] vps_show
--id <str> (required *1)
--id_name <str> (required *1)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <VPS ID>

Specify the ID of the operation-target virtual private storage (VPS).

Either --id or --id_name must be specified.

must match `/^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--id_name <VPS name>

Specify the name of the operation-target virtual private storage (VPS).

Either --id or --id_name must be specified.

must match `/^(?!system$)[\-_A-Za-z0-9,\.:@_]{1,32}$/`

Responses

Normal termination

```
virtualPrivateStorage: object (on page 511)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

vps_set

Required Role: Resource

DESCRIPTION

Edits settings of a virtual private storage (VPS).

Syntax

```
hsds [master command option] vps_set
--id <str> (required *1)
--id_name <str> (required *1)
--name <str> (optional *2)
--upper_limit_for_number_of_user_groups <int32> (optional *2)
--upper_limit_for_number_of_users <int32> (optional *2)
--upper_limit_for_number_of_sessions <int32> (optional *2)
--upper_limit_for_number_of_servers <int32> (optional *2)
--upper_limit_for_number_of_volumes <int32> (optional *2)
--upper_limit_for_capacity_of_volumes <int64> (optional *2)
--upper_limit_for_capacity_of_single_volume <int64> (optional *2)
--upper_limit_for_iops_of_volume <int64> (optional *2)
--upper_limit_for_transfer_rate_of_volume <int64> (optional *2)
--upper_alert_allowable_time_of_volume <int32> (optional *2)
```

**Caution:**

*1: Either --id or --id_name be specified.

*2: If none are specified, an error will occur.

Options and parameters

--id <VPS ID>
Specify VPS ID.

Either --id or --id_name must be specified.

must match /^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

--id_name <VPS name>

Specify the VPS name.

Either --id or --id_name must be specified.

must match /^(?!system\$)[\-\A-Za-z0-9,\.\:@_]{1,32}\$/

--name <VPS name>

Specify the new VPS name (1 to 32 characters).

The string "system" cannot be specified, and an existing VPS cannot be named.

must match /^(?!system\$)[\-\A-Za-z0-9,\.\:@_]{1,32}\$/

--upper_limit_for_number_of_user_groups <number>

Specify the upper limit of the number of user groups (0 to 256) that belong to the VPS.

--upper_limit_for_number_of_users <number>

Specify the upper limit of the number of users (0 to 256) that belong to the VPS.

--upper_limit_for_number_of_sessions <number>

Specify the upper limit of the number of sessions (0 to 436) on the VPS.

--upper_limit_for_number_of_servers <number>

Specify the maximum allowable number of compute nodes (0 to 1024) on the VPS.

--upper_limit_for_number_of_volumes <number>

Specify the upper limit of the number of volumes (0 to 32768) on the VPS.

For details about the values to be specified for --upper_limit_for_number_of_volumes, contact customer support.

--upper_limit_for_capacity_of_volumes <capacity>

Specify the upper limit of the total volume capacity (MiB)(0 to 9223372036854775807) of the VPS.

For details about the values to be specified for --upper_limit_for_capacity_of_volumes, contact customer support.

--upper_limit_for_capacity_of_single_volume <capacity>

Specify the upper limit of the capacity (MiB)(-1 to 6871947674) of a single volume of the VPS.

To place no limit on the capacity of a single volume, specify -1.

For details about the values to be specified for --upper_limit_for_capacity_of_single_volume, contact customer support.

--upper_limit_for_iops_of_volume <iops>

Specify the upper limit of volume performance (in IOPS)(-1 or 100 to 2147483647) of the VPS.

This is used as the default value for the upper limit of performance (in IOPS) of volumes created on the VPS. To set the upper limit of volume performance (in IOPS), specify a value in the range from 100 to 2147483647. To set no upper limit, specify -1. If you specify values from 0 to 99, jobs will be unsuccessful.

The VPS administrator who creates volumes can set a value that is no more than this value as the upper limit of performance (in IOPS) for each volume. If you make both of the --upper_limit_for_iops_of_volume and --upper_limit_for_transfer_rate_of_volume settings unavailable, the setting of --upper_alert_allowable_time_of_volume is also made unavailable. If this property is omitted, -1 is assumed to be specified.

--upper_limit_for_transfer_rate_of_volume <transfer rate>

Specify the upper limit of volume performance (in MiB/s)(-1 or 1 to 2097151) for the VPS.

This is used as the default value for the upper limit of performance (in MiB/s) of volumes created on the VPS. To set the upper limit of volume performance (in MiB/s), specify a value in the range from 1 to 2097151. To set no upper limit, specify -1. If you specify 0, jobs will be unsuccessful.

The VPS administrator who creates volumes can set a value that is no more than this value as the upper limit of performance (in MiB/s) for each volume. If you make both of the --upper_limit_for_iops_of_volume and --upper_limit_for_transfer_rate_of_volume settings unavailable, the setting of --upper_alert_allowable_time_of_volume is also made unavailable. If this property is omitted, -1 is assumed to be specified.

--upper_alert_allowable_time_of_volume <time>

Specify the alert threshold value (in seconds)(-1 or 1 to 600) for the upper limit of volume performance for the VPS.

This is used as the default value for the alert threshold for the upper limit of performance of volumes created on the VPS. To set the alert threshold, specify a value in the range from 1 to 600. To set no alert threshold, specify -1. If you specify 0, jobs will be unsuccessful.

A message is output to the event log when restriction of the upper limit of performance specified by --upper_limit_for_iops_of_volume or --upper_limit_for_transfer_rate_of_volume continues for the specified length of time. This property can be specified if either --upper_limit_for_iops_of_volume or --upper_limit_for_transfer_rate_of_volume, or both, is set. If this property is omitted, -1 is assumed to be specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Chapter 25: Volume management

volume_list

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains a list of volume information.

Volume information to be obtained can be narrowed down using a subcommand-option. Details are as follows:

- Using count, the number of volume information items to be obtained in a batch can be specified. By default, 500 is set.
- By specifying the last returned value for enumerate_context, you can obtain the succeeding information.

If you add a volume while obtaining a series of volume information using enumerate_context, the added volume information might not be obtained. In this case, obtain information from the beginning again without specifying enumerate_context.

totalCount of the response data is the total number of volumes when the CLI was executed. The number might be changed if volume information is obtained using enumerate_context, and volumes are added or deleted.

Syntax

```
hsds [master command option] volume_list
--pool_id <str> (optional)
--pool_name <str> (optional)
--pool_id_name <str> (optional)
--server_id <str> (optional)
--server_id_nickname <str> (optional)
--server_nickname <str> (optional)
--name <str> (optional)
--id_name <str> (optional)
--names <str[]> (optional)
--id_names <str[]> (optional)
--nickname <str> (optional)
--min_total_capacity <int> (optional)
--max_total_capacity <int> (optional)
```

```

--min_used_capacity <int> (optional)
--max_used_capacity <int> (optional)
--saving_setting <str> (optional)
--enumerate_context <str> (optional)
--count <int> (optional)
--storage_controller_id <str> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)

```

Options and parameters

--pool_id <pool ID>

Specify the ID (uuid) of the storage pool to which the volume belongs.

--pool_name <pool name>

Specify the name of the storage pool (exact match) to which the volume belongs.

--pool_name and --pool_id_name cannot be specified simultaneously.

--pool_id_name <pool name>

The alias of --pool_name.

--pool_name and --pool_id_name cannot be specified simultaneously.

--server_id <compute node ID>

Specify the ID (uuid) of the compute node to which the volume is allocated.

--server_id and --server_id_nickname cannot be specified simultaneously.

--server_id_nickname <compute node ID>

Specify the nickname of the compute node to which the volume is allocated (exact match).

Specify a value instead of --server_id.¹

--server_id and --server_id_nickname cannot be specified simultaneously.

--server_nickname and --server_id_nickname cannot be specified simultaneously.

must match /^[a-zA-Z0-9,\.:@_]([a-zA-Z0-9,\.:@_ \-]{0,228})\$/

--server_nickname <compute node nickname>

Specify the nickname of the compute node to which the volume is allocated (partial match).

This parameter is ignored if --server_id is specified.

--server_nickname and --server_id_nickname cannot be specified simultaneously.

--name <volume name>

Specify volume name (exact match).

--name and --id_name cannot be specified simultaneously.

--id_name <volume name>

The alias of --name.

--name and --id_name cannot be specified simultaneously.

--names <volume names>

Specify volume name (exact match).

You can specify plural names up to 32 with comma (,) delimiter.

Example: --names <name1>,<name2>,<name3>...

If the name includes a comma, escape it using '\' (backslash).

Example: if the name is "name,1", specify "--names name\\,1".

If you enter a space character after a comma, the space character is recognized as a part of the name specified after the comma.

Also, if you specify 33 or more names, an error is returned.

--names and --id_names cannot be specified simultaneously.

Each item must match /^[\\-A-Za-z0-9,\\.:@_]{1,32}\$/

--id_names <volume names>

The alias of --names. You can specify maximum of 32 volume names (up to 32 characters).

--names and --id_names cannot be specified simultaneously.

Each item must match /^[\\-A-Za-z0-9,\\.:@_]{1,32}\$/

--nickname <volume nickname>

Specify volume nickname (partial match).

--min_total_capacity <capacity>

Specify minimum volume capacity (MiB).

--max_total_capacity <capacity>

Specify maximum volume capacity (MiB).

--min_used_capacity <capacity>

Specify minimum occupied volume capacity (MiB).

--max_used_capacity <capacity>

Specify maximum occupied volume capacity (MiB).

--saving_setting { Disabled }

Specify the settings of the data reduction function for volumes.

--enumerate_context <token>

Specify token (uuid) that helps obtain the next batch records. Do not specify this parameter for initial information extraction.

--count <number>

Specify the maximum number (0 to 500, default: "0") of obtained volume information items.

If nothing is specified or 0 is specified, all records are output.

--storage_controller_id <storage controller ID>

Specify storage controller ID (uuid).

--vps_id <VPS ID>

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

To filter the resources by the VPS that the resources belong to, specify it in UUID format.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

To filter out the resources that do not belong to the VPS, specify "system".

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses**Normal termination**

Description

A list of summary information of the volume and the information about data.

Properties

data: *object[]*

Items

[volumeSummary: object \(on page 523\)](#)

totalCount: *integer*

The total number of records.

hasNext: *boolean*

Indicates whether there is information dropped from the data.

enumerateContext: *string* (uuid)nullable

A token used to obtain the remaining items for the next batch. A null value is output if there are no more items to be obtained.

Abnormal termination

errorResponse: object (on page 422)



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_create

Required Role: Storage or VpsStorage

Description

Creates a volume.

Syntax

```
hsds [master command option] volume_create
--capacity <int32> (required)
--number <int32> (optional)
--base_name_for_name <str> (required *1)
--start_number_for_name <int32> (optional)
--number_of_digits_for_name <int32> (optional)
--base_name <str> (required *1)
--start_number <int32> (optional)
```

```

--number_of_digits <int32> (optional)
--pool_id <str> (required *2)
--pool_id_name <str> (required *2)
--vps_id <str> (required *2)
--vps_id_name <str> (required *2)
--storage_controller_id <str> (optional)
--upper_limit_for_iops <int64> (optional)
--upper_limit_for_transfer_rate <int64> (optional)
--upper_alert_allowable_time <int32> (optional)

```

**Caution:**

*1: Either `--base_name_for_name` or `--base_name` be specified.

*2: If the execution user's role is the system administrator role, one of `--pool_id`, `--pool_id_name`, `--vps_id`, `--vps_id_name` must be specified.

Options and parameters**--capacity <volume capacity>**

Specify the (logical) capacity of the volume (47 to 268,435,456, unit: MiB).

For the value to be specified in "capacity", see *Creating volumes* in the *Hitachi Virtual Storage Software Block Storage Administrator Guide*.

--number <volume number>

Specify the number (1 to 1,000, default: "1") of volumes to be created.

--base_name_for_name <volume name> ¹

Specify a name (1 to 32 characters) which is set for a volume.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--start_number_for_name <number> ¹

Specify the first sequential number (0 to 32767) suffixed to a name.

When number (parameter of number of volume to be created) is 2 or more, the parameter is required.

--number_of_digits_for_name <number > ¹

Specify the number of digits of a serial number (1 to 5, default: "1") suffixed to a name.

--base_name <nickname> ²

Specify a nickname (1 to 32 characters) which is set for a volume.

(1 to 32 characters) , must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--start_number <number> ²

Specify the first sequential number (0 to 32767) suffixed to a nickname. If omitted, no sequential number is used for nicknames.

--number_of_digits <number> ²

Specify the number of digits of a serial number (1 to 5, default: "1") added to the end of a nickname. This value can be specified only when `start_number` is set.

--pool_id <pool ID>

Specify the ID (uuid) of the storage pool where the volume is created.

If the user who runs the CLI has a system administrator role, one of --pool_id, --pool_id_name, --vps_id, and --vps_id_name must be specified. These options cannot be specified at the same time.

If the user who runs the CLI has a VPS administrator role, this option cannot be specified.

--pool_id_name <pool name>

Specify the name of the storage pool where the volume is created.

Specify a value instead of --pool_id.³

If the user who runs the CLI has a system administrator role, one of --pool_id, --pool_id_name, --vps_id, and --vps_id_name must be specified. These options cannot be specified at the same time.

If the user who runs the CLI has a VPS administrator role, this option cannot be specified.

must match /^[A-Za-z0-9]{1,32}\$/

--vps_id <VPS ID>

Specify the ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to a VPS, specify it by using the --pool_id without specifying the --vps_id.

If this option is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

If the user who runs the CLI has a system administrator role, one of --pool_id, --pool_id_name, --vps_id, and --vps_id_name must be specified. These options cannot be specified at the same time.

If the user who runs the CLI has a VPS administrator role, this option can be omitted.

must match /^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

--vps_id_name <VPS name>

Specify the name of the operation-target virtual private storage (VPS). To specify a resource that does not belong to the VPS, set "system" for this option.

If the user who runs the CLI has a system administrator role, one of --pool_id, --pool_id_name, --vps_id, and --vps_id_name must be specified. These options cannot be specified at the same time.

must match /^(?!system\$)[A-Za-z0-9,\.:@_]{1,32}\$/

--storage_controller_id <storage controller ID>

Specify the ID (uuid) of the storage controller that manages the volume.

If this is omitted, the volume is allocated to an appropriate storage controller depending on the free capacity.

--upper_limit_for_iops <IOPS>

Specify the upper limit of volume performance (in IOPS)(-1 or 100 to 2147483647).

To set the upper limit of volume performance (in IOPS), specify a value in the range from 100 to 2147483647. To set no upper limit, specify -1. If you specify values from 0 to 99, jobs will be unsuccessful.

If you make both of the --upper_limit_for_iops and --upper_limit_for_transfer_rate settings unavailable, the setting of --upper_alert_allowable_time is also made unavailable.

If this option is omitted, following value is specified.

- If the volume belongs to a virtual private storage (VPS): Default value set for the VPS
- If the volume does not belong to a VPS: -1

--upper_limit_for_transfer_rate <transfer rate>

Specify the upper limit of volume performance (in MiB/s)(-1 or 1 to 2097151).

To set the upper limit of volume performance (in MiB/s), specify a value in the range from 1 to 2097151. To set no upper limit, specify -1. If you specify 0, jobs will be unsuccessful.

If you make both of --upper_limit_for_iops and --upper_limit_for_transfer_rate settings unavailable, the setting of --upper_alert_allowable_time is also made unavailable.

If this option is omitted, following value is specified.

- If the volume belongs to a virtual private storage (VPS): Default value set for the VPS
- If the volume does not belong to a VPS: -1

--upper_alert_allowable_time <time>

Specify the alert threshold value (in seconds)(-1 or 1 to 600) for the upper limit of volume performance.

The VPS administrator cannot specify this property.

To set the alert threshold, specify a value in the range from 1 to 600. To set no alert threshold, specify -1. If you specify 0, jobs will be unsuccessful.

A message is output to the event log when restriction of the upper limit of performance specified by --upper_limit_for_iops or --upper_limit_for_transfer_rate continues for the specified length of time.

This option can be specified if either --upper_limit_for_iops or --upper_limit_for_transfer_rate, or both, is set.

If this option is omitted, following value is specified.

- If the volume belongs to a virtual private storage (VPS): Default value set for the VPS
- If the volume does not belong to a VPS: -1



Note:

1:

name = --base_name_for_name + <sequential-number> (the number of digits is set by --number_of_digits_for_name).

The maximum number of characters for a name is 32.

The name must be unique throughout the volumes. If a volume with the name according to the formula above already exists, creation of all the volumes does not succeed.

2:

The following formula is valid only when start_number is set. Specify the number of digits using --number_of_digits.

The maximum number of characters for a nickname is 32.

The same nickname can be set for volumes.

nickname = --base_name + <sequential-number>

3:

Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.



Note:

If --base_name_for_name is specified and --base_name is omitted, the same character string as name is registered in nickname of each volume.

If --base_name is specified and --base_name_for_name is omitted, the following is stored in name of each volume:

- The same character string as nickname if there is no other volume whose name is the same as the nickname string.
- "Volume<volumeNumber-of-created-volume>" if a volume whose name is the same as the nickname string exists.

However, "Volume<volumeNumber-of-created-volume>_<unique-value>" if "<volumeNumber-of-created-volume>" already exists.

This unique value is the smallest in the range of 1 to 1048576 that does not overlap with an existing volume name when the volume is created.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_delete

Required Role: Storage or VpsStorage

Description

Deletes the volume.

P-VOL, S-VOL, and P/S-VOL cannot be deleted by the API. Delete them by the following each procedure.

- P-VOL volume: After having deleted all S-VOLs which are created from the target P-VOL by the CLI for Snapshot delete, delete the volume by the CLI for volume delete.
- S-VOL volume: Delete the volume by the CLI for Snapshot delete.
- P/S-VOL volume: After having deleted all S-VOLs which are created from the target P/S-VOL by the CLI for Snapshot delete, delete the target P/S-VOL by the CLI for Snapshot delete.

Syntax

```
hsds [master command option] volume_delete
--id <str> (required *1)
```

```
--id_name <str> (required *1)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```

**Caution:**

*1: Either `--id` or `--id_name` must be specified.

Options and parameters**--id <volume ID>**

Specify volume ID (uuid).

Either `--id` or `--id_name` must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of `--id`.¹

Either `--id` or `--id_name` must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

`-- vps_id` and `--vps_id_name` cannot be specified simultaneously.

must match `/system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

`-- vps_id` and `--vps_id_name` cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

**Note:**

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```

**Note:**

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_show

Required Role: Security, Storage, Monitor, Service, Resource, VpsSecurity, VpsStorage, or VpsMonitor

Description

Obtains the volume information.

Syntax

```
hsds [master command option] volume_show
--id <str> (required *1)
--id_name <str> (required *1)
```

**Caution:**

*1: Either --id or --id_name must be specified.

Options and parameters

--id <volume ID>

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match `/^[A-Za-z0-9,\.:@_]{1,32}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
volume: object (on page 515)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_set

Required Role: Storage or VpsStorage

Description

Edits the volume settings.

Syntax

```
hsds [master command option] volume_set
--id <str> (required *1)
--id_name <str> (required *1)
--name <str> (optional *2)
--nickname <str> (optional *2)
--upper_limit_for_iops <int64> (optional *2)
--upper_limit_for_transfer_rate <int64> (optional *2)
--upper_alert_allowable_time <int32> (optional *2)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: Either `--id` or `--id_name` must be specified.

*2: The options that you can specify depend on the volume status as shown below.

If options are specified in a combination other than the below, job does not succeed.

- When the status is other than “UpdateFailed”, one or more options must be specified.
- When the status is “UpdateFailed”, none of the options cannot be specified.

Options and parameters

Each value remains as is if nothing is specified for it.

`--id <volume ID>`

Specify volume ID (uuid).

Either `--id` or `--id_name` must be specified.

`--id_name <volume name>`

Specify the volume name.

Specify a value instead of `--id`.¹

Either `--id` or `--id_name` must be specified.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

`--name <volume name>`

Specify volume name (1 to 32 characters). Set a name unique throughout the volumes.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

`--nickname <volume nickname>`

Specify the nickname (1 to 32 characters) of the volume. The same nickname can be specified for multiple volumes.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`

--upper_limit_for_iops <IOPS>

Specify the upper limit of volume performance (in IOPS)(-1 or 100 to 2147483647).

To set the upper limit of volume performance (in IOPS), specify a value in the range from 100 to 2147483647. To set no upper limit, specify -1. If you specify values from 0 to 99, jobs will be unsuccessful.

If you make both of the --upper_limit_for_iops and --upper_limit_for_transfer_rate settings unavailable, the setting of --upper_alert_allowable_time is also made unavailable.

--upper_limit_for_transfer_rate <transfer rate>

Specify the upper limit of volume performance (in MiB/s)(-1 or 1 to 2097151).

To set the upper limit of volume performance (in MiB/s), specify a value in the range from 1 to 2097151. To set no upper limit, specify -1. If you specify 0, jobs will be unsuccessful.

If you make both of --upper_limit_for_iops and --upper_limit_for_transfer_rate settings unavailable, the setting of --upper_alert_allowable_time is also made unavailable.

--upper_alert_allowable_time <time>

Specify the alert threshold value (in seconds)(-1 or 1 to 600) for the upper limit of volume performance.

The VPS administrator cannot specify this property.

To set the alert threshold, specify a value in the range from 1 to 600. To set no alert threshold, specify -1. If you specify 0, jobs will be unsuccessful.

A message is output to the event log when restriction of the upper limit of performance specified by --upper_limit_for_iops or --upper_limit_for_transfer_rate continues for the specified length of time.

This option can be specified if either --upper_limit_for_iops or --upper_limit_for_transfer_rate, or both, is set.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this option.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

-- vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[A-Za-f0-9]{8}(-[A-Za-f0-9]{4}){3}-[A-Za-f0-9]{12}\$/

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this option.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match /^[^A-Za-z0-9,\.:@_]{1,32}\$/



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

volume_expand

Required Role: Storage or VpsStorage

Description

Expands the volume capacity.

You can execute this CLI only for a volume whose "status" is "Normal" or "ExpansionFailed", and "volumeType" is "Normal". The relationship between the status and execution content is as follows.

- If you execute this CLI for a volume whose "status" is "Normal", the CLI expands the volume by the capacity specified in the parameter.
- If you execute this CLI for a volume whose "status" is "ExpansionFailed", the CLI executes the volume expansion again.

Syntax

```
hsds [master command option] volume_expand
--id <str> (required *1)
--id_name <str> (required *1)
--additional_capacity <int32> (optional)
--vps_id <str> (optional)
--vps_id_name <str> (optional)
```



Caution:

*1: Either --id or --id_name must be specified.

Options and parameters

--id <volume ID>

Specify volume ID (uuid).

Either --id or --id_name must be specified.

--id_name <volume name>

Specify the volume name.

Specify a value instead of --id.¹

Either --id or --id_name must be specified.

must match /^[A-Za-z0-9,\.:@_]{1,32}\$/

--additional_capacity <capacity>

Specify the logical capacity (1 to 268,435,456 , in MiB) added to the volume.

Execute this CLI by specifying a value if the status of the value is "Normal", or without specifying "additionalCapacity" if the status is "ExpansionFailed".

For the volume capacity after addition, a value exceeding "logicalLimit" (that is available when the information about the storage controller is obtained) cannot be specified.

--vps_id <VPS ID>

The ID of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

If this property is omitted, the VPS that the user who runs the CLI belongs to is assumed to be the operation target.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^system$|^([A-Fa-f0-9]{8}-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

--vps_id_name <VPS name>

The name of the operation-target virtual private storage (VPS).

To specify a resource that does not belong to the VPS, set "system" for this property.

--vps_id and --vps_id_name cannot be specified simultaneously.

must match `/^[^A-Za-z0-9,\.:@_]{1,32}$/`



Note:

1: Before the specified value for the option is executed, it must first be converted to an ID by issuing API in CLI. Therefore, execution might take longer than the case in which an ID is specified.

Responses

Normal termination

```
job: object (on page 436)
```

Abnormal termination

```
errorResponse: object (on page 422)
```



Note:

When text is specified for format, it is output in the format described in [Output format \(on page 26\)](#).

When json is specified for format, HTTP status code is also output. For http status code, see [Response definitions \(on page 405\)](#).

Authentication schemes

- basic authentication
- session authentication

Appendix A: Response definitions

HTTP status code 200

200 OK: Indicates that the request was processed correctly.

HTTP status code 202

202 Accepted: Indicates that an asynchronous process request was accepted.

`job: object (on page 436)`

HTTP status code 204

204 No Content: Indicates that the request was processed correctly, but no response data to be returned exists.

HTTP status code 400

400 Bad Request: Indicates that the request header, query parameter, and request body are incorrect.

`errorResponse: object (on page 422)`

HTTP status code 401

401 Unauthorized: Indicates that no Authorization header is specified for the request header, authentication using the information specified for the Authorization header was unsuccessful, or authentication using a parameter was unsuccessful.

errorResponse: object (on page 422)

Header	Description	Data Type
WWW-Authenticate	<p>Indicates that authentication is required.</p> <ul style="list-style-type: none"> ▪ When basic authentication did not succeed including session creation failures: Basic realm="Block storage" ▪ When session authentication did not succeed: Session realm="Block storage" 	<i>string</i>

HTTP status code 403

403 Forbidden: Indicates that you are not authorized to perform the operation.

errorResponse: object (on page 422)

HTTP status code 404

404 Not Found: Indicates that the resource specified by the URL was not found, or you are not authorized to see the resource.

errorResponse: object (on page 422)

HTTP status code 406

406 Not Acceptable: Indicates that an unsupported media type was specified for the Accept header.

errorResponse: object (on page 422)

HTTP status code 409

409 Conflict: Indicates that an inconsistent or impossible request was issued for the resource specified by URL (for example, creating a resource whose ID is same as the resource already created).

[errorResponse: object \(on page 422\)](#)

HTTP status code 411

411 Length Required: Indicates that the Content-Length header must be specified. It is returned when the request body was not specified and "Content-Length: 0" was not specified as the header parameter.

[errorResponse: object \(on page 422\)](#)

HTTP status code 412

412 Precondition Failed: Indicates that the conditions for executing the API are not met.

[errorResponse: object \(on page 422\)](#)

HTTP status code 413

413 Payload Too Large: Indicates that the size of the request body exceeds the acceptable upper limit.

[errorResponse: object \(on page 422\)](#)

HTTP status code 415

415 Unsupported Media Type: Indicates that an unsupported media type was specified for the Content-Type header.

[errorResponse: object \(on page 422\)](#)

HTTP status code 417

417 Expectation Failed: Indicates that the Expect header is specified incorrectly, or the REST API server does not support the Expect header.

[errorResponse: object \(on page 422\)](#)

HTTP status code 431

431 Request Header Fields Too Large: Indicates that the size of the request header exceeds the acceptable upper limit.

[errorResponse: object \(on page 422\)](#)

HTTP status code 500

500 Internal Server Error: Indicates that an internal error occurred on the REST API server or in the target storage cluster.

[errorResponse: object \(on page 422\)](#)

HTTP status code 502

502 Bad Gateway: Indicates that an internal error occurred on the REST API server.

[errorResponse: object \(on page 422\)](#)

HTTP status code 503

503 Service Unavailable: Indicates that the request cannot be received because the REST API server or the target storage cluster is busy. This is a temporary problem, and the request might be processed normally if it is executed again after a while.

`errorResponse: object (on page 422)`

HTTP status code 504

504 Gateway Timeout: Indicates that the REST API server did not respond.

`errorResponse: object (on page 422)`

Appendix B: Schema definitions

approvedChapUser: *object*

DESCRIPTION

Information about a CHAP user who is allowed to access the compute port.

PROPERTIES

id: *string* (uuid)

The ID of a CHAP user who is allowed to access the compute port.

targetChapUserName: *string* (1 to 223 chars) , must match `/^[a-zA-Z0-9\.:@_!-!+=\[\]~] {1,223}$/`

CHAP user name used for CHAP authentication on the compute port (i.e., target side).

initiatorChapUserName: *string* (up to 223 chars) , must match `/^[^$|^][a-zA-Z0-9\.:@_!-!+=\[\]~]{0,223}$/`

CHAP user name used for CHAP authentication on the initiator side of the compute node.

An empty string "" is output if no address is set.

auditLogSetting: *object*

DESCRIPTION

Audit log settings.

PROPERTIES

syslogForwardingSetting: [syslogForwardingSettingOfAuditLogSetting: object \(on page 499\)](#)

capacitiesExcludingSystemDataOfStorageController: *object*

DESCRIPTION

Pool usage by a storage controller.

When no monitoring information can be collected, a null value is output.

PROPERTIES

usedVolumeCapacity: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable
Consumed capacity of volumes (unit: MiB).

compressedCapacity: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable
Amount reduced by compression (unit: MiB).

reclaimedCapacity: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable
Amount reduced by fixed pattern exclusion (unit: MiB).

systemDataCapacity: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable
Amount of system data consumed by the data reduction function (amount of metadata and garbage data) (unit: MiB).

preUsedCapacity: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable
Amount of data to be reduced (unit: MiB).

preCompressedCapacity: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable
Amount of data to be compressed (unit: MiB).

capacityBalancingSetting: *object*

DESCRIPTION

Capacity balancing settings.

PROPERTIES

isEnabled: *boolean*

Enables or disables the capacity balancing. If enabled, capacity balancing applies to the storage node. If disabled, capacity balancing does not apply to the storage node.

Even if capacity balancing is enabled, snapshot volumes (P-VOL, P/S-VOL, or S-VOL) are not moved between storage nodes by capacity balancing.

For details, contact customer support.

chapUser: *object*

DESCRIPTION

Information about the CHAP user.

PROPERTIES

portIds: *string*[]

A list of compute port IDs to which the CHAP user is allowed to access in CHAP authentication.

ITEMS

string (uuid)

id: *string* (uuid)

The ID of the CHAP user.

targetChapUserName: *string* (1 to 223 chars) , must match `/^[a-zA-Z0-9\.:@_\-|+=\[\]~] {1,223}$/`

CHAP user name used for CHAP authentication on the compute port (i.e., target side).

initiatorChapUserName: *string* (up to 223 chars) , must match `/^[a-zA-Z0-9\.:@_\-|+=\[\]~] {1,223}$/`

CHAP user name used for CHAP authentication on the initiator side of the compute node.

An empty string "" is output if no address is set.

chapUserSummary: *object*

DESCRIPTION

Summary information about the CHAP user.

PROPERTIES

id: *string* (uuid)

The ID of the CHAP user.

targetChapUserName: *string* (1 to 223 chars) , must match `/^[a-zA-Z0-9\.:@_\-|+=\[\]~] {1,223}$/`

CHAP user name used for CHAP authentication on the compute port (i.e., target side).

initiatorChapUserName: *string* (up to 223 chars) , must match `/^[a-zA-Z0-9\.:@_\-|+=\[\]~] {1,223}$/`

CHAP user name used for CHAP authentication on the initiator side of the compute node.

An empty string "" is output if no address is set.

controlPort: *object*

DESCRIPTION

Control port information.

PROPERTIES

id: *string* (uuid)

Control port ID.

storageNodeId: *string* (uuid)

The ID of the storage node that has control ports.

macAddress: *string*

MAC address used for communication.

(Bare metal) The MAC address of the primary port is always used when teaming is enabled.

mtuSize: *integer* (int32)

MTU size.

interfaceName: *string*

An interface name, which is unique within a storage node that contains compute ports, control ports, and ports between storage nodes. Example: eth0, eth1

deviceName: *string* (1 to 4096 chars)

Device name of the NIC.

configuredPortSpeed: *string*, $x \in \{ \text{"Auto"}, \text{"1G"}, \text{"10G"}, \text{"25G"}, \text{"40G"}, \text{"100G"} \}$

Link speed setting of the physical port used for communication (unit: bps). This setting determines the actual link speed and duplex settings.

- Auto: The speed and duplex settings depend on the switch or SFP specifications.

portSpeedDuplex: *string*, $x \in \{ \text{"10Mbps Half"}, \text{"10Mbps Full"}, \text{"100Mbps Half"}, \text{"100Mbps Full"}, \text{"1Gbps Half"}, \text{"1Gbps Full"}, \text{"2.5Gbps Full"}, \text{"5Gbps Full"}, \text{"10Gbps Full"}, \text{"20Gbps Full"}, \text{"25Gbps Full"}, \text{"40Gbps Full"}, \text{"50Gbps Full"}, \text{"56Gbps Full"}, \text{"100Gbps Full"}, \text{"200Gbps Full"}, \text{"400Gbps Full"}, \text{"Unknown"}, \text{"LinkDown"}, \text{"DependsOnHypervisor"} \}$

Actual link speed and duplex settings of the physical port used for communication.

If configuredPortSpeed is Auto, a value is output as per the actual switch or SFP specifications.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output.

isTeamingEnabled: *string*, $x \in \{ "true" , "false" , "DependsOnHypervisor" \}$

Indicates whether teaming is enabled/disabled.

- true: Teaming is enabled.
- false: Teaming is disabled.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output.

ipv4Information: ipv4InformationOfControlPort: object (on page 432)

teaming: teamingOfInternodePort (on page 432) nullable

(Virtual machine) Null is always output.

(Bare metal) The teaming information of the control port is output.

redundancy: *integer (int32)*, $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 1 \}$ nullable

Redundancy of the physical port. If isTeamingEnabled is set to "DependsOnHypervisor", null is output. If isTeamingEnabled is set to "false", 0 is output.

- -1: No redundancy. (Both systems are down.)
- 0: No redundancy. (One system is down.)
- 1: There is redundancy.

status: *string*, $x \in \{ "Normal" , "Warning" , "Error" \}$

Status of the control port.

(Virtual machine) The output is always Normal.

(Bare metal)

- Normal: Operating normally.
- Warning: There is a problem in one port.
- Error: There is a problem in both ports.

statusSummary: *string*, $x \in \{ "Normal" , "Warning" , "Error" \}$

Status summary of the control port.

(Virtual machine) The output is always Normal.

(Bare metal)

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

controlPortPerformance: *object*

DESCRIPTION

Performance information of the control port (monitor information). Infinite value, Infinity is not output as the double type value.

PROPERTIES

id: *string* (uuid)

The ID of the control port.

receiveTransferRate: *number* (double)

Amount of data received per second (unit: MiB/sec).

sendTransferRate: *number* (double)

Amount of data sent per second (unit: MiB/sec).

controlPortPerformanceListResponse: *object*

DESCRIPTION

A list of control port performance information (monitor information) at the specified time.

PROPERTIES

data: *object*[]

ITEMS

[controlPortPerformanceListResponseData: object \(on page 416\)](#)

controlPortPerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the control port when the information was collected. For performanceObjects, control ports of which performance information could be collected when the API was executed are output as an array.

PROPERTIES

timestamp: *string (date-time)*

The time when this information was collected.

performanceObjects: *object[]*

A list of control port performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[controlPortPerformance: object \(on page 415\)](#)

cpuPerformance: *object*

DESCRIPTION

Usage of the CPU core.

PROPERTIES

index: *number (int32)*

CPU core number.

process: *string*, $x \in \{ \text{"StorageController"}, \text{"SystemController"} \}$

Process which is using the CPU core. Either of the following is output:

- StorageController: Storage controller's process
- SystemController: System managing process

usage: *number (double)*

Usage of the CPU core (unit: %).

createdSession: *object*

DESCRIPTION

Session information.

PROPERTIES

token: *string* (1 to 256 chars) , must match `/^[A-Za-z0-9!"#$%&'()*+,-.\/:;<=>|?@[|\]^\^_`{|}~]{1,256}$/`

Authentication token.

sessionId: *string* (uuid)

Session ID.

userId: *string* (5 to 255 chars) , must match `/^[A-Za-z0-9!#$%&'().@^\^_`{|}~]{5,255}$/`

User ID.

userObjectId: *string* (5 to 765 chars) , must match `/^[A-Za-z0-9%|\._~]{5,765}$/`

Object ID of the user. For the user ID, a percent-encoded reserved string defined in RFC 3986 is output.

expirationTime: *string* (date-time)

Expiration time of the session. After this time, the session expires.

createdTime: *string* (date-time)

Date and time when the session is generated.

lastAccessTime: *string* (date-time)

Date and time when the session was last used.

roleNames: *string[]*

A list of roles assigned to the user who retains this session.

ITEMS

- For system administrators: (One to six items)
string , $x \in \{ "Security", "Storage", "Monitor", "Service", "Audit", "Resource" \}$
- For VPS administrators: (One to three items)
string , $x \in \{ "VpsSecurity", "VpsStorage", "VpsMonitor" \}$

vpsId: *string* , must match `/^[system\]$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the user belongs to.

If the user is a system administrator, the string "(system)" is displayed.

privileges: *object[]* (1 to 65 items)

A list of information about a virtual private storage (VPS) that the user can access.

ITEMS

userPrivileges: *object* (on page 510)

drive: object

DESCRIPTION

Drive information.

PROPERTIES

id: *string* (uuid)

Drive ID.

wwid: *string* (1 to 128 chars)

Drive WWID (WWN).

statusSummary: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

Drive status summary.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string*, $x \in \{ \text{"Offline"}, \text{"Normal"}, \text{"TemporaryBlockage"}, \text{"Blockage"} \}$

The drive status. Any one of the following statuses is output:

- Offline: Not used. This drive can be removed.
- Normal: Operating normally.
- TemporaryBlockage: Temporarily blocked.
- Blockage: Blocked.

typeCode: *string* (1 to 128 chars)

Drive type code (drive model name).

serialNumber: *string* (1 to 128 chars)

Drive serial number.

storageNodeid: *string* (uuid)

Storage node ID.

deviceFileName: *string*

Device file name for a drive.

vendorName: *string* (1 to 128 chars)

The vendor name.

firmwareRevision: *string* (1 to 128 chars)

Firmware revision.

locatorLedStatus: *string*, $x \in \{ \text{"Off"}, \text{"On"} \}$

On/off state of the locator LED.

- Off: The LED is off.
- On: The LED is on.

driveType: *string*, $x \in \{ \text{"SSD"}, \text{"HDD"}, \text{"Unknown"} \}$

Drive type.

driveCapacity: *integer (int32)*, $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 256000 \}$

The drive capacity (Unit: GB). 1GB=1,000,000,000 bytes.

drivePerformance: *object*

DESCRIPTION

Performance information of the drive (monitor information). A null value is set if the information could not be obtained. The infinite value (Infinity) is not output for double type values.

PROPERTIES

id: *string (uuid)*

Drive ID.

readIOPS: *integer (int32) nullable*

The number of read I/Os per second (unit: IOPS).

writeIOPS: *integer (int32) nullable*

The number of write I/Os per second (unit: IOPS).

readTransferRate: *number (double) nullable*

Read data transfer amount per second (unit: MiB/sec).

writeTransferRate: *number (double) nullable*

Write data transfer amount per second (unit: MiB/sec).

responseTime: *number (double)*

Average response time (unit: msec).

usage: *integer (int32)*

Ratio of I/O operating time of the drive against elapsed time (unit: %).

drivePerformanceListResponse: *object*

DESCRIPTION

A list of drive performance information (monitor information) at the specified time.

PROPERTIES

data: *object[]*

ITEMS

[drivePerformanceListResponseData: object \(on page 420\)](#)

drivePerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the drive when the information was collected. For performanceObjects, drives of which performance information could be collected when the CLI was executed are output as an array.

PROPERTIES

timestamp: *string (date-time)*

The time when this information was collected.

performanceObjects: *object[]*

A list of drive performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[drivePerformance: object \(on page 419\)](#)

dumpStatus: *object*

DESCRIPTION

Status of a dump log file creation request.

PROPERTIES

startedTime: *string (date-time) nullable*

Time when dump log file creation started.

completedTime: *string (date-time) nullable*

Time when dump log file creation ended.

label: *string (up to 64 chars) , must match `/^[a-zA-Z0-9!#$%&'\-\.@|\^_`{}~]{1,64}$/code>`*
nullable

Label name assigned to the file name as dump log file identifying information.

status: *string*, $x \in \{ \text{"NotCreated"}, \text{"Creating"}, \text{"Created"}, \text{"Failed"} \}$

Progress of dump log file creation.

- NotCreated: Status in which a dump log file is not created (the dump creation CLI has never been run).
- Creating: Status in which a dump log file is being created.
- Created: Status in which a dump log file is created successfully and is ready to be downloaded.
- Failed: Status in which dump log file creation did not succeed.

size: *integer (int32)*, $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 147456 \}$ nullable

File size that can be downloaded (unit: MiB).

triggerType: *string*, $x \in \{ \text{"Manual"}, \text{"Auto"} \}$ nullable

Trigger type for dump log file creation.

- Manual: A dump log file was created by user's request.
- Auto: A dump log file was automatically created by the system.

mode: *string*, $x \in \{ \text{"Base"}, \text{"Memory"}, \text{"Monitor"}, \text{"All"}, \text{"AutoCollection"} \}$ nullable

Information to be included in the dump log files.

- Base: Obtains log files required for initial analysis.
- Memory: Obtains memory dump files.
- Monitor: Obtains monitor information.
- All: Obtains all the log files.
- AutoCollection: The system automatically obtains log files.

fileName: *string (1 to 255 chars)* nullable

must match `/^[a-zA-Z0-9!#$%&'\-\.\@\^_\{\}~]{1,255}$/code`

Name of the dump log file.

numberOfSplitFiles: *integer (int32)*, $\{ x \in \mathbb{Z} \mid 1 \leq x \leq 369 \}$ nullable

The number that the dump log files are split when the files are downloaded separately.

error: [errorResponse: object \(on page 422\)](#) nullable

dumpStatusList: *object*

DESCRIPTION

A list of dump log file creation statuses.

PROPERTIES

data: *object[]*

ITEMS

dumpStatus: object (on page 420)

emailReportSettingOfEventLogSetting: *object*

DESCRIPTION

Event log email notification setting.

PROPERTIES

smtpSettings: *object[]* (1 item)

A list of SMTP settings.

ITEMS

smtpSettingOfEventLogSetting: object (on page 475)

errorInformationOfLdapServerConnectionVerification: *object*

DESCRIPTION

Information about an error returned by the LDAP server.

PROPERTIES

primaryServer: primaryServerOfLdapServerConnectionVerificationError: object (on page 458) nullable

secondaryServer: secondaryServerOfLdapServerConnectionVerificationError: object (on page 470) nullable

errorResponse: *object*

DESCRIPTION

Error information.

This object is returned with job attribute "error" if attribute "state" is "Failed".

PROPERTIES**errorSource: *string* (link) nullable**

URL on which the error occurred.

messageId: *string*

Message ID.

message: *string* (1 to 512 chars)

Error message.

cause: *string* (1 to 512 chars) nullable

Error factor.

solution: *string* (1 to 512 chars) nullable

Error solution.

solutionType: *string*, $x \in \{ "RETRY" , "SEE_ERROR_DETAIL" \}$

Error solution type.

errorCode: *object* nullable

Internal error code. This information is used to contact customer support or for maintenance.

eventLog: *object***DESCRIPTION**

Event log.

PROPERTIES**id: *string* (uuid)**

Event ID.

time: *string* (date-time)

The date and time when the event was detected.

timeInMicroseconds: *integer* (int64), $\{ x \in \mathbb{Z} \mid x \geq 0 \}$

The time (in microseconds) elapsed from January 1, 1970, 00:00:00:00 until when the event was detected.

If more than one event occurred at the same time, which event occurred first can be verified by comparing their "timeInMicroseconds" values.

category: *string*

Event category (for example, drive, storage pool).

eventName: *string*

Event name uniquely given.

messageId: *string*

Message ID.

severity: *string*, $x \in \{ \text{"Info"}, \text{"Warning"}, \text{"Error"}, \text{"Critical"}, \text{"Unknown"} \}$

The severity of the event. The following severity is output:

- Info: Notified for your information.
- Warning: Immediate action is not required, but this event might cause a major failure in the future.
- Error: Corrective action is required.
- Critical: Fatal failure. Immediate action is required.
- Unknown: Unknown event.

message: *string*

Event description.

solution: *string*

Recommended action for the generated event.

nodeLocation: *string*

Information about a node on which the event occurred.

eventType: *string*

Event type. This item is reserved for future use. "Informational" is always output.

severityLevel: *string*

Degree of urgency of the event. This item is reserved for future use. "1" is always output.

eventLogSetting: *object*

DESCRIPTION

Event log settings.

PROPERTIES

syslogForwardingSetting: [syslogForwardingSettingOfEventLogSetting: object \(on page 499\)](#)

emailReportSetting: [emailReportSettingOfEventLogSetting: object \(on page 422\)](#)

externalAuthServerConnectionVerification: *object*

DESCRIPTION

Information about the connection with the external authentication server.

PROPERTIES

authProtocol: *string*, $x \in \{ \text{"LDAP"} \}$

Authentication protocol used for external authentication.

ldap: [ldapServerConnectionVerification: object \(on page 438\)](#) nullable

externalAuthServerSetting: *object*

DESCRIPTION

Setting of the external authentication server.

PROPERTIES

isEnabled: *boolean*

Enables or disables external authentication.

authProtocol: *string*, $x \in \{ \text{"LDAP"} \}$

Authentication protocol used for external authentication.

ldapSetting: [ldapSettingOfExternalAuthServerSetting: object \(on page 438\)](#) nullable

faultDomain: *object*

DESCRIPTION

Fault domain information.

PROPERTIES

storageNodeIds: *string[]* (1 to 32 items)

A list of storage node IDs which belong to the fault domain.

ITEMS

string (uuid)

id: *string* (uuid)

Fault domain ID.

name: *string* (1 to 32 chars) , must match `/^[^-A-Za-z0-9_]{1,32}$/`

Fault domain name.

statusSummary: *string* , $x \in \{ \text{"Normal"}, \text{"Error"} \}$

Fault domain status summary.

- Normal: No action by the user is required.
- Error: Immediate action by the user is required.

status: *string* , $x \in \{ \text{"Normal"}, \text{"Error"} \}$

The fault domain status.

- Normal: Normal status.
- Error: A failure occurred in at least one storage node in the fault domain.

numberOfStorageNodes: *integer* (int32) , $\{ x \in \mathbb{Z} \mid 1 \leq x \leq 64 \}$

The number of storage nodes which belong to the fault domain.

faultDomainSummary: *object*

DESCRIPTION

Summary information about the fault domain.

PROPERTIES

id: *string* (uuid)

Fault domain ID.

name: *string* (1 to 32 chars) , must match `/^[^-A-Za-z0-9_]{1,32}$/`

Fault domain name.

statusSummary: *string* , $x \in \{ \text{"Normal"}, \text{"Error"} \}$

Fault domain status summary.

- Normal: No action by the user is required.
- Error: Immediate action by the user is required.

status: *string* , $x \in \{ \text{"Normal"}, \text{"Error"} \}$

The fault domain status.

- Normal: Normal status.
- Error: A failure occurred in at least one storage node in the fault domain.

numberOfStorageNodes: *integer* (int32) , $\{ x \in \mathbb{Z} \mid 1 \leq x \leq 64 \}$

The number of storage nodes which belong to the fault domain.

fcPortPerformance: *object*

DESCRIPTION

FC port performance information. Output only if the target port uses FC connection. In this case, iscsi is a null value.

PROPERTIES

target: [fcTargetPortPerformance: object \(on page 427\)](#) nullable

fcTarget: *object*

DESCRIPTION

FC port information. Output only if the compute port uses FC connection. In this case, iscsiInformation is a null value.

PROPERTIES

connectionType: *string*, $x \in \{ \text{"PointToPoint"} \}$

Network connection type.

sfpDataTransferRate: *string*, $x \in \{ \text{"8G"}, \text{"16G"}, \text{"32G"}, \text{"Unknown"} \}$

SFP data transfer rate (unit: bps). "Unknown" is output if the SFP extension port cannot be recognized or nothing is connected to the SFP extension port.

physicalWwn: *string*

Physical WWN of the compute port if "name" of the compute port is a logical WWN.

fcTargetPortPerformance: *object*

DESCRIPTION

Performance information of the FC port for the target operation. Output only if the compute port is for the target operation.

PROPERTIES

readIOPS: *integer (int32)*

The number of read I/Os per second (unit: IOPS).

writeIOPS: *integer (int32)*

The number of write I/Os per second (unit: IOPS).

readTransferRate: *number (double)*

Read data transfer amount per second (unit: MiB/sec).

writeTransferRate: number (double)

Write data transfer amount per second (unit: MiB/sec).

responseTime: number (double)

Average response time (unit: msec).

hba: object**DESCRIPTION**

Initiator information of the compute node.

PROPERTIES**id: string (uuid)**

The ID of the initiator.

serverId: string (uuid)

The ID of the compute node.

name: string

The initiator WWN for FC connection, or the iSCSI name for iSCSI connection.

protocol: string , x ∈ { "FC" , "iSCSI" }

Initiator connection protocol.

portIds: string[]

A list of IDs of the allocation destination compute port for the target operation.

ITEMS

string (uuid)

DESCRIPTION

The ID of the allocation destination compute port for the target operation.

vpsId: string , must match `/^[^system]$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: string (1 to 32 chars) , must match `/^[^system]$|[\-A-Za-z0-9,\.\:@_]{1,32}$/`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

healthStatus: *object*

DESCRIPTION

Health status.

PROPERTIES

resources: *object[]*

ITEMS

[resourceStatusOfHealthStatus: object \(on page 464\)](#)

internodePort: *object*

DESCRIPTION

Internode port information.

PROPERTIES

id: *string (uuid)*

Internode port ID.

storageNodeId: *string (uuid)*

The ID of the storage node that has an internode port.

macAddress: *string*

MAC address used for communication.

(Bare metal) The MAC address of the primary port is always used when teaming is enabled.

mtuSize: *integer (int32)*

MTU size.

interfaceName: *string*

An interface name, which is unique within a storage node that contains compute ports, control ports, and ports between storage nodes. Example: eth0, eth1

deviceName: *string (1 to 4096 chars)*

Device name of the NIC.

configuredPortSpeed: *string*, $x \in \{ \text{"Auto"}, \text{"1G"}, \text{"10G"}, \text{"25G"}, \text{"40G"}, \text{"100G"} \}$

Link speed setting of the physical port used for communication (unit: bps). This setting determines the actual link speed and duplex settings.

- Auto: The speed and duplex settings depend on the switch or SFP specifications.

portSpeedDuplex: *string*, $x \in \{ \text{"10Mbps Half"}, \text{"10Mbps Full"}, \text{"100Mbps Half"}, \text{"100Mbps Full"}, \text{"1Gbps Half"}, \text{"1Gbps Full"}, \text{"2.5Gbps Full"}, \text{"5Gbps Full"}, \text{"10Gbps Full"}, \text{"20Gbps Full"}, \text{"25Gbps Full"}, \text{"40Gbps Full"}, \text{"50Gbps Full"}, \text{"56Gbps Full"}, \text{"100Gbps Full"}, \text{"200Gbps Full"}, \text{"400Gbps Full"}, \text{"Unknown"}, \text{"LinkDown"}, \text{"DependsOnHypervisor"} \}$

Actual link speed and duplex settings of the physical port used for communication.

If configuredPortSpeed is Auto, a value is output as per the actual switch or SFP specifications.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output.

isTeamingEnabled: *string*, $x \in \{ \text{"true"}, \text{"false"}, \text{"DependsOnHypervisor"} \}$

Indicates whether teaming is enabled/disabled.

- true: Teaming is enabled.
- false: Teaming is disabled.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output.

ipv4Information: ipv4InformationOfInternodePort: object (on page 433)

teaming: teamingOfInternodePort: object (on page 503) nullable

(Virtual machine) Null is always output.

(Bare metal) The teaming information of the internode port.

redundancy: *integer (int32)*, $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 1 \}$ nullable

Redundancy of the physical port. If isTeamingEnabled is set to "DependsOnHypervisor", null is output. If isTeamingEnabled is set to "false", 0 is output.

- -1: No redundancy. (Both systems are down.)
- 0: No redundancy. (One system is down.)
- 1: There is redundancy.

status: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

Status of the internode port.

(Virtual machine) The output is always Normal.

(Bare metal)

- Normal: Operating normally.
- Warning: There is a problem in one port.
- Error: There is a problem in both ports.

statusSummary: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

Status summary of the internode port.

(Virtual machine) The output is always Normal.

(Bare metal)

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

internodePortPerformance: *object*

DESCRIPTION

Performance information of the internode port (monitor information). The infinite value (Infinity) is not output for double type values.

PROPERTIES

id: *string* (uuid)

The ID of the internode port.

receiveTransferRate: *number* (double)

Amount of data received per second (unit: MiB/sec).

sendTransferRate: *number* (double)

Amount of data sent per second (unit: MiB/sec).

internodePortPerformanceListResponse: *object*

DESCRIPTION

A list of internode port performance information (monitor information) at the specified time.

PROPERTIES

data: *object[]*

ITEMS

[internodePortPerformanceListResponseData: object \(on page 432\)](#)

internodePortPerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the internode port when the information was collected. For performanceObjects, inter nodes of which performance information could be collected when the API was executed are output as an array.

PROPERTIES

timestamp: *string (date-time)*

The time when this information was collected.

performanceObjects: *object[]*

A list of internode port performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[internodePortPerformance: object \(on page 431\)](#)

ipv4InformationOfControlPort: *object*

DESCRIPTION

IPv4 setting information of the control port.

PROPERTIES

address: *string*

IP address (IPv4).

subnetMask: *string*

Subnet mask (IPv4).

ipv4InformationOfInternodePort: *object*

DESCRIPTION

IPv4 setting information of the internode port.

PROPERTIES

address: *string*

IP address (IPv4).

subnetMask: *string*

Subnet mask (IPv4).

ipv4InformationOfUniversal: *object*

DESCRIPTION

IPv4 setting information of the iSCSI port.

PROPERTIES

address: *string (7 to 15 chars)*

IP address (IPv4).

subnetMask: *string (7 to 15 chars)*

Subnet mask (IPv4).

defaultGateway: *string (up to 15 chars)*

The IP address of the default gateway (IPv4).

ipv4RouteOfStorageNodeNetworkSetting: *object*

DESCRIPTION

Routing table (IPv4).

PROPERTIES

destination: *string*

Destination network.

gateway: *string*

Gateway (NextHop).

interface: *string*

The interface name.

ipv6InformationOfUniversal: *object*

DESCRIPTION

iSCSI port IPv6 information.

PROPERTIES

linklocalAddressMode: *string*, $x \in \{ "Auto", "Manual" \}$

Setting mode for link local addresses.

linklocalAddress: *string (up to 39 chars)*

IPv6 link local address.

An empty string "" is output if no address is set.

globalAddressMode: *string*, $x \in \{ "Auto", "Manual" \}$

Setting mode for IPv6 global addresses.

globalAddress1: *string (up to 39 chars)*

IPv6 global address 1.

An empty string "" is output if no address is set.

subnetPrefixLength1: *integer*, $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 128 \}$

Subnet prefix length of IPv6 global address 1.

defaultGateway: *string (up to 39 chars)*

The IP address of the default gateway (IPv6).

An empty string "" is output if no address is set.

iscsiPortPerformance: *object*

DESCRIPTION

Performance information of the iSCSI port.

Output only if the compute port uses iSCSI connection. In this case, fc is a null value.

PROPERTIES

target: [iscsiTargetPortPerformance: object \(on page 434\)](#) nullable

iscsiTargetPortPerformance: *object*

DESCRIPTION

Performance information of the iSCSI port when the target is running.

PROPERTIES**readIOPS: *integer (int32)***

The number of read I/Os per second (unit: IOPS).

writelOPS: *integer (int32)*

The number of write I/Os per second (unit: IOPS).

readTransferRate: *number (double)*

Read data transfer amount per second (unit: MiB/sec).

writeTransferRate: *number (double)*

Write data transfer amount per second (unit: MiB/sec).

responseTime: *number (double)*

Average response time (unit: msec).

iscsiUniversal: *object***DESCRIPTION**

iSCSI port information.

Output only if the compute port uses iSCSI connection. In this case, fclInformation is a null value.

PROPERTIES**ipMode: *string* , $x \in \{ "ipv4" , "ipv4v6" \}$**

Enables or disables IPv4/IPv6.

- ipv4: Enables IPv4 only.
- ipv4v6: Enables both IPv4 and IPv6.

ipv4Information: ipv4InformationOfUniversal: object (on page 433)**ipv6Information: ipv6InformationOfUniversal: object (on page 434)****delayedAck: *boolean***

Whether TCP delayed ACKs are used. When "true" is specified, TCP delayed ACKs are used.

mtuSize: *integer (int32)* , $\{ x \in \mathbb{Z} \mid 1500 \leq x \leq 9000 \}$

The MTU size of Ethernet (unit: byte).

macAddress: *string (17 chars)* , must match $!^{([a-f0-9]{2}):}{5}[a-f0-9]{2}$$

MAC address.

isIsnsClientEnabled: *boolean*

iSNS client function. Specifying "true" enables the iSNS client function.

isnsServers: object[] (1 item)

iSNS server as the connection destination in the iSNS client function.

ITEMS

[isnsServerOfIscsiUniversal: object \(on page 436\)](#)

isnsServerOfIscsiUniversal: object**DESCRIPTION**

Setting information of the iSNS server.

PROPERTIES

index: *integer (int32)* , { $x \in \mathbb{Z} \mid 1 \leq x \leq 1$ }

The ID of the iSNS server.

serverName: *string (up to 45 chars)* , must match `/^[^$|([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.)\{3\}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$|^((([0-9a-f]{1,4}){7}([0-9a-f]{1,4})|([0-9a-f]{1,4}){6}:)|([0-9a-f]{1,4}){5}((:[0-9a-f]{1,4})|:)|([0-9a-f]{1,4}){4}((:[0-9a-f]{1,4}){1,2})|:)|([0-9a-f]{1,4}){3}((:[0-9a-f]{1,4}){1,3})|:)|([0-9a-f]{1,4}){2}((:[0-9a-f]{1,4}){1,4})|:)|([0-9a-f]{1,4}){1}((:[0-9a-f]{1,4}){1,5})|:)|(:((:[0-9a-f]{1,4}){1,6})|:)))/`

IP address (IPv4 or IPv6) setting of the iSNS server. An empty string "" is output if no address is set.

port: *integer (int32)* , { $x \in \mathbb{Z} \mid 1 \leq x \leq 65536$ }

TCP port number of the iSNS server.

job: object**DESCRIPTION**

Job information.

PROPERTIES

jobId: *string (uuid)*

Job ID.

userId: *string (5 to 255 chars)* , must match `/^[^!#$$%&^\.@\^_`{}~]{5,255}$/`

The ID of the user who issued the API that triggers creation of the job.

status: *string*, $x \in \{ \text{"Initializing"}, \text{"Running"}, \text{"Completed"} \}$

The progress of the job.

- Initializing: Being initialized.
- Running: Being executed.
- Completed

state: *string*, $x \in \{ \text{"Queued"}, \text{"Started"}, \text{"StorageAccepted"}, \text{"Stopping"}, \text{"Succeeded"}, \text{"Failed"}, \text{"Stopped"}, \text{"Unknown"} \}$

The job status.

- Queued: The job is queued.
- Started: The job is started.
- StorageAccepted: The request is accepted by the storage cluster.
- Stopping: The job is in the progress of being stopped.
- Succeeded: The job succeeded.
- Failed: The job could not be executed.
- Stopped: The job is stopped.
- Unknown: The job status is unknown.

createdTime: *string (date-time)*

The time when the job was created.

updatedAt: *string (date-time)*

The time when the job state was updated.

completedTime: *string (date-time)nullable*

The time when the job was completed. Returns a null value if the job is not completed.

request: [request: object \(on page 463\)](#)

affectedResources: *object[]* nullable

The following is output.

- **subCommand: *string***
Subcommand name to access the resource targeted by job.
- **parameters: *object[]***
 - **name: *string***
The name of the option to access the resource for which job is targeted.
 - **value: *string***
Option value for accessing the resource targeted by job.

However, if it is a job as a result of running an unsupported maintenance API in the CLI, a URL (*string*) is output to access the target resource instead of subCommand and parameters.

error: errorResponse: object (on page 422) nullable

IdapServerConnectionVerification: *object*

DESCRIPTION

Connection with the LDAP server.

PROPERTIES

result: resultOfLdapServerConnectionVerification: object (on page 465)

error: errorInformationOfLdapServerConnectionVerification: object (on page 422)

IdapSettingOfExternalAuthServerSetting: *object*

DESCRIPTION

Setting information about LDAP authentication.

PROPERTIES

mappingMode: *string* , $x \in \{ "User" , "Group" \}$

Unit of mapping to the LDAP server.

- User: Mapping for each user. Grants permission to individual users in the LDAP server.
- Group: Mapping for each user group. Grants permission to individual user groups in the LDAP server.

primaryLdapServerUrl: *string* (up to 267 chars) , must match `/^$|^ldaps?:\W(((\[[1-9]?[0-9]\|1[0-9]{2}\|2[0-4][0-9]\|25[0-5])\.)\{3\}(\[[1-9]?[0-9]\|1[0-9]{2}\|2[0-4][0-9]\|25[0-5])\|(\[a-zA-Z0-9\|(\[a-zA-Z0-9\-\]{0,61}\[a-zA-Z0-9])\.\))*(\[a-zA-Z0-9\|(\[a-zA-Z0-9\-\]{0,61}\[a-zA-Z0-9])\|):(\[[1-9]\|1[0-9]\|0-9\]{1,3}\|1-5[0-9]\{4\}|6[0-4][0-9]\{3\}|65[0-4][0-9]\{2\}|655[0-2][0-9]\|6553[0-5])\)?/?$`

URL of the primary LDAP server. An empty string "" is returned if no URL is set.

secondaryLdapServerUrl: *string* (up to 267 chars) , must match `/^$|^ldaps?:\W(((\[[1-9]?[0-9]\|1[0-9]{2}\|2[0-4][0-9]\|25[0-5])\.)\{3\}(\[[1-9]?[0-9]\|1[0-9]{2}\|2[0-4][0-9]\|25[0-5])\|(\[a-zA-Z0-9\|(\[a-zA-Z0-9\-\]{0,61}\[a-zA-Z0-9])\.\))*(\[a-zA-Z0-9\|(\[a-zA-Z0-9\-\]{0,61}\[a-zA-Z0-9])\|):(\[[1-9]\|1[0-9]\|0-9\]{1,3}\|1-5[0-9]\{4\}|6[0-4][0-9]\{3\}|65[0-4][0-9]\{2\}|655[0-2][0-9]\|6553[0-5])\)?/?$`

URL of the secondary LDAP server. An empty string "" is returned if no URL is set.

isStartTlsEnabled: *boolean*

Enables or disables the StartTLS communication.

baseDn: *string* (up to 8192 chars)

Base Distinguished Name used as the point from where a user or user group will be searched for external authentication.

bindDn: *string* (up to 8192 chars)

Bind Distinguished Name used for performing a search on a tree specified in baseDn.

userIdAttribute: *string* (up to 8192 chars)

LDAP Attribute Type mapped as the user ID.

userTreeDn: *string* (up to 8192 chars)

Base Distinguished Name used as the point from where a user will be searched for external authentication.

Search with userTreeDn has priority when it is specified at the same time as baseDn.

The default of this item is an empty string. If the value is an empty string, a string of "OU=users," followed by baseDn is handled as userTreeDn.

userObjectClass: *string* (up to 8192 chars)

LDAP object class to be mapped as a user. Only the LDAP entry which is the applicable object class is mapped.

externalGroupNameAttribute: *string* (up to 8192 chars)

LDAP Attribute Type mapped as externalGroupName in the user group.

userGroupTreeDn: *string* (up to 8192 chars)

Base Distinguished Name used as the point from where a user group will be searched for external authentication.

Search with userGroupTreeDn has priority when it is specified at the same time as baseDn.

The default of this item is an empty string. If the value is an empty string, a string of "OU=userGroups," followed by baseDn is handled as userGroupTreeDn.

userGroupObjectClass: *string* (up to 8192 chars)

LDAP object class to be mapped as a user group. Only the LDAP entry which is the applicable object class is mapped.

timeoutSeconds: *integer* (int32) , { $x \in \mathbb{Z} \mid -1 \leq x \leq 65535$ }

Timeout time (in seconds) applied to the connection to the external authentication server. -1 means that a session never times out.

retryIntervalMilliseconds: *integer* (int32) , { $x \in \mathbb{Z} \mid 1 \leq x \leq 3000$ }

Retry interval (in milliseconds) in communication with the external authentication server.

maxRetries: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 65535$ }

Number of retries in communication with the external authentication server. 0 means that no retry is performed.

license: *object*

DESCRIPTION

License information.

PROPERTIES

id: *string* (uuid)

The ID of the license.

programProductName: *string* (1 to 63 chars)

Name of the program product.

"_NotSupported" is displayed for an unsupported license.

status: *string* , $x \in \{ \text{"Active"} , \text{"Warning"} , \text{"Overwritten"} , \text{"GracePeriod"} , \text{"Invalid"} \}$

Status of the license.

- Active: Status in which a license is applied to the system.
- Warning: Status in which a license is applied to the system, but a warning threshold is exceeded.

- Overwritten: The license is invalid because a conflicting license exists.
- GracePeriod: The license has expired or the contract capacity is exceeded.
- Invalid: The license is invalid.

statusSummary: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

License status summary.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

cause: *string* nullable

Cause of Warning or Error in the license status summary.

ITEMS

string[], $x \in \{ \text{"Capacity"}, \text{"Term"} \}$

- Capacity: The licensed capacity is exceeded (including the license threshold setting).
- Term: The license has expired (including the license threshold setting).

keyType: *string*, $x \in \{ \text{"Trial"}, \text{"Perpetual"}, \text{"Subscription"}, \text{"Utility"}, \text{"Emergency"}, \text{"NonProductionTestAndDevelopment"} \}$

License key type.

permittedCapacityInTiB: *integer (int64)*, $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 268435455 \}$ nullable

Total logical capacity (in TiB) of all storage pools allowed by the license. A null value is output if no limitation is applied to the capacity.

totalPoolCapacityInGiB: *integer (int64)*, $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 274877906943 \}$ nullable

Total logical capacity (in GiB) of all storage pools. A null value is output if no limitation is applied to the capacity.

remainingDays: *integer (int64)*, $\{ x \in \mathbb{Z} \mid -120 \leq x \leq 1000000 \}$ nullable

Number of remaining days. A null value is output if the license can be used indefinitely.

If the status is Active, Warning, or Overwritten, this number indicates the number of remaining days.

If the status is GracePeriod or Invalid, this value is a minus value, indicating the number of days since the license has expired or the licensed capacity was exceeded. For a license whose status is GracePeriod, the status becomes Invalid when remainingDays is -31 or less.

licenseSetting: *object*

DESCRIPTION

License setting.

PROPERTIES

warningThresholdSetting: [warningThresholdSettingOfLicenseSetting: object \(on page 528\)](#)

lockoutSettingOfUserAuthSetting: *object*

DESCRIPTION

Lockout settings.

This setting is applied only to users whose authentication is local.

PROPERTIES

maxAttempts: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 10$ }

Number of consecutive login failures until the account is locked. 0 means that the function is disabled (the user can be unsuccessful an unlimited number of times).

lockoutSeconds: *integer (int32)* , { $x \in \mathbb{Z} \mid 60 \leq x \leq 600$ }

Duration (in seconds) after the account is locked due to consecutive login failures until the account is unlocked.

loginMessage: *object*

DESCRIPTION

Message to be displayed in the GUI login window and CLI warning banner.

PROPERTIES

message: *string* (up to 6144 chars) , must match `/^[a-zA-Z0-9!"#$%&"\()*!+,|-\.V:;<=>|\?@[\|\|]^\^_\{\|\}\~\|lrln]{0,6144}$/`

Message body to be displayed in the GUI login window and CLI warning banner. An empty string "" means that nothing is displayed.

masterVolume: *object*

DESCRIPTION

P-VOL information.

PROPERTIES

masterVolumeId: *string* (uuid)

The ID of the volume which is P-VOL.

vpsId: *string*, must match `/^(\system)$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string* (1 to 32 chars), must match `/^(\system)$|[\-A-Za-z0-9,\.:@_]{1,32}$/`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

qosParam: *object*

A QoS-related parameter.

PROPERTIES

upperLimitForIops: *integer* (int64), $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 2147483647 \}$

The upper limit of volume performance (in IOPS).

The value -1 indicates that no upper limit is placed on volume performance (in IOPS).

upperLimitForTransferRate: *integer* (int64), $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 2097151 \}$

The upper limit of volume performance (in MiB/s).

The value -1 indicates that no upper limit is placed on volume performance (in MiB/s).

upperAlertAllowableTime: *integer* (int32), $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 600 \}$

The alert threshold value (in seconds) for the upper limit of volume performance.

The value -1 indicates that no entries are output to the event log.

VPS administrators cannot specify this property when creating or editing volumes.

upperAlertTime: string (date-time) nullable

The last time the upper limit of volume performance was continuously exceeded and the conditions for the alert threshold of the performance upper limit were met (UTC).

memoryPerformance: object**DESCRIPTION**

Performance information of the memory.

PROPERTIES**usage: number (double)**

Memory usage (unit: %).

passwordAgeSettingOfUserAuthSetting: object**DESCRIPTION**

Password expiration time setting. This setting is applied only to users whose authentication is local.

PROPERTIES**requiresInitialPasswordReset: boolean**

Whether a new user is forced to change the default password before the initial login. If true, a new user is forced to change the default password before the initial login.

minAgeDays: integer (int32) , { x ∈ ℤ | 0 ≤ x ≤ 10 }

Number of days after which you can change the password again after you changed the password last. 0 means that the expiration time is disabled (the user can change the password immediately).

maxAgeDays: integer (int32) , { x ∈ ℤ | 0 ≤ x ≤ 365 }

Number of days during which you can use the password after you changed the password last. The password is invalid after this period has elapsed. 0 means that this limit is disabled (the user can use the password indefinitely).

passwordComplexitySettingOfUserAuthSetting: object**DESCRIPTION**

Password complexity settings.

This setting is applied only to users whose authentication is local.

PROPERTIES

minLength: *integer (int32)* , { $x \in \mathbb{Z} \mid 1 \leq x \leq 256$ }

Minimum password length.

minNumberOfUpperCaseChars: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 256$ }

Minimum number of uppercase alphabetical characters contained in a password.

minNumberOfLowerCaseChars: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 256$ }

Minimum number of lowercase alphabetical characters contained in a password.

minNumberOfNumerals: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 256$ }

Minimum number of numerals (0 to 9) contained in a password.

minNumberOfSymbols: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 256$ }

Minimum number of symbols (excluding alphanumeric characters) contained in a password.

numberOfPasswordHistory: *integer (int32)* , { $x \in \mathbb{Z} \mid 1 \leq x \leq 10$ }

Number of generations from generation 1 (when the password was changed) for which use of a previously used password is prohibited. 1 means that this limit is disabled (the user can set the same password as a past one).

path: object

DESCRIPTION

Path information.

PROPERTIES

id: *string*

The ID of the path. Format: "<hbald>,<portId>" Where hbald is the initiator ID of the computer node, and portId is the ID of the compute port for the target operation.

serverId: *string (uuid)*

The ID of the compute node.

hbaName: *string*

The initiator WWN of the compute node for FC connection, or iSCSI name for iSCSI connection.

hbald: *string (uuid)*

The initiator ID of the compute node.

portId: *string (uuid)*

The ID of the compute port to which the initiator of the compute node is allocated.

portName: string

The WWN (for FC connection) or iSCSI Name (for iSCSI connection) of the compute port to which the initiator of the compute node is allocated.

portNickname: string , must match /^[a-zA-Z0-9!#\$%&'*+,-./:;=@^_{|}~\(\)\[\]:]{1,32}\$/

The nickname of the compute port to which the initiator of the compute node is allocated.

vpsId: string , must match /^(\system)\$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}\$/

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: string (1 to 32 chars) , must match /^(\system)\$|[\-A-Za-z0-9,\.:@_]{1,32}\$/

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

pathOfServer: object

DESCRIPTION

Information about registered paths.

PROPERTIES

hbaName: string

The initiator WWN of the compute node for FC connection, or iSCSI name for iSCSI connection.

portIds: string[]

A list of IDs of the allocation destination compute port for the target operation.

ITEMS

string (uuid)

DESCRIPTION

The ID of the allocation destination compute port for the target operation.

pool: object

DESCRIPTION

Storage pool information.

PROPERTIES

id: *string* (uuid)

The ID of the storage pool.

name: *string* (1 to 32 chars)

The name of the storage pool.

protectionDomainId: *string* (uuid)

The ID of the protection domain to which the volume is belonging.

statusSummary: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

The summary of the storage pool status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string*, $x \in \{ \text{"Normal"}, \text{"ExceededThreshold"}, \text{"Error"} \}$

The storage pool status. The following status is returned:

- Normal: Operating normally.
- ExceededThreshold: The threshold is exceeded.
- Error: Cannot be used because the storage pool is full or blocked.

totalCapacity: *integer* (int64), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674 \}$

The logical capacity of the storage pool (unit: MiB).

totalRawCapacity: *integer* (int64), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807 \}$

The effective physical capacity in the total physical capacity of the storage pool (Unit: MiB)

usedCapacity: *integer* (int64), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674 \}$ nullable

The used capacity of the storage pool (unit: MiB).

freeCapacity: *integer* (int64), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674 \}$ nullable

The available capacity of the storage pool (unit: MiB).

totalPhysicalCapacity: *integer* (int64), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807 \}$

The total physical capacity of the storage pool (unit: MiB).

metaDataPhysicalCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The capacity for control information in the total physical capacity of the storage pool (unit: MiB).

reservedPhysicalCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The internally reserved area in the effective physical capacity of the storage pool. This area cannot be configured redundantly (unit: MiB).

usablePhysicalCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ }

The capacity which can be used as the logical capacity in the effective physical capacity of the storage pool (unit: MiB).

blockedPhysicalCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The blocked capacity in the effective physical capacity of the storage pool (unit: MiB).

totalVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of volumes that have been created on this storage controller (unit: MiB).

provisionedVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of provisioned volumes that have been created on this storage controller (unit: MiB).

otherVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of other volumes that have been created on this storage controller (unit: MiB).

temporaryVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of temporary volumes that have been created on this storage controller (unit: MiB).

capacityManage: *object*

Capacity management.

PROPERTIES

usedCapacityRate: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ } nullable

Usage rate (unit: %).

maximumReserveRate: *integer (int32)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 65534$ }

Maximum reserve rate (%). -1 indicates the capacity is unlimited.

maximumReserveRate is currently fixed to -1.

thresholdWarning: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ }

The warning threshold (unit: %).

thresholdWarning is currently fixed to 70.

thresholdDepletion: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ }

The Depletion threshold (unit: %).

thresholdDepletion is currently fixed to 80.

thresholdStorageControllerDepletion: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ }

The depletion threshold of the storage controller managing the storage pool (unit: %).

thresholdDepletion is currently fixed to 95.

savingEffects: savingEffectOfPool: object (on page 465)

numberOfVolumes: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 32768$ }

The number of volumes belonging to the storage pool.

redundantPolicy: *string* , $x \in \{ \text{"Mirroring"} , \text{"HitachiPolyphaseErasureCoding"} \}$

User data protection method.

redundantType: *string* , $x \in \{ \text{"Duplication"} , \text{"2D+1P"} , \text{"4D+1P"} , \text{"4D+2P"} \}$

User data protection type.

dataRedundancy: *integer (int32)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 2$ }

Redundancy of user data. User data will not be lost for this number of storage nodes in the event of the following failures.

- Failure of one or more drives in the storage node.
- Failure of the storage node.

Value of 0 means no redundancy, and -1 means that the user data has been lost.

storageControllerCapacitiesGeneralStatus: *string* , $x \in \{ \text{"Normal"} , \text{"Warning"} , \text{"Error"} \}$

Summary information about the capacity status (capacityStatus) of all the storage controllers managing the storage pool.

- Normal: capacityStatus of all the storage controllers managing the storage pool is Normal.
- Warning: At least one of the storage controllers managing the storage pool has Warning capacityStatus and none have Error capacityStatus.
- Error: At least one of the storage controllers managing the storage pool has Error capacityStatus.

rebuildCapacityPolicy: *string* , $x \in \{ \text{"Fixed"} , \text{"Variable"} \}$

Rebuild capacity policy.

- Fixed: Secures capacity required for Rebuild as a fixed Rebuild-dedicated capacity.
- Variable: Secures a part of user data capacity as rebuild capacity when the storage pool usage is low, and uses the capacity entirely as user data capacity when the storage pool usage increases.

rebuildCapacityResourceSetting: *object*

Resource type and the number of resources of rebuild capacity.

PROPERTIES

numberOfTolerableDriveFailures: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 23$ } nullable

The number of drive failures that can be tolerated.

rebuildCapacityStatus: *string* , $x \in \{ \text{"Sufficient"} , \text{"PartialShortage"} , \text{"None"} \}$

The status of securing rebuild capacity.

- Sufficient: The capacity required for Rebuild is already secured.
- PartialShortage: A part of the capacity required for Rebuild is already secured.
- None: None of the capacity required for Rebuild is secured.

rebuildableResources: rebuildableResourcesOfPool: *object (on page 462)*

Resource for which Rebuild is possible.

poolCapacity: *object*

DESCRIPTION

Capacity information (monitor information) for each storage pool. A null value is output if the information could not be obtained.

PROPERTIES

id: *string (uuid)*

The ID of the storage pool.

usedCapacity: *integer (int64)* nullable

Total occupied capacity (unit: MiB).

poolCapacityListResponseData: *object*

DESCRIPTION

The capacity information (monitor information) of the storage pool when the information was collected. For performanceObjects, storage pools of which capacity information could be collected when the API was executed are output as an array.

PROPERTIES**timestamp: *string* (date-time)**

The time when this information was collected.

performanceObjects: *object*[]

A list of storage pool capacity information (monitor information) collected at the time specified for timestamp.

ITEMS

poolCapacity: object (on page 450)

poolPerformance: *object***DESCRIPTION**

Performance information (monitor information) for each storage pool. A null value is output if the information could not be obtained. The infinite value (Infinity) is not output as the double type value.

PROPERTIES**id: *string* (uuid)**

The ID of the storage pool.

volumeReadIOPS: *integer* (int64) nullable

The amount of write transfer across all volumes in the storage pool per second (unit: MiB/sec).

volumeWriteIOPS: *integer* (int64) nullable

The number of write I/Os across all volumes in the storage pool per second (unit: IOPS).

volumeReadTransferRate: *number* (double) nullable

The amount of read transfer across all volumes in the storage pool per second (unit: MiB/sec).

volumeWriteTransferRate: *number* (double) nullable

The amount of write transfer across all volumes in the storage pool per second (unit: MiB/sec).

poolPerformanceListResponseData: *object***DESCRIPTION**

The performance information (monitor information) of the storage pool when the information was collected. For performanceObjects, storage pools of which performance information could be collected when the CLI was executed are output as an array.

PROPERTIES**timestamp:** *string* (date-time)

The time when this information was collected.

performanceObjects: *object[]*

A list of storage pool performance information (monitor information) collected at the time specified for timestamp.

ITEMSpoolPerformance: object (on page 451)**port: object****DESCRIPTION**

Compute port information.

PROPERTIES**id:** *string* (uuid)

The ID of the compute port.

protocol: *string*, $x \in \{ "FC" , "iSCSI" \}$

The protocol for connecting compute ports.

type: *string*, $x \in \{ "Target" , "Initiator" , "Universal" \}$

The type of the compute port.

nickname: *string*, must match `/^[a-zA-Z0-9!#$%&'*\+\-\.=@\^_\{\}\~\|\[\]:]{1,32}$/code>`

The compute port nickname. Each compute port must have its own unique nickname.

name: *string*

The WWN of the allocation destination compute port of the target operation for FC connection, or the iSCSI name for iSCSI connections.

The same name cannot be used for multiple compute ports.

configuredPortSpeed: *string*, $x \in \{ "16G" , "32G" , "Auto" \}$

Link speed setting. The actual link speed is determined based on this setting.

- Auto: The speed is automatically set according to the switch and FC cable specifications.
- 16G, 32G: The compute port runs at the set speed even if communication is possible at a speed faster than the set value.

portSpeed: *string*, $x \in \{ "1G" , "2G" , "4G" , "8G" , "10G" , "16G" , "25G" , "32G" , "40G" , "Unknown" , "LinkDown" , "DependsOnHypervisor" \}$

Actual link speed (unit: bps).

If configuredPortSpeed is Auto, a value is output as per the actual cable or switch specifications.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output for iSCSI connection configuration.

portSpeedDuplex: *string*, $x \in \{ "10Mbps Half" , "10Mbps Full" , "100Mbps Half" , "100Mbps Full" , "1Gbps Half" , "1Gbps Full" , "2.5Gbps Full" , "5Gbps Full" , "10Gbps Full" , "20Gbps Full" , "25Gbps Full" , "40Gbps Full" , "50Gbps Full" , "56Gbps Full" , "100Gbps Full" , "200Gbps Full" , "400Gbps Full" , "1G" , "8G" , "10G" , "16G" , "25G" , "32G" , "40G" , "Unknown" , "LinkDown" , "DependsOnHypervisor" \}$

Actual link speed and duplex settings of the physical port used for communication. Only link speed is displayed for FC connection configuration.

If configuredPortSpeed is Auto, a value is output as per the actual cable or switch specifications.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output for iSCSI connection configuration.

protectionDomainId: *string* (uuid)

The ID of the protection domain to which the volume is belonging.

storageNodeId: *string* (uuid)

The ID of the storage node that has compute ports.

interfaceName: *string*

An interface name, which is unique within a storage node that contains compute ports, control ports, and ports between storage nodes. Example: eth0, eth1

statusSummary: *string*, $x \in \{ "Normal" , "Warning" , "Error" \}$

The summary of the compute port status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string*, $x \in \{ \text{"Normal"} , \text{"Error"} , \text{"MaintenanceBlockage"} \}$

The status of the compute port.

- Normal: Available.
- Error: Unavailable.
- MaintenanceBlockage: Unavailable (during maintenance blockade).

fcInformation: **fcTarget:** **object** ([on page 427](#)) **nullable**

iscsiInformation: **iscsiUniversal:** **object** ([on page 435](#)) **nullable**

portAuthSetting: *object*

DESCRIPTION

Information about the authentication settings for the compute port for the target operation.

PROPERTIES

id: *string* (**uuid**)

The ID of the compute port.

authMode: *string*, $x \in \{ \text{"CHAP"} , \text{"CHAPComplyingWithInitiatorSetting"} , \text{"None"} \}$

Authentication scheme of the compute port.

- CHAP: CHAP authentication.
- CHAPComplyingWithInitiatorSetting: Complies with the setting of the compute node. If the setting is "CHAP", CHAP authentication is performed. If the setting is "None", no authentication is required.
- None: No authentication is performed.

isDiscoveryChapAuth: *boolean*

Enables or disables CHAP authentication at the time of discovery in iSCSI connection.

Enables CHAP authentication at the time of discovery when true is specified.

isMutualChapAuth: *boolean*

Enables or disables mutual CHAP authentication. Enables mutual CHAP authentication when true is specified.

portPerformance: *object*

DESCRIPTION

Performance information of the compute port (monitor information). A null value is set if the information could not be obtained. The infinite value (Infinity) is not output for double type values.

PROPERTIES

id: *string* (uuid)

The ID of the compute port.

fc: [fcPortPerformance: object \(on page 427\)](#) nullable

iscsi: [iscsiPortPerformance: object \(on page 434\)](#) nullable

portPerformanceListResponse: *object*

DESCRIPTION

A list of compute port performance information (monitor information) at the specified time.

PROPERTIES

data: *object[]*

ITEMS

[portPerformanceListResponseData: object \(on page 455\)](#)

portPerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the compute port when the information was collected. For performanceObjects, compute ports of which performance information could be collected when the API was executed are output as an array.

PROPERTIES

timestamp: *string* (date-time)

The time when this information was collected.

performanceObjects: *object[]*

A list of compute port performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[portPerformance: object \(on page 455\)](#)

portSummary: *object*

DESCRIPTION

Summary information about the compute port.

PROPERTIES

id: *string* (uuid)

The ID of the compute port.

protocol: *string*, $x \in \{ "FC" , "iSCSI" \}$

The protocol for connecting compute ports.

type: *string*, $x \in \{ "Target" , "Initiator" , "Universal" \}$

The type of the compute port.

nickname: *string*, must match `/^[a-zA-Z0-9!#$%&'*+,-.=@^_{}~\|\[\]:]{1,32}$/`

The compute port nickname. Each compute port must have its own unique nickname.

name: *string*

The WWN of the allocation destination compute port of the target operation for FC connection, or the iSCSI name for iSCSI connections.

The same name cannot be used for multiple compute ports.

configuredPortSpeed: *string*, $x \in \{ "16G" , "32G" , "Auto" \}$

Link speed setting. The actual link speed is determined based on this setting.

- Auto: The speed is automatically set according to the switch and FC cable specifications.
- 16G, 32G: The compute port runs at the set speed even if communication is possible at a speed faster than the set value.

portSpeed: *string*, $x \in \{ "1G" , "2G" , "4G" , "8G" , "10G" , "16G" , "25G" , "32G" , "40G" , "Unknown" , "LinkDown" , "DependsOnHypervisor" \}$

Actual link speed (unit: bps).

If configuredPortSpeed is Auto, a value is output as per the actual cable or switch specifications.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output for iSCSI connection configuration.

portSpeedDuplex: *string*, $x \in \{ "10Mbps Half" , "10Mbps Full" , "100Mbps Half" , "100Mbps Full" , "1Gbps Half" , "1Gbps Full" , "2.5Gbps Full" , "5Gbps Full" , "10Gbps Full" , "20Gbps Full" , "25Gbps Full" , "40Gbps Full" , "50Gbps Full" , "56Gbps Full" , "100Gbps Full" , "200Gbps Full" , "400Gbps Full" , "1G" , "8G" , "10G" , "16G" , "25G" , "32G" , "40G" , "Unknown" , "LinkDown" , "DependsOnHypervisor" \}$

Actual link speed and duplex settings of the physical port used for communication. Only link speed is displayed for FC connection configuration.

If configuredPortSpeed is Auto, a value is output as per the actual cable or switch specifications.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.
- DependsOnHypervisor: Depends on the hypervisor setting.

(Virtual machine) DependsOnHypervisor is always output for iSCSI connection configuration.

protectionDomainId: *string* (uuid)

The ID of the protection domain to which the volume is belonging.

storageNodeId: *string* (uuid)

The ID of the storage node that has compute ports.

interfaceName: *string*

An interface name, which is unique within a storage node that contains compute ports, control ports, and ports between storage nodes. Example: eth0, eth1

statusSummary: *string*, $x \in \{ "Normal" , "Warning" , "Error" \}$

The summary of the compute port status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string*, $x \in \{ \text{"Normal"} , \text{"Error"} , \text{"MaintenanceBlockage"} \}$

The status of the compute port.

- Normal: Available.
- Error: Unavailable.
- MaintenanceBlockage: Unavailable (during maintenance blockade).

fcInformation: **fcTarget:** **object (on page 427) nullable**

iscsiInformation: **iscsiUniversal:** **object (on page 435) nullable**

primaryServerOfLdapServerConnectionVerificationError: object

DESCRIPTION

Error information in the primary LDAP server.

If the primary LDAP server did not return an error, primaryServer returns a null value instead of the object.

If the primary LDAP server is not registered, primaryServer also returns a null value.

PROPERTIES

code: *integer (int32)*

LDAP protocol error code when connecting the primary LDAP server.

-1 is output if the LDAP server cannot be connected.

message: *string*

Description of the LDAP protocol error code when connecting the primary LDAP server.

primaryServerOfLdapServerConnectionVerificationResult: object

DESCRIPTION

Result of primary LDAP server connection verification.

If the primary LDAP server could not be reached or it returned an error, primaryServer returns a null value instead of the object.

If the primary LDAP server is not registered, primaryServer also returns a null value.

PROPERTIES

numberOfExternalUsers: *integer (int64)*

The number of users who could be searched on the primary LDAP server and can be externally authenticated.

0 means that communication was unsuccessful or no user could be found because the DN was set incorrectly.

numberOfExternalUserGroups: *integer (int64)*

The number of user groups who could be searched on the primary LDAP server and can be externally authenticated.

0 means that communication was unsuccessful or no user group could be found because the DN was set incorrectly.

protectionDomain: *object*

DESCRIPTION

Information about the protection domain.

PROPERTIES

totalPhysicalCapacity: *integer (int64)*

Total drive capacity in a protection domain (unit: MiB)

isFastRebuildEnabled: *boolean*

Whether fast rebuild is enabled or disabled. Only "true" is output.

id: *string (uuid)*

Protection domain ID.

name: *string (1 to 32 chars)*

The name of the protection domain.

redundantPolicy: *string*, x ∈ { "Mirroring", "HitachiPolyphaseErasureCoding" }

User data protection method.

redundantType: *string*, x ∈ { "Duplication", "2D+1P", "4D+1P", "4D+2P" }

User data protection type.

driveDataRelocationStatus: *string*, x ∈ { "Stopped", "Running", "Error", "Suspended" }

Status of drive data relocation.

- Stopped: Status in which drive data relocation is not being performed.
- Running: Status in which drive data relocation is being performed.

- Error: Status in which drive data relocation cannot be performed due to an error.
- Suspended: Status in which drive data relocation is suspended at the request of the user.

driveDataRelocationProgressRate: integer (int32) , { x ∈ ℤ | 0 ≤ x ≤ 100 } nullable

Progress rate (%) of drive data relocation.

A null value is output if driveDataRelocationStatus is "Stopped".

rebuildStatus: string , x ∈ { "Stopped" , "Running" , "Error" }

Rebuild status.

- Stopped: Status in which rebuild processing is not being performed.
- Running: Status in which rebuild processing is being performed.
- Error: Status in which rebuild processing cannot be performed due to an error.

rebuildProgressRate: integer (int32) , { x ∈ ℤ | 0 ≤ x ≤ 100 } nullable

Progress rate (%) of rebuild processing.

A null value is output if rebuildStatus is "Stopped".

memoryMode: string , x ∈ { "VolatileMemory" }

Information about memory in use.

- VolatileMemory: Volatile memory.

asyncProcessingResourceUsageRate: string , x ∈ { "VeryHigh" , "High" , "Middle" , "Low" }

Controls the resource usage rate of the internal processing I/O.

numberOfFaultDomains: integer (int32) , { x ∈ ℤ | 1 ≤ x ≤ 1024 }

The total number of fault domains in the protection domain.

storageControllerClusteringPolicy: string , x ∈ { "OneRedundantStorageNode" , "TwoRedundantStorageNodes" }

Cluster policy of the storage controller. This represents the number of storage nodes on which the standby storage controller node runs when a storage controller cluster is configured.

- OneRedundantStorageNode: The standby storage controller node runs on a single storage node.
- TwoRedundantStorageNodes: The standby storage controller node runs on two storage nodes.

minimumMemorySize: integer (int64) , { x ∈ ℤ | 0 ≤ x ≤ 268435456 }

Smallest value of memory among storage nodes belonging to the protection domain (unit: MiB).

protectionDomainSummary: *object*

DESCRIPTION

Summary information about protection domain.

PROPERTIES

id: *string* (uuid)

Protection domain ID.

name: *string* (1 to 32 chars)

The name of the protection domain.

redundantPolicy: *string*, $x \in \{ \text{"Mirroring"}, \text{"HitachiPolyphaseErasureCoding"} \}$

User data protection method.

redundantType: *string*, $x \in \{ \text{"Duplication"}, \text{"2D+1P"}, \text{"4D+1P"}, \text{"4D+2P"} \}$

User data protection type.

driveDataRelocationStatus: *string*, $x \in \{ \text{"Stopped"}, \text{"Running"}, \text{"Error"}, \text{"Suspended"} \}$

Status of drive data relocation.

- Stopped: Status in which drive data relocation is not being performed.
- Running: Status in which drive data relocation is being performed.
- Error: Status in which drive data relocation cannot be performed due to an error.
- Suspended: Status in which drive data relocation is suspended at the request of the user.

driveDataRelocationProgressRate: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 100 \}$ nullable

Progress rate (%) of drive data relocation.

A null value is output if driveDataRelocationStatus is "Stopped".

rebuildStatus: *string*, $x \in \{ \text{"Stopped"}, \text{"Running"}, \text{"Error"} \}$

Rebuild status.

- Stopped: Status in which rebuild processing is not being performed.
- Running: Status in which rebuild processing is being performed.
- Error: Status in which rebuild processing cannot be performed due to an error.

rebuildProgressRate: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 100 \}$ nullable

Progress rate (%) of rebuild processing.

A null value is output if rebuildStatus is "Stopped".

memoryMode: *string* , $x \in \{ \text{"VolatileMemory"} \}$

Information about memory in use.

- VolatileMemory: Volatile memory.

asyncProcessingResourceUsageRate: *string* , $x \in \{ \text{"VeryHigh"}, \text{"High"}, \text{"Middle"}, \text{"Low"} \}$

Resource usage rate of the internal processing I/O. Controls the resource usage rate of the internal processing I/O.

numberOfFaultDomains: *integer (int32)* , $\{ x \in \mathbb{Z} \mid 1 \leq x \leq 1024 \}$

The total number of fault domains in the protection domain.

storageControllerClusteringPolicy: *string* , $x \in \{ \text{"OneRedundantStorageNode"}, \text{"TwoRedundantStorageNodes"} \}$

Cluster policy of the storage controller. This represents the number of storage nodes on which the standby storage controller node runs when a storage controller cluster is configured.

- OneRedundantStorageNode: The standby storage controller node runs on a single storage node.
- TwoRedundantStorageNodes: The standby storage controller node runs on two storage nodes.

minimumMemorySize: *integer (int64)* , $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 268435456 \}$

Smallest value of memory among storage nodes belonging to the protection domain (unit: MiB).

rebuildableResourcesOfPool: *object*

DESCRIPTION

Information about resources for which Rebuild is possible.

PROPERTIES

numberOfDrives: *integer (int32)* , $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 23 \}$ nullable

The number of drives for which Rebuild is possible.

rebuildableResourcesOfStorageNode: *object*

DESCRIPTION

Information about resources for which Rebuild is possible.

PROPERTIES**numberOfDrives:** *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 23$ } nullable

The number of drives for which Rebuild is possible.

request: object**DESCRIPTION**

Request information.

PROPERTIES**subCommand:** *string*

Requested subcommand name.

However, in the case of a request as a result of running the maintenance API without CLI support, the following is output instead of subCommand.

requestUrl: *string (link)*

A URL requested by an asynchronous processing API. If a character string is longer than 2048 bytes, it is displayed in abbreviated form (in-between characters of the string are trimmed).

requestMethod: *string* , $x \in \{ \text{"GET"} , \text{"PATCH"} , \text{"POST"} , \text{"DELETE"} \}$

HTTP method requested by an asynchronous processing API.

requestBody: *string nullable*

Request body when requested by an asynchronous processing API. If a character string is longer than 1024 bytes, it is displayed in abbreviated form (in-between characters of the string are trimmed).

A parameter which is not specified by the user or a parameter for which its default is specified is not output. Only parameters specified in the application/json form are output. Parameters in the multipart/form-data form are not output.

requestAuthenticationSettingOfSnmpSetting: object**DESCRIPTION**

Setting for whether to permit SNMP requests.

PROPERTIES**snmpv2cSettings:** *object[] (up to 3 items)*

A list of settings for whether to permit SNMPv2c requests.

ITEMS[snmpv2cSettingOfRequestAuthenticationSetting: object \(on page 480\)](#)

resourceStatusOfHealthStatus: *object*

DESCRIPTION

Status information of each resource in the health status.

PROPERTIES

type: *string* , $x \in \{ \text{"Storage"}, \text{"StorageNode"}, \text{"Pool"}, \text{"Port"}, \text{"Drive"}, \text{"Volume"}, \text{"License"}, \text{"FaultDomain"}, \text{"ControlPort"}, \text{"InternodePort"} \}$

Resource type.

- Storage: Storage cluster. You can obtain resource information by "storage_show".
- StorageNode: Storage node. You can obtain resource information by "storage_node_list".
- Pool: Storage pool. You can obtain resource information by "pool_list".
- Port: Compute port. You can obtain resource information by "port_list".
- Drive: Drive. You can obtain resource information by "drive_list".
- Volume: Volume. You can obtain resource information by "volume_list".
- License: License. You can obtain resource information by "license_list".
- FaultDomain: Fault domain. You can obtain resource information by "fault_domain_list".
- ControlPort; Control port. You can obtain resource information by "control_port_list".
- InternodePort: Internode port. You can obtain resource information by "internode_port_list".

status: *string* , $x \in \{ \text{"Normal"}, \text{"Alerting"} \}$

Resource status of the type which belongs to the protection domain of protectionDomainId in the health status.

Status of the resource indicated by "type" managed on a cluster-wide basis (not on each protection domain basis) if protectionDomainId is a null value.

statusSummary of the applicable resource contains one or more warnings or errors, the Alerting status applies.

protectionDomainId: *string (uuid) nullable*

The ID of the protection domain.

A null value is output if the type indicates a resource which is managed on a storage cluster basis (not for each protection domain).

The types for which a null value is output are "Storage", "License", or "FaultDomain".

resultOfLdapServerConnectionVerification: *object*

DESCRIPTION

Result of verification of the connection with the LDAP server.

PROPERTIES

primaryServer: [primaryServerOfLdapServerConnectionVerificationResult: object \(on page 458\)](#) nullable

secondaryServer: [secondaryServerOfLdapServerConnectionVerificationResult: object \(on page 471\)](#) nullable

savingEffectOfPool: *object*

DESCRIPTION

Effect of the data reduction function on the storage pool.

PROPERTIES

efficiencyDataReduction: *integer (int32)*, { $x \in \mathbb{Z} \mid 100 \leq x \leq 100$ } nullable

Ratio of the data capacity before and after data reduction (unit: %).

efficiencyDataReduction is currently fixed to 100.

-1 indicates that the value is invalid.

Reduction effect by the Snapshot function is not included.

preCapacityDataReduction: *integer (int64)*, { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ } nullable

Data capacity before reduction by the data reduction function (unit: MiB).

-1 indicates that the value is invalid.

postCapacityDataReduction: *integer (int64)*, { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ } nullable

Data capacity after reduction by the data reduction function (unit: MiB).

-1 indicates that the value is invalid.

totalEfficiencyStatus: *string*, $x \in \{ \text{"Valid"}, \text{"CalculationInProgress"}, \text{"NoTargetData"}, \text{"Unknown"} \}$ nullable

Status of total efficiency.

- Valid: Valid.
- CalculationInProgress: Calculation is in progress.

- NoTargetData: No data to be calculated exists.
- Unknown: Indicates that the calculated value is invalid. This status is set when the storage pool capacity is not expanded. This status is also set when volumes are created under all storage nodes and the consumed amount of the storage pool is 0.

dataReductionWithoutSystemDataStatus: *string* , $x \in \{ \text{"Valid"} , \text{"NotSupported"} , \text{"CalculationInProgress"} , \text{"NoTargetData"} , \text{"Unknown"} \}$ nullable
Status of the reduction effect of the data reduction function.

- Valid: Valid.
- NotSupported: Not supported.
- CalculationInProgress: Calculation is in progress.
- NoTargetData: No data to be calculated exists.
- Unknown: Indicates that the calculated value is invalid. This status is set when the storage pool capacity is not expanded.

totalEfficiency: *integer(int64)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 9223372036854775807 \}$ nullable
Indicates the effect of volume creation and snapshot functions on capacity consumption.

Indicates weighted average of the ratio (according to total capacity of created volumes for each storage controller) of total capacity of created volumes (totalVolumeCapacity) to used capacity of the storage pool (usedCapacity) for each storage controller (unit: %).

The greater the total capacity of created volumes of a storage controller, the greater the effect of saving capacity reflected in the totalEfficiency value.

For example, if the total capacity of created volumes is 1,000 and used capacity of the storage pool is 50 for each storage controller, 2,000 (unit: %) is output.

dataReductionWithoutSystemData: *integer (int64)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 9223372036854775807 \}$ nullable

Ratio of reduction efficiency in the entire storage pool after reduction by the data reduction function (unit: %).

The value before data reduction is output when the value after data reduction is assumed to be 100.

For example, 138 is output if the ratio of the value before data reduction to the value after data reduction is 138:100.

preCapacityDataReductionWithoutSystemData: *integer (int64)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674 \}$ nullable

Capacity of the entire storage pool before reduction by the data reduction function (MiB).

There may be an error with the sum of the properties with the same name, which is displayed in the effect of the data reduction function for each volume (savingEffectOfVolume, savingEffectOfVolumeSummary).

postCapacityDataReductionWithoutSystemData: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ } nullable

Capacity of the entire storage pool after reduction by the data reduction function (unit: MiB).

calculationStartTime: *string (date-time)* nullable

Date and time the calculation started.

calculationEndTime: *string (date-time)* nullable

Date and time the calculation ended.

savingEffectOfStorage: object

DESCRIPTION

Effect of the data reduction function on the entire storage cluster.

PROPERTIES

efficiencyDataReduction: *integer (int32)* , { $x \in \mathbb{Z} \mid 100 \leq x \leq 100$ } nullable

Ratio of the data capacity before and after data reduction (unit: %).

efficiencyDataReduction is currently fixed to 100.

-1 indicates that the value is invalid.

Reduction effect by the Snapshot function is not included.

preCapacityDataReduction: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ } nullable

Data capacity before reduction by the data reduction function (unit: MiB).

-1 indicates that the value is invalid.

postCapacityDataReduction: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ } nullable

Data capacity after reduction by the data reduction function (unit: MiB).

-1 indicates that the value is invalid.

totalEfficiencyStatus: *string* , $x \in \{ \text{"Valid"} , \text{"CalculationInProgress"} , \text{"NoTargetData"} , \text{"Unknown"} \}$ nullable

Status of total efficiency.

- Valid: Valid.
- CalculationInProgress: Calculation is in progress.

- NoTargetData: No data to be calculated exists.
- Unknown: Indicates that the calculated value is invalid. This status is set when the storage pool capacity is not expanded. This status is also set when volumes are created under all storage nodes and the consumed amount of the storage pool is 0.

dataReductionWithoutSystemDataStatus: *string* , $x \in \{ \text{"Valid"} , \text{"NotSupported"} , \text{"CalculationInProgress"} , \text{"NoTargetData"} , \text{"Unknown"} \}$ nullable
 Status of the reduction effect of the data reduction function.

- Valid: Valid.
- NotSupported: Not supported.
- CalculationInProgress: Calculation is in progress.
- NoTargetData: No data to be calculated exists.
- Unknown: Indicates that the calculated value is invalid. This status is set when the storage pool capacity is not expanded.

totalEfficiency: *integer (int64)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 9223372036854775807 \}$ nullable
 Indicates the effect of volume creation and snapshot functions on capacity consumption.

Indicates weighted average of the ratio (according to total capacity of created volumes for each storage controller) of total capacity of created volumes (totalVolumeCapacity) to used capacity of the storage pool (usedCapacity) for each storage controller (unit: %).

The greater the total capacity of created volumes of a storage controller, the greater the effect of saving capacity reflected in the totalEfficiency value.

For example, if the total capacity of created volumes is 1,000 and used capacity of the storage pool is 50 for each storage controller, 2,000 (unit: %) is output.

dataReductionWithoutSystemData: *integer (int64)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 9223372036854775807 \}$ nullable

Ratio of reduction efficiency in the entire storage pool after reduction by the data reduction function (unit: %).

The value before data reduction is output when the value after data reduction is assumed to be 100.

For example, 138 is output if the ratio of the value before data reduction to the value after data reduction is 138:100.

preCapacityDataReductionWithoutSystemData: *integer (int64)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674 \}$ nullable

Capacity of the entire storage pool before reduction by the data reduction function (MiB).

There may be an error with the sum of the properties with the same name, which is displayed in the effect of the data reduction function for each volume (savingEffectOfVolume, savingEffectOfVolumeSummary).

postCapacityDataReductionWithoutSystemData: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ } nullable

Capacity of the entire storage pool after reduction by the data reduction function (unit: MiB).

calculationStartTime: *string (date-time)* nullable

Date and time the calculation started.

calculationEndTime: *string (date-time)* nullable

Date and time the calculation ended.

savingEffectOfVolume: object

DESCRIPTION

Effect of the data reduction function.

PROPERTIES

dataReductionRate: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 2147483647$ } nullable

Ratio of the data capacity before and after data reduction (unit: %).

dataReductionRate is currently fixed to a null value or 0.

dataReductionCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Amount reduced by the data reduction function (unit: MiB).

The amount of metadata and garbage data by the data reduction function are included.

dataReductionCapacity is currently fixed to a null value or 0.

compressedCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Amount reduced by compression (unit: MiB).

compressedCapacity is currently fixed to a null value or 0.

reclaimedCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Amount reduced by fixed pattern exclusion (unit: MiB).

reclaimedCapacity is currently fixed to a null value or 0.

systemDataCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

The amount of system data consumed by the data reduction function (amount of metadata and garbage data) (unit: MiB).

systemDataCapacity is currently fixed to a null value or 0.

preCapacityDataReductionWithoutSystemData: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Consumed amount of the storage pool before reduction by the data reduction function (unit: MiB).

preCapacityDataReductionWithoutSystemData is currently fixed to a null value or 0.

postCapacityDataReduction: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Consumed amount of the storage pool after reduction by the data reduction function (unit: MiB).

postCapacityDataReduction is currently fixed to a null value or 0.

savingEffectOfVolumeSummary: object

DESCRIPTION

Effect of the data reduction function on the volume summary information.

PROPERTIES

systemDataCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

The amount of system data consumed by the data reduction function (amount of metadata and garbage data) (unit: MiB).

systemDataCapacity is currently fixed to a null value or 0.

preCapacityDataReductionWithoutSystemData: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Consumed amount of the storage pool before reduction by the data reduction function (unit: MiB).

preCapacityDataReductionWithoutSystemData is currently fixed to a null value or 0.

postCapacityDataReduction: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Consumed amount of the storage pool after reduction by the data reduction function (unit: MiB).

PostCapacityDataReduction is currently fixed to a null value or 0.

secondaryServerOfLdapServerConnectionVerificationError: object

DESCRIPTION

Error information in the secondary LDAP server.

If the secondary LDAP server did not return an error, the secondary server returns a null value instead of the object.

If the secondary LDAP server is not registered, secondaryServer also returns a null value.

PROPERTIES

code: *integer (int32)*

LDAP protocol error code when connecting the secondary LDAP server.

-1 is output if the LDAP server cannot be connected.

message: *string*

Description of the LDAP protocol error code when connecting the secondary LDAP server.

secondaryServerOfLdapServerConnectionVerificationResult: *object*

DESCRIPTION

Result of secondary LDAP server connection verification.

If the secondary LDAP server could not be reached or it returned an error, secondaryServer returns a null value instead of the object.

If the secondary LDAP server is not registered, secondaryServer also returns a null value.

PROPERTIES

numberOfExternalUsers: *integer (int64)*

The number of users who could be searched on the secondary LDAP server and can be externally authenticated.

0 means that communication was unsuccessful or no user could be found because the DN was set incorrectly.

numberOfExternalUserGroups: *integer (int64)*

The number of user groups who could be searched on the secondary LDAP server and can be externally authenticated.

0 means that communication was unsuccessful or no user group could be found because the DN was set incorrectly.

sendingTrapSettingOfSnmpSetting: *object*

DESCRIPTION

SNMP trap transmission destination settings.

PROPERTIES**snmpv2cSettings:** *object[]* (up to 3 items)

A list of SNMPv2c trap transmission destination settings.

ITEMSsnmpv2cSettingOfSendingTrapSetting: object (on page 480)**server: object****DESCRIPTION**

Compute node information.

PROPERTIES**numberOfVolumes:** *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 8192$ }

The number of volumes already allocated.

paths: *object[]* nullable

A list of information items of registered paths.

ITEMSpathOfServer: object (on page 446)**id:** *string (uuid)*

The ID of the compute node.

nickname: *string (1 to 229 chars)*

The compute node nickname. The same nickname must be unique across compute nodes.

osType: *string* , $x \in \{ "Linux" , "VMware" , "Windows" \}$

The OS type of the compute node.

totalCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 2199023255552$ }

Total capacity of the volumes on the storage pool allocated to the compute node (unit: MiB).

Any volume whose "volumeType" is "ExternalMigrationOrigin" is not included. 0 is output if volumes whose "volumeType" is "ExternalMigrationOrigin" are allocated to the compute node.

usedCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 2199023255552$ } nullable

Consumed amount of the volumes on the storage pool allocated to the compute node (unit: MiB).

Any volume whose "volumeType" is "ExternalMigrationOrigin" is not included. 0 is output if volumes whose "volumeType" is "ExternalMigrationOrigin" are allocated to the compute node.

numberOfPaths: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 8192$ }

The number of registered paths.

vpsId: *string* , must match `/^\(system\)$$[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string (1 to 32 chars)* , must match `/^\(system\)$$[\l-A-Za-z0-9,\.:@_]{1,32}$`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

serverSummary: *object*

DESCRIPTION

Summary information of the compute node.

PROPERTIES

id: *string (uuid)*

The ID of the compute node.

nickname: *string (1 to 229 chars)*

The compute node nickname. The same nickname must be unique across compute nodes.

osType: *string* , $x \in \{ \text{"Linux"}, \text{"VMware"}, \text{"Windows"} \}$

The OS type of the compute node.

totalCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 2199023255552$ }

Total capacity of the volumes on the storage pool allocated to the compute node (unit: MiB).

Any volume whose "volumeType" is "ExternalMigrationOrigin" is not included. 0 is output if volumes whose "volumeType" is "ExternalMigrationOrigin" are allocated to the compute node.

usedCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 2199023255552$ } nullable

Consumed amount of the volumes on the storage pool allocated to the compute node (unit: MiB).

Any volume whose "volumeType" is "ExternalMigrationOrigin" is not included. 0 is output if volumes whose "volumeType" is "ExternalMigrationOrigin" are allocated to the compute node.

numberOfPaths: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 8192$ }

The number of registered paths.

vpsId: *string* , must match `/^\(system\)$$[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string (1 to 32 chars)* , must match `/^\(system\)$$[\-A-Za-z0-9,\.:@_]{1,32}$`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

session: *object*

DESCRIPTION

Session information.

PROPERTIES

sessionId: *string (uuid)*

Session ID.

userId: *string (5 to 255 chars)* , must match `/^\[-A-Za-z0-9!#\$\%&\.\@\^_\`{}~\]{5,255}$`

User ID.

userObjectId: *string (5 to 765 chars)*

Object ID of the user. For the user ID, a percent-encoded reserved string defined in RFC 3986 is output.

expirationTime: *string (date-time)*

Expiration time of the session. After this time, the session expires.

createdTime: *string (date-time)*

Date and time when the session is generated.

lastAccessTime: *string (date-time)*

Date and time when the session was last used.

roleNames: *string[]*

A list of roles assigned to the user who retains this session.

ITEMS

- For system administrators: (One to six items)
string , $x \in \{ "Security", "Storage", "Monitor", "Service", "Audit", "Resource" \}$
- For VPS administrators: (One to three items)
string , $x \in \{ "VpsSecurity", "VpsStorage", "VpsMonitor" \}$

vpsId: *string* , must match `!^(system)$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$!`

The ID of the virtual private storage (VPS) that the user belongs to.

If the user is a system administrator, the string "(system)" is displayed.

privileges: *object[]* (1 to 65 items)

A list of information about a virtual private storage (VPS) that the user can access.

ITEMS

userPrivileges: object (on page 510)

sessionSettingOfUserAuthSetting: object

DESCRIPTION

Session settings.

PROPERTIES

maxLifetimeSeconds: *integer (int32)* , $\{ x \in \mathbb{Z} \mid 1800 \leq x \leq 604800 \}$

Token lifetime (unit: seconds). After authentication, authentication by the authentication token is enabled during this period.

maxIdleSeconds: *integer (int32)* , $\{ x \in \mathbb{Z} \mid 300 \leq x \leq 86400 \}$

Time until the session times out (unit: seconds). The session is disabled if the REST API server is not accessed using the session during this specified time after the server is accessed using the session.

smtpSettingOfEventLogSetting: object

DESCRIPTION

A parameter for editing the event log transfer destination in SMTP settings.

PROPERTIES**index:** *integer* (int32) , { $x \in \mathbb{Z} \mid 1 \leq x \leq 1$ }

The ID of the SMTP server.

isEnabled: *boolean*

Whether event logs are transferred using the SMTP setting.

smtpServerName: *string* (up to 253 chars) , must match `/^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.(?([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))$/`

Host name or IP address (IPv4) of the SMTP server.

port: *integer* (int32) , { $x \in \mathbb{Z} \mid 1 \leq x \leq 65535$ }

Port number of the SMTP server.

connectionEncryptionType: *string* , $x \in \{ "STARTTLS" , "SMTPS" , "None" \}$

Encryption type when the SMTP server is connected.

isSmtplibAuthEnabled: *boolean*

Enables or disables SMTP authentication.

smtpAuthAccount: *string* (up to 255 chars) , must match `/^[0-9a-zA-Z!$%&'()*+,-./:;@_~_@]+$/`

SMTP authentication account.

fromAddress: *string* (up to 255 chars) , must match `/^[0-9a-zA-Z@!#$%&'()*+,-./:;@_~_@]+$/`

Source E-mail address.

toAddress1: *string* (up to 255 chars) , must match `/^[0-9a-zA-Z@!#$%&'()*+,-./:;@_~_@]+$/`

Destination E-mail address 1.

toAddress2: *string* (up to 255 chars) , must match `/^[0-9a-zA-Z@!#$%&'()*+,-./:;@_~_@]+$/`

Destination E-mail address 2.

toAddress3: *string* (up to 255 chars) , must match `/^[0-9a-zA-Z@!#$%&'()*+,-./:;@_~_@]+$/`

Destination E-mail address 3.

snapshotVolume: object**DESCRIPTION**

S-VOL information.

PROPERTIES**snapshotVolumeld:** *string* (uuid)

The ID of the volume which is S-VOL.

snapshotVolumeName: string (1 to 32 chars)

The name of the volume which is S-VOL. The same name cannot be used in multiple volumes.

snapshotVolumeNickname: string (1 to 32 chars)

The nickname of the volume which is S-VOL. The same nickname can be used in multiple volumes.

statusSummary: string , x ∈ { "Normal" , "Warning" , "Error" }

The summary of the S-VOL status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: string , x ∈ { "Normal" , "Deleting" , "Updating" , "Expanding" , "CreationFailed" , "DeletionFailed" , "UpdateFailed" , "ExpansionFailed" , "IOSuppressed" }

The volume status. Any one of the following statuses is output:

- Normal: Operating normally.
- Deleting: Being deleted.
- Updating: The setting is being updated.
- Expanding: The capacity is being expanded.
- CreationFailed: Creation ended abnormally.
- DeletionFailed: Deleting ended abnormally.
- UpdateFailed: The setting update ended abnormally.
- ExpansionFailed: Capacity expansion did not succeed.
- IOSuppressed: I/O is suppressed.

snapshotStatus: string , x ∈ { "Normal" , "Deleting" , "Restoring" , "Empty " , "Preparing" , "Prepared" , "Error" }

The snapshot status. Any one of the following statuses is output:

- Normal: Operating normally.
- Deleting: Being deleted.
- Restoring: Being restored.

- Empty: Status in which snapshots are empty without metadata. This is a temporary status when creating or deleting S-VOLs. After waiting for a while, the status transitions to Preparing when creating S-VOLs and the applicable volumes are deleted when deleting S-VOLs.
- Preparing: Being prepared for creating snapshots.
- Prepared: Completed preparation for creating snapshots.
- Error: Operating abnormally.

snapshotProgressRate: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ } nullable

Progress rate of snapshot operation (unit: %). The progress rate is output only when snapshotStatus is one of Preparing, Deleting, or Restoring. In the case of other statuses, a null value is output.

snapshotTimestamp: *string (date-time)* nullable

The time when snapshots are obtained.

When snapshotStatus is other than Normal, a null value is output.

snapshotType: *string* , $x \in \{ \text{"Snapshot"} \}$

The type of the snapshot.

snapshotConcordanceRate: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ } nullable

The matching rate between the snapshot creation-source volume (P-VOL) and the applicable volume (unit: %).

- The matching rate is output only when snapshotAttribute is "S-VOL" or "P/S-VOL".
- The matching rate is output when snapshotStatus is Normal or Prepared. In the case of other statuses, a null value is output.

isWrittenInSvol: *boolean* nullable

When snapshotStatus is Normal, whether writing is performed from the compute node to the volume is output.

- true: Writing to the volume is performed.
- false: Writing to the volume is not performed.

When snapshotStatus is other than Normal, a null value is output.

vpsId: *string* , must match `/(^system)$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/code>`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string* (1 to 32 chars) , must match `/^\(system\)$$[\-A-Za-z0-9,\.:@_]{1,32}$/`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

qosParam: *object*

A QoS-related parameter.

PROPERTIES

upperLimitForIops: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 2147483647$ }

The upper limit of volume performance (in IOPS).

The value -1 indicates that no upper limit is placed on volume performance (in IOPS).

upperLimitForTransferRate: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 2097151$ }

The upper limit of volume performance (in MiB/s).

The value -1 indicates that no upper limit is placed on volume performance (in MiB/s).

upperAlertAllowableTime: *integer (int32)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 600$ }

The alert threshold value (in seconds) for the upper limit of volume performance.

The value -1 indicates that no entries are output to the event log.

VPS administrators cannot specify this property when creating or editing volumes.

upperAlertTime: *string (date-time)* nullable

The last time the upper limit of volume performance was continuously exceeded and the conditions for the alert threshold of the performance upper limit were met (UTC).

snmpSetting: *object*

DESCRIPTION

SNMP settings.

PROPERTIES

isSNMPAgentEnabled: *boolean*

Enables or disables SNMP.

snmpVersion: *string* , $x \in \{ "v2c" \}$

SNMP version.

sendingTrapSetting: [sendingTrapSettingOfSnmpSetting: object \(on page 471\)](#)

requestAuthenticationSetting: [requestAuthenticationSettingOfSnmpSetting: object \(on page 463\)](#)

systemGroupInformation: [systemGroupInformationOfSnmpSetting: object \(on page 501\)](#)

snmpv2cSettingOfRequestAuthenticationSetting: object

DESCRIPTION

Setting information about whether to permit SNMPv2c requests.

PROPERTIES

community: *string* (up to 180 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-./:;@_`{|}~]*$/`

Name of the community which accepts requests.

requestsPermitted: *string[]* (1 item)

IP address (IPv4) or host name of the SNMP manager which accepts requests. For an empty array, all SNMP managers accept requests.

ITEMS

string (up to 253 chars) , must match `/^[a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.*([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))$/`

snmpv2cSettingOfSendingTrapSetting: object

DESCRIPTION

Setting information about the SNMPv2c trap transmission destination.

PROPERTIES

community: *string* (up to 180 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-./:;@_`{|}~]*$/`

Community name to be used when reporting SNMP traps.

sendTrapTo: *string[]* 1 item

IP address (IPv4) or host name of the SNMP trap transmission destination.

ITEMS

string (up to 253 chars) , must match `/^[a-zA-Z0-9]([a-zA-Z0-9]{0,61}[a-zA-Z0-9])\.(?([a-zA-Z0-9]([a-zA-Z0-9]{0,61}[a-zA-Z0-9]))$ /`

softwareUpdateFile: object**DESCRIPTION**

The information about the update file of the storage software transferred to the storage cluster.

PROPERTIES

version: string (7 to 11 chars) , must match `/^[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}$/`
The version of the update file of the storage software.

spareNode: object**DESCRIPTION**

Spare node information.

PROPERTIES

id: string (uuid)
The ID of a spare node.

name: string
A spare node name.

faultDomainId: string (uuid)
The ID of the fault domain that the nodes belong to.

faultDomainName: string
The name of the fault domain that the nodes belong to.

controlPortIpv4Address: string (7 to 15 chars) , must match `/^[([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`
The IP address (IPv4) of the control port.

softwareVersion: string
The version of storage software.

biosUuid: string (uuid)
The BIOS ID.

modelName: string

The model name of the server on which the spare node is operating.

serialNumber: string

The serial number of the server on which the spare node is operating.

bmcName: string (1 to 253 chars) , must match `/^[a-zA-Z0-9]([a-zA-Z0-9]{0,61}[a-zA-Z0-9])\.[a-zA-Z0-9]([a-zA-Z0-9]{0,61}[a-zA-Z0-9])$/`

The host name or IP address (IPv4) of the BMC.

bmcUser: string (1 to 512 chars) , must match `/^[a-zA-Z0-9!"#$%&'()*+,-.\/:;<=>!?@[\]]^_`{|}~]{1,512}$/`

The user name for BMC connection.

spareNodeList: object

DESCRIPTION

A list of spare node information.

PROPERTIES

data: object[]

ITEMS

[spareNode: object \(on page 481\)](#)

storage: object

DESCRIPTION

Storage cluster information.

PROPERTIES

storageDeviceld: string (12 chars) , must match `/^[0-9]{12}$/`

ID to identify a storage system type.

id: string (uuid)

The UUID of the storage cluster.

modelName: string (3 to 23 chars)

Product model name.

internalld: string (6 chars) , must match `/^[0-9]{6}$/`

The ID used in the storage cluster.

nickname: *string* (1 to 180 chars)

The nickname of the storage cluster.

numberOfTotalVolumes: *integer* (int32), { $x \in \mathbb{Z} \mid 0 \leq x \leq 32768$ }

The number of volumes already created.

Any volume whose "volumeType" is "ExternalMigrationOrigin" is not included.

numberOfTotalServers: *integer* (int32), { $x \in \mathbb{Z} \mid 0 \leq x \leq 1024$ }

The number of registered compute nodes.

numberOfTotalStorageNodes: *integer* (int32), { $x \in \mathbb{Z} \mid 1 \leq x \leq 64$ }

The total number of storage nodes contained in the storage cluster.

numberOfReadyStorageNodes: *integer* (int32), { $x \in \mathbb{Z} \mid 1 \leq x \leq 64$ }

The number of storage nodes operating normally in the storage cluster.

numberOfFaultDomains: *integer* (int32), { $x \in \mathbb{Z} \mid 1 \leq x \leq 64$ }

The total number of fault domains that comprise the storage cluster.

totalPoolRawCapacity: *integer* (int64), { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total effective physical capacity of all storage pools contained in the storage cluster (unit: MiB).

totalPoolPhysicalCapacity: *integer* (int64), { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total physical capacity of all storage pools contained in the storage cluster (unit: MiB).

totalPoolCapacity: *integer* (int64), { $x \in \mathbb{Z} \mid 0 \leq x \leq 281474976710655$ }

The total logical capacity of all storage pools contained in the storage cluster (unit: MiB).

usedPoolCapacity: *integer* (int64), { $x \in \mathbb{Z} \mid 0 \leq x \leq 281474976710655$ } nullable

The total used capacity of all storage pools contained in the storage cluster (unit: MiB).

freePoolCapacity: *integer* (int64), { $x \in \mathbb{Z} \mid 0 \leq x \leq 281474976710655$ } nullable

The total available capacity of all storage pools contained in the storage cluster (unit: MiB).

savingEffects: savingEffectOfStorage: object (on page 467)

softwareVersion: *string* (7 to 11 chars), must match `/^[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}$/`

The version of storage software.

statusSummary: *string* , $x \in \{ \text{"Normal"} , \text{"Warning"} , \text{"Error"} \}$

Summary of the storage cluster status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string* , $x \in \{ \text{"Installing"} , \text{"Starting"} , \text{"Ready"} , \text{"NondisruptiveUpdating"} , \text{"InstallationFailed"} , \text{"StartFailed"} , \text{"Stopping"} , \text{"Stopped"} , \text{"Blockage"} , \text{"BlockageDueToFailuresExceedingRedundancyLimit"} \}$

The management status of the storage cluster. The following status is output:

- Installing: Initial installation is in progress.
- Starting: Being started.
- Ready: Normal status. The storage cluster can be stopped, or storage software can be upgraded.
- NondisruptiveUpdating: Storage software is being updated without stopping I/Os.
- InstallationFailed: Installation was unsuccessful.
- StartFailed: Startup was unsuccessful.
- Stopping: Planned shutdown is in progress.
- Stopped: Planned shutdown.
- Blockage: Blocked status.
- BlockageDueToFailuresExceedingRedundancyLimit: Blocked status because multiple failures exceeding redundancy occurred.

systemRequirementsFileVersion: *integer (int32)* , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 99991231 \}$

Version of the system requirements file registered in the storage cluster.

-1 is returned if an invalid system requirements file is registered.

serviceId: *string (13 chars)* , **must match `/^[A-Z]{4}[0-9]{9}$/`** nullable

Service ID of the storage cluster.

The value set by service personnel or maintenance personnel is displayed. When no value is set, a null value is output.

storageAutoRecoverySetting: *object*

DESCRIPTION

The setting of whether to enable or disable the auto-recovery function and the status of the function.

PROPERTIES

isEnabled: *boolean*

Enables or disables the auto-recovery function.

storageNodePersistentBlockingThresholdTime: *integer (int32)*

The time to determine if the temporarily blocked storage node that was recovered previously is changed to persistent blockage status (unit: hours).

If a temporarily blocked storage node was recovered previously at least once in the period specified for this parameter, the storage node is changed to persistent blockage status. When the value is 0, the storage node is not changed to persistent blockage status.

status: *string*, $x \in \{ \text{"Disabled"}, \text{"Normal"}, \text{"Conflict"}, \text{"Error"} \}$

The status of the auto-recovery function.

- Disabled: The auto-recovery function is disabled.
- Normal: Status in which the auto-recovery function is operating normally. Included cases are those where no storage node is blocked temporarily or the maintenance recovery job by auto recovery is being performed.
- Conflict: The auto-recovery function is temporarily unavailable due to conflict with another task that is in progress.
- Error: The auto-recovery function is unavailable.

storageController: *object*

DESCRIPTION

Storage controller information.

PROPERTIES

id: *string (uuid)*

Storage controller ID.

allocatableCapacity: *integer (int64)*, $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674 \}$

The maximum logical capacity that can be managed on this storage controller (unit: MiB).

currentlyAllocatableCapacity: *integer (int64)*

The logical capacity that is managed on this storage controller (unit: MiB).

usedCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable

The used capacity of the storage pool managed by this storage controller (unit: MiB).

logicalLimit: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ }

The maximum logical capacity of volumes that can be created on this storage controller (unit: MiB). The capacity includes the area for control information of the volume.

volumeMaximumCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ }

The maximum capacity of the single volume that can be created on this storage controller (unit: MiB). The capacity does not include the area for control information of the volume.

This is the maximum value that can be specified in "capacity" for the volume-creating CLI when creating a single volume. When creating multiple volumes, specify a value that includes the areas for control information of all the volumes and is smaller than "logicalLimit" for "capacity".

freeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 6871947674$ } nullable

The available capacity of the storage pool managed by this storage controller (unit: MiB).

totalVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of volumes that have been created on this storage controller (unit: MiB).

provisionedVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of provisioned volumes that have been created on this storage controller (unit: MiB).

otherVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of other volumes that have been created on this storage controller (unit: MiB).

temporaryVolumeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity of temporary volumes that have been created on this storage controller (unit: MiB).

status: *string* , $x \in \{ \text{"Normal"} , \text{"OneNodeDown"} , \text{"RecoveringOneNode"} , \text{"Blockage"} , \text{"Switching"} , \text{"TwoNodesDown"} , \text{"BlockageDueToNoActiveNodes"} \}$

The status of the storage controller. The following status is output:

- Normal: Operating normally.
- OneNodeDown: One of the storage controllers went down.
- RecoveringOneNode: One of the storage controllers is recovering.
- Blockage: Blocked.

- Switching: The active and standby storage controllers are switching.
- TwoNodesDown: Two of the storage controller nodes went down.
- BlockageDueToNoActiveNodes: The storage nodes represented in standbyStorageNodeId and secondaryStandbyStorageNodeId could not be failed over and are blocked.

activeStorageNodeId: *string* (uuid)

The ID of the storage node in which the active storage controller is running.

standbyStorageNodeId: *string* (uuid)

The ID of the storage node in which the standby storage controller is running.

secondaryStandbyStorageNodeId: *string* (uuid) nullable

The ID of the storage node in which the second standby storage controller is running.

If storageControllerClusteringPolicy of the protection domain in which the storage controller runs is set to OneRedundantStorageNode, a null value is output.

isDetailedLoggingMode: *boolean*

Enables or disables the detailed logging mode. If "true" is set, the detailed logging mode is enabled.

allocatableCapacityUsageRate: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ }

Usage rate to the maximum logical capacity that can be managed on the storage controller (unit: %).

currentlyAllocatableCapacityUsageRate: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 100$ }

Usage rate to the logical capacity managed on the storage controller (unit: %).

capacityStatus: *string* , $x \in \{ \text{"Normal"} , \text{"Warning"} , \text{"Error"} \}$

Capacity status managed by the storage controller.

- Normal: Normal.
- Warning: Capacity usage rate of the storage controller is high.
- Error: Capacity usage rate of the storage controller is high, which might lead to capacity depletion.

dataRebalanceStatus: *string* , $x \in \{ \text{"Stopped"} , \text{"Running"} , \text{"Waiting"} \}$

Status of balancing processing of user data capacity managed by each storage controller.

- Stopped: Status in which the above processing is not being performed.
- Running: Status in which the above processing is being performed.
- Waiting: Status in which the above processing is waiting to be performed.

dataRebalanceProgressRate: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 99$ }

Progress rate of balancing processing of user data capacity managed by each storage controller (unit: %).

If dataRebalanceStatus is "Stopped" or "Waiting", a null value is output.

capacitiesExcludingSystemData: *capacitiesExcludingSystemDataOfStorageController: object (on page 410)*

storageMasterNodePrimaryFlag: *object*

DESCRIPTION

Indicates whether the storage node is the cluster master node (primary).

PROPERTIES

isStorageMasterNodePrimary: *boolean*

Indicates whether the storage node that received the target CLI is the cluster master node (primary). If another node receives the CLI request, an error is returned. Therefore, this attribute is always true.

storageNetworkSetting: *object*

DESCRIPTION

Network settings of the storage cluster.

PROPERTIES

primaryDnsServerIpAddress: *string*

The IP address of the DNS server for the first name resolution request destination.

secondaryDnsServerIpAddress: *string*

The IP address of the DNS server for the second name resolution request destination.

virtuallypv4Address: *string*

The representative IP address (IPv4) of the storage cluster. If a failure occurs on the storage node to which this IP address is assigned, the IP address is inherited by another storage node.

If the subnet of the control port on all storage nodes is not common, this property cannot be set. In this case, an empty string "" is stored for virtuallypv4Address.

storageNode: *object*

DESCRIPTION

Storage node information.

PROPERTIES

id: *string* (uuid)

Storage node ID.

biosUuid: *string* (uuid)

The storage node UUID, which is registered in the SMBIOS.

protectionDomainId: *string* (uuid)

The ID of the protection domain to which the volume is belonging.

faultDomainId: *string* (uuid)

The ID of a fault domain to which the volume belongs.

faultDomainName: *string*

Name of a fault domain to which the volume belongs.

name: *string* (1 to 64 chars)

Storage node name.

clusterRole: *string*, $x \in \{ \text{"Master"}, \text{"Worker"} \}$

The role of the storage node in the storage cluster.

storageNodeAttributes: *string*[] (up to 1 items)

Storage node attribute. An empty array ([]) means a storage node which has no attribute.

- Initiator: Initiator node.

ITEMS

string, $x \in \{ \text{"Initiator"} \}$

statusSummary: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

The summary of the storage node status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string*, $x \in \{ \text{"Installing"}, \text{"Starting"}, \text{"Ready"}, \text{"NondisruptiveUpdating"}, \text{"TemporaryBlockageProcessInProgress"}, \text{"TemporaryBlockage"}, \text{"PersistentBlockage"}, \text{"TemporaryBlockageFailed"}, \text{"MaintenanceBlockageProcessInProgress"}, \text{"MaintenanceBlockage"}, \}$

"MaintenanceBlockageFailed" , "Recovering" , "InstallationFailed" , "Removing" , "BlockageAndRemoving" , "Stopping" , "Stopped" , "RemovalFailedAndStarting" , "RemovalFailed" , "RemovalFailedAndNondisruptiveUpdating" , "RemovalFailedAndTemporaryBlockageProcessInProgress" , "RemovalFailedAndTemporaryBlockage" , "RemovalFailedAndPersistentBlockage" , "RemovalFailedAndMaintenanceBlockageProcessInProgress" , "RemovalFailedAndMaintenanceBlockage" , "RemovalFailedAndRecovering" , "RemovalFailedAndStopping" , "RemovalFailedAndStopped" , "RemovalFailedAndMultipleFailures" , "Unknown" }

The status of the storage node. The following status is output:

- Installing: Being set up.
- Starting: Being started.
- Ready: Running normally.
- NondisruptiveUpdating: The storage software on this storage node is being updated without stopping I/Os.
- TemporaryBlockageProcessInProgress: In the process of being blocked temporarily.
- TemporaryBlockage: Blocked temporarily. If the auto-recovery function is enabled, the storage node is subject to auto recovery.
- PersistentBlockage: Blocked(including the case of a recovery failure). The storage node is not subject to auto recovery.
- TemporaryBlockageFailed: Could not be blocked temporarily.
- MaintenanceBlockageProcessInProgress: In the process of being blocked for maintenance.
- MaintenanceBlockage: Blocked for maintenance.
- MaintenanceBlockageFailed: Could not be blocked for maintenance (including the case of a recovery failure).
- Recovering: Being restored.
- InstallationFailed: Could not be set up.
- Removing: Being removed.
- BlockageAndRemoving: Being removed and ready to be disconnected.
- Stopping: Being stopped.
- Stopped: Stopped.

- RemovalFailedAndStarting: Removal did not succeed and starting.
- RemovalFailed: Removal did not succeed and running.
- RemovalFailedAndNondisruptiveUpdating: Removal did not succeed and updating the storage software in the storage node without disrupting I/O.
- RemovalFailedAndTemporaryBlockageProcessInProgress: Removal did not succeed and in the process of being blocked temporarily.
- RemovalFailedAndTemporaryBlockage: Removal did not succeed and blocked temporarily. The storage node is not subject to auto recovery.
- RemovalFailedAndPersistentBlockage: Removal did not succeed and blocked. The storage node is not subject to auto recovery.
- RemovalFailedAndMaintenanceBlockageProcessInProgress: Removal did not succeed and in the process of being blocked for maintenance.
- RemovalFailedAndMaintenanceBlockage: Removal did not succeed and blocked for maintenance.
- RemovalFailedAndRecovering: Removal did not succeed and recovering from the storage node blocked state.
- RemovalFailedAndStopping: Removal did not succeed and stopping.
- RemovalFailedAndStopped: Removal did not succeed and stopped.
- RemovalFailedAndMultipleFailures: Removal did not succeed and multiple failures occurred.
- Unknown: Unknown

driveDataRelocationStatus: *string* , $x \in \{ "Stopped" , "Running" \}$

Status of drive data relocation.

- Stopped: Status in which drive data relocation is not performed.
- Running: Status in which drive data relocation is being performed.

controlPortIpv4Address: *string* , must match `^(([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.)\{3\}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`

The IP address (IPv4) of the control port.

internodePortIpv4Address: *string* , must match `^(([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.)\{3\}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`

The IP address (IPv4) of the internode port.

softwareVersion: *string* (7 to 11 chars) , must match `^[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}$/`

The version of storage software.

modelName: *string* (0 to 128 chars)

Model name of the server on which the storage node is running.

serialNumber: *string* (0 to 128 chars)

Serial number of the server on which the storage node is running.

memory: *integer* (int64) , { x ∈ ℤ | 0 ≤ x ≤ 268435456 }

Amount of storage node memory (unit: MiB).

(Virtual machine) Memory capacity of VM

(Bare metal) Memory capacity available in the physical server

insufficientResourcesForRebuildCapacity: *object*

PROPERTIES

capacityOfDrive: *integer* (int32) , { x ∈ ℤ | 0 ≤ x ≤ 256000 } nullable

Lacking drive capacity of rebuild capacity (unit: GB, 1 GB = 1,000,000,000 byte).

numberOfDrives: *integer* (int32) , { x ∈ ℤ | 0 ≤ x ≤ 23 } nullable

The number of lacking drives of rebuild capacity.

rebuildableResources: rebuildableResourcesOfStorageNode: *object* (on page 462)

Resource for which Rebuild is possible.

storageNodeBmcAccessSetting: *object*

DESCRIPTION

The BMC connection information about storage nodes.

PROPERTIES

id: *string* (uuid)

Storage node ID.

bmcName: *string* (up to 253 chars) , must match `/^$|^([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9])\.)*([a-zA-Z0-9]([a-zA-Z0-9-]{0,61}[a-zA-Z0-9]))$/`

The host name or IP address (IPv4) of the BMC.

An empty string "" is output if nothing is set.

bmcUser: *string* (up to 512 chars) , must match `/^$|^([a-zA-Z0-9!"#$%&'()*+,-.:/;<=> \?@|\[\]\^_`{|}~]{1,512})$/`

The user name for BMC connection.

An empty string "" is output if nothing is set.

storageNodeBmcAccessSettingList: *object*

DESCRIPTION

A list of BMC connection information about storage nodes.

PROPERTIES

data: *object[]*

ITEMS

[storageNodeBmcAccessSetting: object \(on page 492\)](#)

storageNodeCapacitySetting: *object*

DESCRIPTION

Capacity management settings of a storage node.

PROPERTIES

id: *string (uuid)*

Storage node ID.

capacityBalancingSetting: [capacityBalancingSetting: object \(on page 411\)](#)

storageNodeNetworkSetting: *object*

DESCRIPTION

Storage node network settings.

PROPERTIES

id: *string (uuid)*

Storage node ID.

ipv4Route: *object[]*

ITEMS

[ipv4RouteOfStorageNodeNetworkSetting: object \(on page 433\)](#)

storageNodePerformance: *object*

DESCRIPTION

Performance information of the storage node (monitor information). A null value is set if the information could not be obtained. Infinite value, Infinity is not output as the double type value.

PROPERTIES

id: *string (uuid)*

Storage node ID.

volumeReadIOPS: *integer (int32) nullable*

The number of read I/Os processed for a volume (unit: IOPS).

volumeWriteIOPS: *integer (int32) nullable*

The number of write I/Os processed for a volume (unit: IOPS).

volumeReadTransferRate: *number (double) nullable*

Read data transfer amount in a volume per second (unit: MiB/sec).

volumeWriteTransferRate: *number (double) nullable*

Write data transfer amount in a volume per second (unit: MiB/sec).

driveReadIOPS: *integer (int32) nullable*

The number of read I/Os processed by a drive (unit: IOPS).

driveWriteIOPS: *integer (int32) nullable*

The number of write I/Os processed by a drive (unit: IOPS).

driveReadTransferRate: *number (double) nullable*

Read data transfer amount per second (unit: MiB/sec).

driveWriteTransferRate: *number (double) nullable*

Write data transfer amount per second (unit: MiB/sec).

cpu: *object[]*

A list of CPU performance information of the storage node. If no information could be collected about the usage of a specific CPU core, an array without information about the CPU core is returned. If no information could be collected about the usage of all CPU cores, an empty array ([]) is returned.

ITEMS

[cpuPerformance: object \(on page 416\)](#)

memory: [memoryPerformance: object \(on page 444\)](#) *nullable*

storageNodePerformanceListResponse: *object*

DESCRIPTION

A list of storage node performance information (monitor information) at the specified time.

PROPERTIES

data: *object[]*

ITEMS

[storageNodePerformanceListResponseData: object \(on page 495\)](#)

storageNodePerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the storage node when the information was collected. For performanceObjects, storage nodes of which performance information could be collected when the API was executed are output as an array.

PROPERTIES

timestamp: *string (date-time)*

The time when this information was collected.

performanceObjects: *object[]*

A list of storage node performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[storageNodePerformance: object \(on page 494\)](#)

storagePerformance: *object*

DESCRIPTION

Performance information (monitor information) for each storage cluster. Infinite value, Infinity is not output as a double type value.

PROPERTIES

id: *string (uuid)*

The UUID of the storage cluster.

averageCpuUsage: *number (double)*

Average CPU usage for all storage nodes (unit: %).

averageMemoryUsage: *number* (double)

Average memory usage for all storage nodes (unit: %).

storagePerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the storage cluster when the information was collected. For performanceObjects, storage clusters of which performance information could be collected when the API was executed are output as an array.

PROPERTIES

timestamp: *string* (date-time)

The time when this information was collected.

performanceObjects: *object*[]

A list of storage cluster performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[storagePerformance: object \(on page 495\)](#)

storageTimeSetting: *object*

DESCRIPTION

Time settings of the storage cluster.

PROPERTIES

systemTime: *string* (date-time)

The UTC time of the storage cluster.

ntpServerNames: *string*[]

A list of NTP servers. NTP servers are stored in the order of priority.

ITEMS

string

DESCRIPTION

Host name or IP address (IPv4) of the NTP server.

timezone: *string*, $x \in \{ \text{"Africa/Abidjan"}, \text{"Africa/Accra"}, \text{"Africa/Addis_Ababa"}, \text{"Africa/Algiers"}, \text{"Africa/Asmara"}, \text{"Africa/Bamako"}, \text{"Africa/Bangui"}, \text{"Africa/Banjul"}, \text{"Africa/Bissau"}, \text{"Africa/Blantyre"}, \text{"Africa/Brazzaville"}, \text{"Africa/Bujumbura"}, \text{"Africa/Cairo"}, \text{"Africa/Casablanca"}, \text{"Africa/Ceuta"}, \text{"Africa/Conakry"}, \text{"Africa/}$

Dakar" , "Africa/Dar_es_Salaam" , "Africa/Djibouti" , "Africa/Douala" , "Africa/El_Aaiun" , "Africa/Freetown" , "Africa/Gaborone" , "Africa/Harare" , "Africa/Johannesburg" , "Africa/Juba" , "Africa/Kampala" , "Africa/Khartoum" , "Africa/Kigali" , "Africa/Kinshasa" , "Africa/Lagos" , "Africa/Libreville" , "Africa/Lome" , "Africa/Luanda" , "Africa/Lubumbashi" , "Africa/Lusaka" , "Africa/Malabo" , "Africa/Maputo" , "Africa/Maseru" , "Africa/Mbabane" , "Africa/Mogadishu" , "Africa/Monrovia" , "Africa/Nairobi" , "Africa/Ndjamena" , "Africa/Niamey" , "Africa/Nouakchott" , "Africa/Ouagadougou" , "Africa/Porto-Novo" , "Africa/Sao_Tome" , "Africa/Tripoli" , "Africa/Tunis" , "Africa/Windhoek" , "America/Adak" , "America/Anchorage" , "America/Anguilla" , "America/Antigua" , "America/Araguaina" , "America/Argentina/Buenos_Aires" , "America/Argentina/Catamarca" , "America/Argentina/Cordoba" , "America/Argentina/Jujuy" , "America/Argentina/La_Rioja" , "America/Argentina/Mendoza" , "America/Argentina/Rio_Gallegos" , "America/Argentina/Salta" , "America/Argentina/San_Juan" , "America/Argentina/San_Luis" , "America/Argentina/Tucuman" , "America/Argentina/Ushuaia" , "America/Aruba" , "America/Asuncion" , "America/Atikokan" , "America/Bahia" , "America/Bahia_Banderas" , "America/Barbados" , "America/Belem" , "America/Belize" , "America/Blanc-Sablon" , "America/Boa_Vista" , "America/Bogota" , "America/Boise" , "America/Cambridge_Bay" , "America/Campo_Grande" , "America/Cancun" , "America/Caracas" , "America/Cayenne" , "America/Cayman" , "America/Chicago" , "America/Chihuahua" , "America/Costa_Rica" , "America/Creston" , "America/Cuiaba" , "America/Curacao" , "America/Danmarkshavn" , "America/Dawson" , "America/Dawson_Creek" , "America/Denver" , "America/Detroit" , "America/Dominica" , "America/Edmonton" , "America/Eirunepe" , "America/El_Salvador" , "America/Fort_Nelson" , "America/Fortaleza" , "America/Glace_Bay" , "America/Godthab" , "America/Goose_Bay" , "America/Grand_Turk" , "America/Grenada" , "America/Guadeloupe" , "America/Guatemala" , "America/Guayaquil" , "America/Guyana" , "America/Halifax" , "America/Havana" , "America/Hermosillo" , "America/Indiana/Indianapolis" , "America/Indiana/Knox" , "America/Indiana/Marengo" , "America/Indiana/Petersburg" , "America/Indiana/Tell_City" , "America/Indiana/Vevay" , "America/Indiana/Vincennes" , "America/Indiana/Winamac" , "America/Inuvik" , "America/Iqaluit" , "America/Jamaica" , "America/Juneau" , "America/Kentucky/Louisville" , "America/Kentucky/Monticello" , "America/Kralendijk" , "America/La_Paz" , "America/Lima" , "America/Los_Angeles" , "America/Lower_Princes" , "America/Maceio" , "America/Managua" , "America/Manaus" , "America/Marigot" , "America/Martinique" , "America/Matamoros" , "America/Mazatlan" , "America/Menominee" , "America/Merida" , "America/Metlakatla" , "America/Mexico_City" , "America/Miquelon" , "America/Moncton" , "America/Monterrey" , "America/Montevideo" , "America/Montserrat" , "America/Nassau" , "America/New_York" , "America/Nipigon" , "America/Nome" , "America/Noronha" , "America/North_Dakota/Beulah" , "America/North_Dakota/Center" , "America/North_Dakota/New_Salem" , "America/Ojinaga" , "America/Panama" , "America/Pangnirtung" , "America/Paramaribo" , "America/Phoenix" , "America/Port-au-Prince" , "America/Port_of_Spain" , "America/Porto_Velho" , "America/Puerto_Rico" , "America/Punta_Arenas" , "America/Rainy_River" , "America/Rankin_Inlet" , "America/Recife" , "America/Regina" , "America/Resolute" , "America/Rio_Branco" , "America/Santarem" , "America/Santiago" , "America/Santo_Domingo" , "America/Sao_Paulo" , "America/Scoresbysund" , "America/Sitka" , "America/St_Barthelemy" , "America/St_Johns" , "America/St_Kitts" , "America/St_Lucia" , "America/St_Thomas" , "America/St_Vincent" , "America/Swift_Current" , "America/Tegucigalpa" , "America/Thule" , "America/Thunder_Bay" , "America/Tijuana" , "America/Toronto" , "America/

Tortola", "America/Vancouver", "America/Whitehorse", "America/Winnipeg",
 "America/Yakutat", "America/Yellowknife", "Antarctica/Casey", "Antarctica/Davis",
 "Antarctica/DumontDUrville", "Antarctica/Macquarie", "Antarctica/Mawson",
 "Antarctica/McMurdo", "Antarctica/Palmer", "Antarctica/Rothera", "Antarctica/
 Syowa", "Antarctica/Troll", "Antarctica/Vostok", "Arctic/Longyearbyen", "Asia/
 Aden", "Asia/Almaty", "Asia/Amman", "Asia/Anadyr", "Asia/Aqttau", "Asia/Aqtobe",
 "Asia/Ashgabat", "Asia/Atyrau", "Asia/Baghdad", "Asia/Bahrain", "Asia/Baku",
 "Asia/Bangkok", "Asia/Barnaul", "Asia/Beijing", "Asia/Beirut", "Asia/Bishkek",
 "Asia/Brunei", "Asia/Chita", "Asia/Choibalsan", "Asia/Colombo", "Asia/Damascus",
 "Asia/Dhaka", "Asia/Dili", "Asia/Dubai", "Asia/Dushanbe", "Asia/Famagusta", "Asia/
 Gaza", "Asia/Hebron", "Asia/Ho_Chi_Minh", "Asia/Hong_Kong", "Asia/Hovd", "Asia/
 Irkutsk", "Asia/Jakarta", "Asia/Jayapura", "Asia/Jerusalem", "Asia/Kabul", "Asia/
 Kamchatka", "Asia/Karachi", "Asia/Kathmandu", "Asia/Khandyga", "Asia/Kolkata",
 "Asia/Krasnoyarsk", "Asia/Kuala_Lumpur", "Asia/Kuching", "Asia/Kuwait", "Asia/
 Macau", "Asia/Magadan", "Asia/Makassar", "Asia/Manila", "Asia/Muscat", "Asia/
 Nicosia", "Asia/Novokuznetsk", "Asia/Novosibirsk", "Asia/Omsk", "Asia/Oral",
 "Asia/Phnom_Penh", "Asia/Pontianak", "Asia/Pyongyang", "Asia/Qatar", "Asia/
 Qyzylorda", "Asia/Riyadh", "Asia/Sakhalin", "Asia/Samarkand", "Asia/Seoul", "Asia/
 Shanghai", "Asia/Singapore", "Asia/Srednekolymsk", "Asia/Taipei", "Asia/
 Tashkent", "Asia/Tbilisi", "Asia/Tehran", "Asia/Thimphu", "Asia/Tokyo", "Asia/
 Tomsk", "Asia/Ulaanbaatar", "Asia/Urumqi", "Asia/Ust-Nera", "Asia/Vientiane",
 "Asia/Vladivostok", "Asia/Yakutsk", "Asia/Yangon", "Asia/Yekaterinburg", "Asia/
 Yerevan", "Atlantic/Azores", "Atlantic/Bermuda", "Atlantic/Canary", "Atlantic/
 Cape_Verde", "Atlantic/Faroe", "Atlantic/Madeira", "Atlantic/Reykjavik", "Atlantic/
 South_Georgia", "Atlantic/St_Helena", "Atlantic/Stanley", "Australia/Adelaide",
 "Australia/Brisbane", "Australia/Broken_Hill", "Australia/Currie", "Australia/Darwin",
 "Australia/Eucla", "Australia/Hobart", "Australia/Lindeman", "Australia/Lord_Howe",
 "Australia/Melbourne", "Australia/Perth", "Australia/Sydney", "Europe/Amsterdam",
 "Europe/Andorra", "Europe/Astrakhan", "Europe/Athens", "Europe/Belgrade",
 "Europe/Berlin", "Europe/Bratislava", "Europe/Brussels", "Europe/Bucharest",
 "Europe/Budapest", "Europe/Busingen", "Europe/Chisinau", "Europe/Copenhagen",
 "Europe/Dublin", "Europe/Gibraltar", "Europe/Guernsey", "Europe/Helsinki",
 "Europe/Isle_of_Man", "Europe/Istanbul", "Europe/Jersey", "Europe/Kaliningrad",
 "Europe/Kiev", "Europe/Kirov", "Europe/Lisbon", "Europe/Ljubljana", "Europe/
 London", "Europe/Luxembourg", "Europe/Madrid", "Europe/Malta", "Europe/
 Mariehamn", "Europe/Minsk", "Europe/Monaco", "Europe/Moscow", "Europe/Oslo",
 "Europe/Paris", "Europe/Podgorica", "Europe/Prague", "Europe/Riga", "Europe/
 Rome", "Europe/Samara", "Europe/San_Marino", "Europe/Sarajevo", "Europe/
 Saratov", "Europe/Simferopol", "Europe/Skopje", "Europe/Sofia", "Europe/
 Stockholm", "Europe/Tallinn", "Europe/Tirane", "Europe/Ulyanovsk", "Europe/
 Uzhgorod", "Europe/Vaduz", "Europe/Vatican", "Europe/Vienna", "Europe/Vilnius",
 "Europe/Volgograd", "Europe/Warsaw", "Europe/Zagreb", "Europe/Zaporozhye",
 "Europe/Zurich", "Indian/Antananarivo", "Indian/Chagos", "Indian/Christmas",
 "Indian/Cocos", "Indian/Comoro", "Indian/Kerguelen", "Indian/Mahe", "Indian/
 Maldives", "Indian/Mauritius", "Indian/Mayotte", "Indian/Reunion", "Pacific/Apia",
 "Pacific/Auckland", "Pacific/Bougainville", "Pacific/Chatham", "Pacific/Chuuk",
 "Pacific/Easter", "Pacific/Efate", "Pacific/Enderbury", "Pacific/Fakaofu", "Pacific/
 Fiji", "Pacific/Funafuti", "Pacific/Galapagos", "Pacific/Gambier", "Pacific/
 Guadalcanal", "Pacific/Guam", "Pacific/Honolulu", "Pacific/Kiritimati", "Pacific/
 Kosrae", "Pacific/Kwajalein", "Pacific/Majuro", "Pacific/Marquesas", "Pacific/
 Midway", "Pacific/Nauru", "Pacific/Niue", "Pacific/Norfolk", "Pacific/Noumea",

"Pacific/Pago_Pago" , "Pacific/Palau" , "Pacific/Pitcairn" , "Pacific/Pohnpei" , "Pacific/Port_Moresby" , "Pacific/Rarotonga" , "Pacific/Saipan" , "Pacific/Tahiti" , "Pacific/Tarawa" , "Pacific/Tongatapu" , "Pacific/Wake" , "Pacific/Wallis" , "UTC" }

The timezone of the storage cluster.

syslogForwardingSettingOfAuditLogSetting: object

DESCRIPTION

Syslog transfer settings of audit logs.

PROPERTIES

locationName: *string* (up to 32 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-\.:;<=>?@\[\]\|^_`{|}~]{1,32}$/code>`

Location information.

syslogServers: *object[]* (1 to 2 items)

Syslog server to which audit logs are transferred. You can set up to two servers.

ITEMS

[syslogServerSettingOfAuditLogSetting: object \(on page 500\)](#)

syslogForwardingSettingOfEventLogSetting: object

DESCRIPTION

Syslog transfer settings of event logs.

PROPERTIES

locationName: *string* (up to 32 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-\.:;<=>?@\[\]\|^_`{|}~]{1,32}$/code>`

Location information.

syslogServers: *object[]* (1 to 2 items)

Syslog server to which event logs are transferred. You can set up to two servers.

ITEMS

[syslogServerSettingOfEventLogSetting: object \(on page 500\)](#)

syslogServerSettingOfAuditLogSetting: object

DESCRIPTION

Settings of the Syslog server to which audit logs are transferred.

PROPERTIES

index: *integer* (int32)

The ID of the Syslog server.

isEnabled: *boolean*

Whether audit logs are transferred to the Syslog server specified in serverName.

serverName: *string* (up to 253 chars) , must match `/^$|^([a-zA-Z0-9]([a-zA-Z0-9\-\-]{0,61}[a-zA-Z0-9])\.)*([a-zA-Z0-9]([a-zA-Z0-9\-\-]{0,61}[a-zA-Z0-9]))$/`

Host name or IP address (IPv4) of the Syslog server.

port: *integer* (int32) , { $x \in \mathbb{Z} \mid 1 \leq x \leq 65535$ }

Port number of the Syslog server.

transportProtocol: *string* , $x \in \{ "UDP" \}$

Communications protocol.

syslogServerSettingOfEventLogSetting: object

DESCRIPTION

Settings of the Syslog server to which event logs are transferred.

PROPERTIES

index: *integer* (int32)

The ID of the Syslog server.

isEnabled: *boolean*

Whether event logs are transferred to the Syslog server specified in serverName.

serverName: *string* (up to 253 chars) , must match `/^$|^([a-zA-Z0-9]([a-zA-Z0-9\-\-]{0,61}[a-zA-Z0-9])\.)*([a-zA-Z0-9]([a-zA-Z0-9\-\-]{0,61}[a-zA-Z0-9]))$/`

Host name or IP address (IPv4) of the Syslog server.

port: *integer* (int32) , { $x \in \mathbb{Z} \mid 1 \leq x \leq 65535$ }

Port number of the Syslog server.

transportProtocol: *string* , $x \in \{ "UDP" \}$

Communications protocol.

systemGroupInformationOfSnmpSetting: object

DESCRIPTION

System group information.

PROPERTIES

storageSystemName: *string* (up to 180 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]$ | [A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~][A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]{0,178} [A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]$ /`

System name. Output as "sysName" in the SNMP agent MIB. If this is not set, a hyphen (-) will be output.

contact: *string* (up to 180 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]$ | [A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~][A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]{0,178} [A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]$ /`

Administrator name or contact. Output as "sysContact" in the SNMP agent MIB. If this is not set, a hyphen (-) will be output.

location: *string* (up to 180 chars) , must match `/^[A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]$ | [A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~][A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]{0,178} [A-Za-z0-9!#$%&'()*+,-.=@[\]_`{|}~]$ /`

Installation location. Output as "sysLocation" in the SNMP agent MIB. If this is not set, a hyphen (-) will be output.

teamingOfControlPort: object

DESCRIPTION

Teaming information of the control port. This is output only when teaming is enabled.

PROPERTIES

primaryMacAddress: *string* (17 chars) , must match `/^[a-f0-9]{2:}{5}[a-f0-9]{2}$/`
The physical MAC address of the teaming information of the primary port.

secondaryMacAddress: *string* (17 chars) , must match `/^[a-f0-9]{2:}{5}[a-f0-9]{2}$/`
The physical MAC address of the teaming information of the secondary port.

primaryConfiguredPortSpeed: *string* , $x \in \{ "Auto" , "1G" , "10G" , "25G" , "40G" , "100G" \}$

Link speed setting of the primary port (unit: bps). This setting determines the actual link speed.

- Auto: The speed setting depends on the switch or SFP specifications.

secondaryConfiguredPortSpeed: *string*, $x \in \{ "Auto" , "1G" , "10G" , "25G" , "40G" , "100G" \}$

Link speed setting of the secondary port (unit: bps). This setting determines the actual link speed.

- Auto: The speed setting depends on the switch or SFP specifications.

primaryPortSpeedDuplex: *string*, $x \in \{ "10Mbps Half" , "10Mbps Full" , "100Mbps Half" , "100Mbps Full" , "1Gbps Half" , "1Gbps Full" , "2.5Gbps Full" , "5Gbps Full" , "10Gbps Full" , "20Gbps Full" , "25Gbps Full" , "40Gbps Full" , "50Gbps Full" , "56Gbps Full" , "100Gbps Full" , "200Gbps Full" , "400Gbps Full" , "Unknown" , "LinkDown" \}$

Actual link speed and duplex settings of the physical port used for communication through the primary port.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.

secondaryPortSpeedDuplex: *string*, $x \in \{ "10Mbps Half" , "10Mbps Full" , "100Mbps Half" , "100Mbps Full" , "1Gbps Half" , "1Gbps Full" , "2.5Gbps Full" , "5Gbps Full" , "10Gbps Full" , "20Gbps Full" , "25Gbps Full" , "40Gbps Full" , "50Gbps Full" , "56Gbps Full" , "100Gbps Full" , "200Gbps Full" , "400Gbps Full" , "Unknown" , "LinkDown" \}$

Actual link speed and duplex settings of the physical port used for communication through the secondary port.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.

primaryDeviceName: *string* (1 to 4096 chars)

Device name of the NIC of the primary port.

secondaryDeviceName: *string* (1 to 4096 chars)

Device name of the NIC of the secondary port.

primaryInterfaceName: *string*

Interface name of the primary port. This name is unique within a storage node for the compute ports, control ports, and internode ports.

secondaryInterfaceName: *string*

Interface name of the secondary port. This name is unique within a storage node for the compute ports, control ports, and internode ports.

activePort: *string*, $x \in \{ "primary" , "secondary" \}$

Information on the teaming active port.

- primary: The primary port is the active port.
- secondary: The secondary port is the active port.

mode: *string*, $x \in \{ \text{"active-standby"} \}$

Teaming mode.

- active-standby: Active-standby configuration

autoFailBackEnabled: *boolean*

Indicates whether automatic failback for teaming is enabled/disabled.

- true: Automatic failback is enabled.
- false: Automatic failback is disabled.

teamingOfInternodePort: *object*

DESCRIPTION

Teaming information of the internode port. This is output only when teaming is enabled.

PROPERTIES

primaryMacAddress: *string* (17 chars), must match `/^[a-f0-9]{2:}{5}[a-f0-9]{2}$/`

The physical MAC address of the teaming information of the primary port.

secondaryMacAddress: *string* (17 chars), must match `/^[a-f0-9]{2:}{5}[a-f0-9]{2}$/`

The physical MAC address of the teaming information of the secondary port.

primaryConfiguredPortSpeed: *string*, $x \in \{ \text{"Auto"}, \text{"1G"}, \text{"10G"}, \text{"25G"}, \text{"40G"}, \text{"100G"} \}$

Link speed setting of the primary port (unit: bps). This setting determines the actual link speed.

- Auto: The speed setting depends on the switch or SFP specifications.

secondaryConfiguredPortSpeed: *string*, $x \in \{ \text{"Auto"}, \text{"1G"}, \text{"10G"}, \text{"25G"}, \text{"40G"}, \text{"100G"} \}$

Link speed setting of the secondary port (unit: bps). This setting determines the actual link speed.

- Auto: The speed setting depends on the switch or SFP specifications.

primaryPortSpeedDuplex: *string*, $x \in \{ \text{"10Mbps Half"}, \text{"10Mbps Full"}, \text{"100Mbps Half"}, \text{"100Mbps Full"}, \text{"1Gbps Half"}, \text{"1Gbps Full"}, \text{"2.5Gbps Full"}, \text{"5Gbps Full"}, \text{"10Gbps Full"}, \text{"20Gbps Full"}, \text{"25Gbps Full"}, \text{"40Gbps Full"}, \text{"50Gbps Full"} \}$

"56Gbps Full" , "100Gbps Full" , "200Gbps Full" , "400Gbps Full" , "Unknown" , "LinkDown" }

Actual link speed and duplex settings of the physical port used for communication through the primary port.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.

secondaryPortSpeedDuplex: *string* , x ∈ { "10Mbps Half" , "10Mbps Full" , "100Mbps Half" , "100Mbps Full" , "1Gbps Half" , "1Gbps Full" , "2.5Gbps Full" , "5Gbps Full" , "10Gbps Full" , "20Gbps Full" , "25Gbps Full" , "40Gbps Full" , "50Gbps Full" , "56Gbps Full" , "100Gbps Full" , "200Gbps Full" , "400Gbps Full" , "Unknown" , "LinkDown" }

Actual link speed and duplex settings of the physical port used for communication through the secondary port.

- Unknown: The status is unknown.
- LinkDown: Link down occurred.

primaryDeviceName: *string* (1 to 4096 chars)

Device name of the NIC of the primary port.

secondaryDeviceName: *string* (1 to 4096 chars)

Device name of the NIC of the secondary port.

primaryInterfaceName: *string*

Interface name of the primary port. This name is unique within a storage node for the compute ports, control ports, and internode ports.

secondaryInterfaceName: *string*

Interface name of the secondary port. This name is unique within a storage node for the compute ports, control ports, and internode ports.

activePort: *string* , x ∈ { "primary" , "secondary" }

Information on the teaming active port.

- primary: The primary port is the active port.
- secondary: The secondary port is the active port.

mode: *string* , x ∈ { "active-standby" }

Teaming mode.

- active-standby: Active-standby configuration

autoFailBackEnabled: *boolean*

Indicates whether automatic failback for teaming is enabled/disabled.

- true: Automatic failback is enabled.
- false: Automatic failback is disabled.

ticket: object

DESCRIPTION

Information of the authentication ticket.

PROPERTIES

ticket: *string* (1 to 12288 chars) , must match `/^[!-A-Za-z0-9!'"#$%&'()*+,.:;<=>|?@[\\]^_`{|}~]{1,12288}$/`

Authentication ticket. Specify applicable information to the Authorization header when using ticket authentication.

expirationTime: *string* (date-time)

Expiration time of the authentication ticket. If the valid period is omitted, the authentication ticket expiration date and time are the same as that for the password of the user who issued the ticket.

However, if the user's password does not have an expiration time, the ticket will be valid for 365 days.

user: object

DESCRIPTION

User information.

A null value is returned for the following values if (1) External authentication is enabled, (2) mappingMode is set to Group, (3) The CLI for obtaining user information is run with "self" specified for userId, and (4) (3) is run by using the user on the external authentication server:

- userId
- isEnabled
- userGroups

PROPERTIES

userId: *string* (5 to 255 chars) , must match `/^[!-A-Za-z0-9!#$%&'@.\\^_`{|}~]{5,255}$/`
User ID.

userId: *string* (5 to 765 chars) , must match `/^[A-Za-z0-9%\\-\\. _~]{5,765}$/` nullable
Object ID of the user. For the user ID, a percent-encoded reserved string defined in RFC 3986 is output.

passwordExpirationTime: *string* (date-time) nullable

Expiration time of the password. After this time, the password expires.

If authentication is external, a null value is returned.

isEnabled: *boolean* nullable

Enables or disables the user.

userGroups: *object[]* (1 to 8 items) nullable

A list of user group IDs to which the user belongs.

ITEMS

object

PROPERTIES

userGroupId: *string* (1 to 64 chars) , must match `/^[a-zA-Z0-9!#$%&'\-\.@\^_\{\}~]{1,64}$/code>`
User Group ID.

userGroupObjectId: *string* (1 to 192 chars) , must match `/^[A-Za-z0-9%\-\. _~]{1,192}$/code>`
Object ID of the user group. For the user group ID, a percent-encoded reserved string defined in RFC 3986 is output.

isBuiltIn: *boolean*

Whether the user is a built-in user.

authentication: *string* , $x \in \{ "local" , "external" \}$

Authentication type.

- local: Authenticated locally.
- external: Authenticated by the external authentication server.

roleNames: *string[]*

Role of the user group.

ITEMS

- For system administrators: (One to six items)
string , $x \in \{ "Security" , "Storage" , "Monitor" , "Service" , "Audit" , "Resource" \}$
- For VPS administrators: (One to three items)
string , $x \in \{ "VpsSecurity" , "VpsStorage" , "VpsMonitor" \}$

isEnabledConsoleLogin: *boolean* nullable

Whether the use of console interface is permitted.

- true: The console interface can be used.
- false: The console interface cannot be used.

(Virtual machine) A null value is output.

(Bare metal) The set value is valid.

vpsId: *string* , must match `/^\(system\)$$[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$`

The ID of the virtual private storage (VPS) that the user belongs to.

If the user is a system administrator, the string "(system)" is displayed.

privileges: *object[]* (1 to 65 items)

A list of information about a virtual private storage (VPS) that the user can access.

ITEMS

[userPrivileges: object \(on page 510\)](#)

userAuthSetting: *object*

DESCRIPTION

User authentication settings.

PROPERTIES

passwordComplexitySetting: [passwordComplexitySettingOfUserAuthSetting: object \(on page 444\)](#)

passwordAgeSetting: [passwordAgeSettingOfUserAuthSetting: object \(on page 444\)](#)

lockoutSetting: [lockoutSettingOfUserAuthSetting: object \(on page 442\)](#)

sessionSetting: [sessionSettingOfUserAuthSetting: object \(on page 475\)](#)

userGroup: *object*

DESCRIPTION

User group information.

PROPERTIES

memberUsers: *object[]* (1 to 32 items)

A list of users who belong to the user group.

For a user group on an external authentication server, no user on that server is output.

ITEMS

object

PROPERTIES

userId: *string* (5 to 255 chars) , must match `/^[^\-A-Za-z0-9!#$%&'\.@\^_`{}~]{5,255}$/code>
User ID.`

userObjectId: *string* (5 to 765 chars) , must match `/^[A-Za-z0-9%\-\._~]{5,765}$/code
Object ID of the user. For the user ID, a percent-encoded reserved string defined in RFC 3986 is output.`

userGroupId: *string* (1 to 64 chars) , must match `/^[a-zA-Z0-9!#$%&'\.@\^_`{}~]{1,64}$/code
User Group ID.`

userGroupObjectId: *string* (1 to 192 chars) , must match `/^[A-Za-z0-9%\-\._~]{1,192}$/code
Object ID of the user group. For the user group ID, a percent-encoded reserved string defined in RFC 3986 is output.`

roleNames: *string[]*
Role of the user group.

ITEMS

- For system administrators: (One to six items)
string , $x \in \{ \text{"Security", "Storage", "Monitor", "Service", "Audit", "Resource"} \}$
- For VPS administrators: (One to three items)
string , $x \in \{ \text{"VpsSecurity", "VpsStorage", "VpsMonitor"} \}$

isBuiltIn: *boolean*
Whether the user is a built-in user.

externalGroupName: *string* (1 to 4096 chars) nullable
Name of the user group registered with an external authorization server when the external authorization server is linked.

A null value is returned for a user group on the storage cluster (not on an external authentication server).

vpsId: *string* , must match `/^[^(system)$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/code`

The ID of the virtual private storage (VPS) that the user group belongs to.

For a system administrator group, the string "(system)" is displayed.

scope: *string[]* (1 to 65 items)
An array of the IDs of virtual private storages (VPSs) that the user group can access.

ITEMS

must match `/^system$|^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The IDs of VPSs that the user group can access.

For a system administrator group, the string "system" is displayed instead of an ID.

userGroupSummary: object**DESCRIPTION**

User group summary information.

PROPERTIES

userGroupId: *string* (1 to 64 chars) , must match `/^[a-zA-Z0-9!#$%&'*-.\@^_`{|}~]{1,64}$/code>`

User Group ID.

userGroupId: *string* (1 to 192 chars) , must match `/^[A-Za-z0-9%\-\._~]{1,192}$/code>`
Object ID of the user group. For the user group ID, a percent-encoded reserved string defined in RFC 3986 is output.

roleNames: *string[]*

Role of the user group.

ITEMS

- For system administrators: (One to six items)
string , $x \in \{ \text{"Security", "Storage", "Monitor", "Service", "Audit", "Resource"} \}$
- For VPS administrators: (One to three items)
string , $x \in \{ \text{"VpsSecurity", "VpsStorage", "VpsMonitor"} \}$

isBuiltIn: *boolean*

Whether the user is a built-in user.

externalGroupName: *string* (1 to 4096 chars) nullable

Name of the user group registered with an external authorization server when the external authorization server is linked.

A null value is returned for a user group on the storage cluster (not on an external authentication server).

userPrivileges: *object*

DESCRIPTION

The information about the virtual private storage (VPS) that the user can access.

PROPERTIES

scope: *string* , must match `/^system$|^[A-Za-f0-9]{8}(-[A-Za-f0-9]{4}){3}-[A-Za-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the user can access.

roleNames: *string[]*

A list of roles for the virtual private storage (VPS) that the user can access.

ITEMS

- For system administrators: (One to six items)
string , $x \in \{ \text{"Security", "Storage", "Monitor", "Service", "Audit", "Resource"} \}$
- For VPS administrators: (One to three items)
string , $x \in \{ \text{"VpsSecurity", "VpsStorage", "VpsMonitor"} \}$

version: *object*

DESCRIPTION

API version information.

PROPERTIES

apiVersion: *string* (7 to 11 chars) , must match `/^[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}\.[0-9]{1,2}$/`

API version.

productName: *string*

API name.

userPrivileges: *object*

DESCRIPTION

The information about the virtual private storage (VPS) that the user can access.

PROPERTIES

scope: *string*, must match `/^system$|^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the user can access.

roleNames: *string[]*

A list of roles for the virtual private storage (VPS) that the user can access.

ITEMS

- For system administrators: (One to six items)

string, $x \in \{ \text{"Security", "Storage", "Monitor", "Service", "Audit", "Resource"} \}$

- For VPS administrators: (One to three items)

string, $x \in \{ \text{"VpsSecurity", "VpsStorage", "VpsMonitor"} \}$

virtualPrivateStorage: object**DESCRIPTION**

The information about a virtual private storage (VPS).

PROPERTIES

id: *string*, must match `/^[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the VPS.

name: *string* (1 to 32 chars), must match `/^(?!system$)[\A-Za-z0-9,\.:@_]{1,32}$/`

A VPS name.

upperLimitForNumberOfUserGroups: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 256 \}$

The upper limit of the number of user groups that belong to the VPS.

numberOfUserGroupsCreated: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 256 \}$

The number of user groups that have been created on the VPS.

upperLimitForNumberOfUsers: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 256 \}$

The upper limit of the number of users that belong to the VPS.

numberOfUsersCreated: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 256 \}$

The number of users that have been created on the VPS.

upperLimitForNumberOfSessions: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 436 \}$

The upper limit of the number of sessions on the VPS.

numberOfSessionsCreated: *integer* (int32), $\{ x \in \mathbb{Z} \mid 0 \leq x \leq 436 \}$

The number of sessions that have been created on the VPS.

upperLimitForNumberOfServers: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 1024$ }

The maximum allowable number of compute nodes on the VPS.

numberOfServersCreated: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 1024$ }

The number of compute nodes that have been created on the VPS.

upperLimitForNumberOfHbas: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 4096$ }

The upper limit of the number of initiators for the VPS.

numberOfHbasCreated: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 4096$ }

The number of initiators that have been created on the VPS.

upperLimitForNumberOfVolumeServerConnections: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 65536$ }

The upper limit of the number of information items about connections between volumes and compute nodes on the VPS.

numberOfVolumeServerConnectionsCreated: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 65536$ }

The number of information items about connections between volumes and compute nodes on the VPS.

volumeSettings: *object*

The information about volumes on the VPS.

PROPERTIES

poolId: *string (uuid)*

The ID of the storage pool to be used.

upperLimitForNumberOfVolumes: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 32768$ }

The upper limit of the number of volumes on the VPS.

numberOfVolumesCreated: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 32768$ }

The number of volumes that have been created on the VPS.

upperLimitForCapacityOfVolumes: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The upper limit of the total volume capacity (MiB) of the VPS.

capacityOfVolumesCreated: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total capacity (in MiB) of volumes that have been created on the VPS.

upperLimitForCapacityOfSingleVolume: *integer (int64)* , { $x \in \mathbb{Z} \mid -1 \leq x \leq 6871947674$ }

The upper limit of the capacity (MiB) of a single volume of the VPS.

If the capacity of a single volume is not limited, -1 is displayed.

qosParam: object

PROPERTIES**upperLimitForIopsOfVolume: integer (int64) , { x ∈ ℤ | -1 ≤ x ≤ 2147483647 }**

The upper limit of volume performance (in IOPS) of the VPS.

This is used as the default value for the upper limit of performance (in IOPS) of volumes created on the VPS. If the upper limit of volume performance (in IOPS) is set, a value in the range from 100 to 2147483647 is displayed. The VPS administrator who creates volumes can set a value that is no more than this value as the upper limit of performance (in IOPS) for each volume. If the upper limit of volume performance (in IOPS) is not set, -1 is displayed.

upperLimitForTransferRateOfVolume: integer (int64) , { x ∈ ℤ | -1 ≤ x ≤ 2097151 }

The upper limit of volume performance (in MiB/s) for the VPS.

This is used as the default value for the upper limit of performance (in MiB/s) of volumes created on the VPS. If the upper limit of volume performance (in MiB/s) is set, a value in the range from 1 to 2097151 is displayed. The VPS administrator who creates volumes can set a value that is no more than this value as the upper limit of performance (in MiB/s) for each volume. If the upper limit of volume performance (in MiB/s) is not set, -1 is displayed.

upperAlertAllowableTimeOfVolume: integer (int32) , { x ∈ ℤ | -1 ≤ x ≤ 600 }

The alert threshold value (in seconds) for the upper limit of volume performance for the VPS.

This is used as the default value for the alert threshold for the upper limit of performance of volumes created on the VPS. If the alert threshold for the upper limit of volume performance is set, a value in the range from 1 to 600 is displayed. A message is output to the event log when restriction of the upper limit of performance specified by upperLimitForIopsOfVolume or upperLimitForTransferRateOfVolume continues for the specified length of time. If the alert threshold for the upper limit of volume performance is not set, -1 is displayed.

virtualPrivateStorageList: *object*

DESCRIPTION

A list of summary information about virtual private storages (VPSs) and information about data.

PROPERTIES

data: *object[]* (up to 64 items)

A list of summary information about virtual private storages (VPSs).

ITEMS

[virtualPrivateStorage: object \(on page 511\)](#)

summaryInformation: [virtualPrivateStorageSummaryInformation: object \(on page 514\)](#)

virtualPrivateStorageSummaryInformation: *object*

DESCRIPTION

PROPERTIES

totalCount: *integer (int32)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 64$ }

The number of virtual private storages (VPSs) that have been created.

totalUpperLimitForNumberOfUserGroups: *integer (int32)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 16384$ }

The total value of the upperLimitForNumberOfUserGroups properties set for the VPSs that have been created.

totalUpperLimitForNumberOfUsers: *integer (int32)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 16384$ }

The total value of the upperLimitForNumberOfUsers properties set for the VPSs that have been created.

totalUpperLimitForNumberOfSessions: *integer (int32)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 16384$ }

The total value of the upperLimitForNumberOfSessions properties set for the VPSs that have been created.

totalUpperLimitForNumberOfVolumes: *integer (int32)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 2097152$ }

The total value of the upperLimitForNumberOfVolumes properties set for the VPSs that have been created.

totalUpperLimitForCapacityOfVolumes: *integer (int64)*, { $x \in \mathbb{Z} \mid 0 \leq x \leq 9223372036854775807$ }

The total value (in MiB) of the upperLimitForCapacityOfVolumes properties set for the VPSs that have been created.

totalUpperLimitForNumberOfServers: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 65536$ }

The total value of the upperLimitForNumberOfServers properties set for the VPSs that have been created.

totalUpperLimitForNumberOfHbas: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 262144$ }

The total value of the upperLimitForNumberOfHbas properties set for the VPSs that have been created.

totalUpperLimitForNumberOfVolumeServerConnections: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 4194304$ }

The total value of the upperLimitForNumberOfVolumeServerConnections properties set for the VPSs that have been created.

volume: object

DESCRIPTION

Volume information.

PROPERTIES

reservedCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ }

The reserved (logical) capacity (unit: MiB).

A null value is output if "volumeType" is "ExternalMigrationOrigin".

freeCapacity: *integer (int64)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

Available (logical) capacity (unit: MiB).

A null value is output if "volumeType" is "ExternalMigrationOrigin".

luns: *object[]* nullable

A list of volume LUNs

ITEMS

object

PROPERTIES

lun: *integer (int32)* , { $x \in \mathbb{Z} \mid 0 \leq x \leq 8191$ }

LUN

serverId: *string (uuid)*

The ID of the compute node.

snapshotProgressRate: *integer* (int32) , { x ∈ ℤ | 0 ≤ x ≤ 100 } nullable

The progress of preparing, deleting, or restoring snapshots (unit: %).

- A null value is output when snapshotAttribute is a hyphen (-) or P-VOL.
- The progress rate is output only when snapshotStatus is one of Preparing, Deleting, or Restoring. In the case of other statuses, a null value is output.

snapshotTimestamp: *string* (date-time) nullable

The time when snapshots are obtained is output when snapshotAttribute is "S-VOL" or "P/S-VOL".

When snapshotStatus is other than Normal, a null value is output.

snapshotType: *string* , x ∈ { "Snapshot" } nullable

The type of the snapshot. A null value is output when snapshotAttribute is a hyphen (-) or P-VOL.

savingEffects: savingEffectOfVolume: object (on page 469)**snapshotConcordanceRate: *integer* (int32) , { x ∈ ℤ | 0 ≤ x ≤ 100 } nullable**

The matching rate between the snapshot creation-source volume (P-VOL) and the applicable volume (unit: %).

- The matching rate is output only when snapshotAttribute is "S-VOL" or "P/S-VOL". When snapshotAttribute is "-" or "P-VOL", a null value is output.
- The matching rate is output when snapshotStatus is Normal or Prepared. In the case of other statuses, a null value is output.

isWrittenInSvol: *boolean* nullable

When snapshotStatus is Normal, whether writing is performed from the compute node to the volume is output.

- true: Writing to the volume is performed.
- false: Writing to the volume is not performed.

When snapshotStatus is other than Normal, a null value is output.

id: *string* (uuid)

Volume ID.

name: *string* (1 to 32 chars)

Volume name. The same name cannot be used in multiple volumes.

nickname: *string* (1 to 32 chars)

The nickname of the volume. The same nickname can be used in multiple volumes.

volumeNumber: *integer* (int32) , { x ∈ ℤ | 0 ≤ x ≤ 131071 }

Volume number.

poolId: *string* (uuid) nullable

The ID of the storage pool.

A null value is output if "volumeType" is "ExternalMigrationOrigin".

poolName: *string* (1 to 32 chars) nullable

The name of the storage pool.

A null value is output if "volumeType" is "ExternalMigrationOrigin".

totalCapacity: *integer* (int64) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ }

The total (logical) capacity (unit: MiB).

(Virtual machine) An external volume or a volume after data migration might not be in 1-MiB units depending on the capacity of the external volume. In this case, the value is rounded down to 1 MiB.

usedCapacity: *integer* (int64) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

The used (logical) capacity (unit: MiB).

A null value is output if "volumeType" is "ExternalMigrationOrigin".

Equals totalCapacity if fullAllocated is true.

numberOfConnectingServers: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 4096$ }

The number of connected compute nodes.

numberOfSnapshots: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 1023$ }

The number of Snapshots.

protectionDomainId: *string* (uuid)

The ID of the protection domain to which the volume is belonging.

fullAllocated: *boolean*

Specifies whether all the area for writing user data is pre-allocated.

fullAllocated is currently fixed to false.

- false: The area is allocated according to the amount of written user data.

volumeType: *string* , $x \in \{ \text{"Normal"}, \text{"Snapshot"}, \text{"MigrationDestination"}, \text{"ExternalMigrationOrigin"} \}$

A list of volume types (attributes)

- Normal: Normal volume
- Snapshot: Volume which is used in Snapshot
- MigrationDestination: Volume being used as the migration destination
- (Virtual machine) ExternalMigrationOrigin: The migration source volume (virtual volume)

statusSummary: *string*, $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

Summary of the volume status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string*, $x \in \{ \text{"Normal"}, \text{"Deleting"}, \text{"Updating"}, \text{"Expanding"}, \text{"CreationFailed"}, \text{"DeletionFailed"}, \text{"UpdateFailed"}, \text{"ExpansionFailed"}, \text{"IOSuppressed"}, \text{"MetaDataConsistencyError"} \}$

The volume status. The following status is output:

- Normal: Operating normally.
- Deleting: Being deleted.
- Updating: The setting is being updated.
- Expanding: The capacity is being expanded.
- CreationFailed: Creation ended abnormally.
- DeletionFailed: Deleting ended abnormally.
- UpdateFailed: The setting update ended abnormally.
- ExpansionFailed: Capacity expansion did not succeed.
- IOSuppressed: I/O is suppressed.
- MetaDataConsistencyError: Metadata used by the data reduction function is inconsistent.

storageControllerId: *string (uuid) nullable*

The ID of the storage controller that manages this volume.

A null value is output if "volumeType" is "ExternalMigrationOrigin".

snapshotAttribute: *string*, $x \in \{ \text{"-"}, \text{"P-VOL"}, \text{"P/S-VOL"}, \text{"S-VOL"} \}$

The snapshot attribute. A hyphen (-) indicates that the volume is other than P-VOL, P/S-VOL, or S-VOL.

snapshotStatus: *string*, $x \in \{ \text{"Normal"}, \text{"Deleting"}, \text{"Restoring"}, \text{"Empty"}, \text{"Preparing"}, \text{"Prepared"}, \text{"Error"} \}$ nullable

The snapshot status. Any one of the following statuses is output:

- Normal: Operating normally.
- Deleting: Being deleted.
- Restoring: Being restored.
- Empty: Status in which snapshots are empty without metadata. This is a temporary status when creating or deleting S-VOLs. After waiting for a while, the status transitions to Preparing when creating S-VOLs and the applicable volumes are deleted when deleting S-VOLs.
- Preparing: Being prepared for creating snapshots.
- Prepared: Completed preparation for creating snapshots.
- Error: Operating abnormally.

The status is output only when snapshotAttribute is "S-VOL" or "P/S-VOL". When snapshotAttribute is "-" or "P-VOL", a null value is output.

savingSetting: *string*, $x \in \{ \text{"Disabled"} \}$

Settings of the data reduction function.

- Disabled: The data reduction function is disabled.

savingMode: *string*, $x \in \{ \text{"null"} \}$ nullable

Processing mode of the data reduction function.

savingMode is currently fixed to null value.

dataReductionStatus: *string*, $x \in \{ \text{"Disabled"} \}$

Status of data reduction.

- Disabled: The data reduction function is disabled.

dataReductionProgressRate: *integer (int32)*, $\{ x \in \mathbb{Z} \mid \text{null} \}$ nullable

Progress of the data reduction function (unit: %).

dataReductionStatus is currently fixed to null value.

vpsId: *string*, must match `/^\(system\)$$[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string* (1 to 32 chars) , must match `/^\(system\)$$[\-A-Za-z0-9,\.:@_]{1,32}$/`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

qosParam: *object*

PROPERTIES

upperLimitForIops: *integer* (int64) , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 2147483647 \}$

The upper limit of volume performance (in IOPS).

The value -1 indicates no upper limit is placed on volume performance (in IOPS).

upperLimitForTransferRate: *integer* (int64) , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 2097151 \}$

The upper limit of volume performance (in MiB/s).

The value -1 indicates that no upper limit is placed on volume performance (in MiB/s).

upperAlertAllowableTime: *integer* (int32) , $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 600 \}$

The alert threshold value (in seconds) for the upper limit of volume performance.

The value -1 indicates that no entries are output to the event log.

VPS administrators cannot specify this property when creating or editing volumes.

upperAlertTime: *string* (date-time) nullable

The last time the upper limit of volume performance was continuously exceeded and the conditions for the alert threshold of the performance upper limit were met (UTC).

naaid: *string* (up to 32 chars) , must match `/^[0-9a-f]{32}$/` nullable

NAA ID of volumes.

If the volumes were created by the software version earlier than 01.12.0x.xx, null is output.

volumeCapacity: object

DESCRIPTION

The capacity information of the volume (monitor information). A null value is set if the information could not be obtained.

PROPERTIES

id: *string* (uuid)

Volume ID.

vpsId: *string*

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

capacityUsage: *integer* (int64) nullable

Usage amount (unit: MiB).

volumeCapacityListResponseData: *object*

DESCRIPTION

The capacity information (monitor information) of the volume when the information was collected. For performanceObjects, volumes of which capacity information could be collected when the CLI was executed are output as an array.

PROPERTIES

timestamp: *string* (date-time)

The time when this information was collected.

performanceObjects: *object*[]

A list of volume capacity information (monitor information) collected at the time specified for timestamp.

ITEMS

[volumeCapacity: object \(on page 520\)](#)

volumePath: *object*

DESCRIPTION

Connection information between the volume and the compute node.

PROPERTIES

id: *string*

The ID of connection information between the volume and the compute node.

Format: "(*volumeId*) , (*serverId*)"

Where volumeID is the ID of the volume, and serverID is the ID of the compute node.

serverId: *string* (uuid)

The ID of the compute node.

volumeId: *string* (uuid)

Volume ID.

lun: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 8191$ }

LUN

vpsId: *string* , must match `/^(\system)$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string* (1 to 32 chars) , must match `/^(\system)$|[\-A-Za-z0-9,\.:@_]{1,32}$/`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

volumePerformance: object

DESCRIPTION

Performance information of the volume (monitor information). A null value is set if the information could not be obtained. The infinite value (Infinity) is not output for double type values.

PROPERTIES

id: *string* (uuid)

Volume ID.

readIOPS: *integer* (int32) nullable

The number of read I/Os per second (unit: IOPS).

writeIOPS: *integer* (int32) nullable

The number of write I/Os per second (unit: IOPS).

readTransferRate: *number* (double) nullable

Read data transfer amount per second (unit: MiB/sec).

writeTransferRate: *number* (double) nullable

Write data transfer amount per second (unit: MiB/sec).

readResponseTime: *number (double) nullable*

Average response time of the volume (unit: msec).

writeResponseTime: *number (double) nullable*

Average write response time of the volume (unit: msec).

volumePerformanceListResponse: *object*

DESCRIPTION

A list of volume performance information (monitor information) at the specified time.

PROPERTIES

data: *object[]*

ITEMS

[volumePerformanceListResponseData: object \(on page 523\)](#)

volumePerformanceListResponseData: *object*

DESCRIPTION

The performance information (monitor information) of the volume when the information was collected. For performanceObjects, volumes of which performance information could be collected when the API was executed are output as an array.

PROPERTIES

timestamp: *string (date-time)*

The time when this information was collected.

performanceObjects: *object[]*

A list of volume performance information (monitor information) collected at the time specified for timestamp.

ITEMS

[volumePerformance: object \(on page 522\)](#)

volumeSummary: *object*

DESCRIPTION

Summary information of the volume.

PROPERTIES**savingEffects:** [savingEffectOfVolumeSummary: object \(on page 470\)](#)**id:** *string* (uuid)

Volume ID.

name: *string* (1 to 32 chars)

The name of the volume. The same name cannot be used in multiple volumes.

nickname: *string* (1 to 32 chars)

The nickname of the volume. The same nickname can be used in multiple volumes.

volumeNumber: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 131071$ }

Volume number.

poolId: *string* (uuid) nullable

The ID of the storage pool.

A null value is output if "volumeType" is "ExternalMigrationOrigin".

poolName: *string* (1 to 32 chars) nullable

The name of the storage pool.

A null value is output if "volumeType" is "ExternalMigrationOrigin".

totalCapacity: *integer* (int64) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ }

The total (logical) capacity (unit: MiB).

(Virtual machine) An external volume or a volume after data migration might not be in 1-MiB units depending on the capacity of the external volume. In this case, the value is rounded down to 1 MiB.

usedCapacity: *integer* (int64) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 268435456$ } nullable

The used (logical) capacity (unit: MiB).

A null value is output if "volumeType" is "ExternalMigrationOrigin".

Equals totalCapacity if fullAllocated is true.

numberOfConnectingServers: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 4096$ }

The number of connected compute nodes.

numberOfSnapshots: *integer* (int32) , { $x \in \mathbb{Z} \mid 0 \leq x \leq 1023$ }

The number of Snapshots.

protectionDomainId: *string* (uuid)

The ID of the protection domain to which the volume is belonging.

fullAllocated: *boolean*

Specifies whether all the area for writing user data is pre-allocated.

fullAllocated is currently fixed to false.

- false: The area is allocated according to the amount of written user data.

volumeType: *string* , $x \in \{ \text{"Normal"}, \text{"Snapshot"}, \text{"MigrationDestination"}, \text{"ExternalMigrationOrigin"} \}$

A list of volume types (attributes)

- Normal: Normal volume
- Snapshot: Volume which is used in Snapshot
- MigrationDestination: Volume being used as the migration destination
- (Virtual machine) ExternalMigrationOrigin: The migration source volume (virtual volume)

statusSummary: *string* , $x \in \{ \text{"Normal"}, \text{"Warning"}, \text{"Error"} \}$

Summary of the volume status.

- Normal: No action by the user is required.
- Warning: Although immediate action by the user is not required, some action may have to be taken.
- Error: Immediate action by the user is required.

status: *string* , $x \in \{ \text{"Normal"}, \text{"Deleting"}, \text{"Updating"}, \text{"Expanding"}, \text{"CreationFailed"}, \text{"DeletionFailed"}, \text{"UpdateFailed"}, \text{"ExpansionFailed"}, \text{"IOSuppressed"}, \text{"MetaDataConsistencyError"} \}$

The volume status. The following status is output:

- Normal: Operating normally.
- Deleting: Being deleted.
- Updating: The setting is being updated.
- Expanding: The capacity is being expanded.
- CreationFailed: Creation ended abnormally.
- DeletionFailed: Deleting ended abnormally.
- UpdateFailed: The setting update ended abnormally.
- ExpansionFailed: Capacity expansion did not succeed.

- IOSuppressed: I/O is suppressed.
- MetadataConsistencyError: Metadata used by the data reduction function is inconsistent.

storageControllerId: *string* (uuid) nullable

The ID of the storage controller that manages this volume.

A null value is output if "volumeType" is "ExternalMigrationOrigin".

snapshotAttribute: *string* , x ∈ { "-", "P-VOL", "P/S-VOL", "S-VOL" }

The snapshot attribute. A hyphen (-) indicates that the volume is other than P-VOL, P/S-VOL, or S-VOL.

snapshotStatus: *string* , x ∈ { "Normal", "Deleting", "Restoring", "Empty", "Preparing", "Prepared", "Error" } nullable

The snapshot status. Any one of the following statuses is output:

- Normal: Operating normally.
- Deleting: Being deleted.
- Restoring: Being restored.
- Empty: Status in which snapshots are empty without metadata. This is a temporary status when creating or deleting S-VOLs. After waiting for a while, the status transitions to Preparing when creating S-VOLs and the applicable volumes are deleted when deleting S-VOLs.
- Preparing: Being prepared for creating snapshots.
- Prepared: Completed preparation for creating snapshots.
- Error: Operating abnormally.

The status is output only when snapshotAttribute is "S-VOL" or "P/S-VOL". When snapshotAttribute is "-" or "P-VOL", a null value is output.

savingSetting: *string* , x ∈ { "Disabled" }

Settings of the data reduction function.

- Disabled: The data reduction function is disabled.

savingMode: *string* , x ∈ { "null" } nullable

Processing mode of the data reduction function.

savingMode is currently fixed to null value.

dataReductionStatus: *string*, $x \in \{ \text{"Disabled"} \}$

Status of data reduction.

- Disabled: The data reduction function is disabled.

dataReductionProgressRate: *integer (int32)*, $\{ x \in \mathbb{Z} \mid \text{null} \}$

Progress of the data reduction function (unit: %).

dataReductionProgressStatus is currently fixed to null value.

vpsId: *string*, must match `/^(\system)$|[A-Fa-f0-9]{8}(-[A-Fa-f0-9]{4}){3}-[A-Fa-f0-9]{12}$/`

The ID of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output instead of an ID.

vpsName: *string (1 to 32 chars)*, must match `/^(\system)$|[\-A-Za-z0-9,\.:@_]{1,32}$/`

The name of the virtual private storage (VPS) that the acquisition-target resource belongs to.

If the resource does not belong to a VPS, the reserved word "(system)", which indicates that the resource is independent, is output.

qosParam: *object*

A QoS-related parameter.

PROPERTIES

upperLimitForIops: *integer (int64)*, $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 2147483647 \}$

The upper limit of volume performance (in IOPS).

The value -1 indicates that no upper limit is placed on volume performance (in IOPS).

upperLimitForTransferRate: *integer (int64)*, $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 2097151 \}$

The upper limit of volume performance (in MiB/s).

The alert threshold value (in seconds) for the upper limit of volume performance.

upperAlertAllowableTime: *integer (int32)*, $\{ x \in \mathbb{Z} \mid -1 \leq x \leq 600 \}$

The alert threshold value (in seconds) for the upper limit of volume performance.

The value -1 indicates that no entries are output to the event log.

VPS administrators cannot specify this property when creating or editing volumes.

upperAlertTime: *string* (date-time) nullable

The last time the upper limit of volume performance was continuously exceeded and the conditions for the alert threshold of the performance upper limit were met (UTC).

naald: *string* (up to 32 chars) , must match /^[0-9a-f]{32}\$/ nullable

NAA ID of volumes.

If the volumes were created by the software version earlier than 01.12.0x.xx, null is output.

warningThresholdSettingOfLicenseSetting: *object*

DESCRIPTION

License warning threshold setting.

PROPERTIES

remainingDays: *integer* (int32) , { $x \in \mathbb{Z} \mid -1 \leq x \leq 60$ }

Number of remaining days. A warning is issued if the number of remaining days becomes less than the specified number of days.

-1 means that no warning is issued.

totalPoolCapacityRate: *integer* (int32) , { $x \in \mathbb{Z} \mid -1 \leq x \leq 100$ }

Warned capacity rate. A warning is issued if the current total logical capacity of all storage pools exceeds the specified capacity rate in the total logical capacity of all storage pools permitted by the license.

-1 means that no warning is issued.

webServerAccessSetting: *object*

DESCRIPTION

Web server access settings.

PROPERTIES

whitelistSetting: [whitelistSettingOfWebServerAccessSetting: object \(on page 529\)](#)

whitelistSettingOfWebServerAccessSetting: *object*

DESCRIPTION

Web server whitelist settings.

PROPERTIES

isEnabled: *boolean*

Enables or disables the whitelist function for the web server.

clientNames: *string[]* (up to 10 items)

Transmission source list which is set in the whitelist for the web server.

ITEMS

string (7 to 15 chars) , must match `/^(([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([1-9]?[0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])$/`

Glossary

Auto recovery

See *Storage node auto-recovery* in the Glossary.

base license

A license that provides basic functionality.

blocked, blocking, blockage

A state for a storage or resources that comprise a storage where I/O operations cannot be performed.

BMC network

Network that connects the storage node BMC and the controller node. This network is used to operate the BMC from the controller node.

BMC port

The port that is on a storage node and is used for connection to the BMC network.

capacity balancing

Function of moving volumes automatically from high capacity usage storage controllers to low capacity usage storage controllers when capacity usage is not balanced among storage controllers.

cluster master node (primary)

A storage node within the storage cluster that has the role of managing the entire storage cluster.

cluster master node (secondary)

A storage node in the storage cluster that is responsible for managing the entire storage cluster in the event of failure of the cluster master node (primary).

cluster worker node

A storage node in the storage cluster that does not have the role of managing the entire storage cluster.

compute network

A network between a compute node and a storage node. Used for input / output of user data.

compute node

A node that the application of the user operates and instructs input / output of user data to the storage node. A host connected to the compute port.

compute port

(Virtual machine) The virtual port that is on a storage node and connects to the compute network.
(Bare metal) The port that is on a storage node and connects to the compute network.

configuration backup file

Backup file of storage cluster configuration information.

Configuration file

(Virtual machine) Generic term for VSS block configuration file and VM configuration file.

(Bare metal) A synonym for the VSS block configuration file.

Console interface

The interface of a storage node console (such as a virtual console via BMC).

control network

(Virtual machine) The network between the controller node and the storage node or maintenance node. It is used for Virtual Storage Software block management operation and communication with external service such as SNMP and NTP.

(Bare metal) The network between the controller node and the storage node. It is used for Virtual Storage Software block management operation and communication with external service such as SNMP and NTP.

control port

(Virtual machine) The virtual port that is on a storage node and connects to the control network.

(Bare metal) The port that is on a storage node and connects to the control network.

controller node

A management node used to instruct Virtual Storage Software block's management function (volume creation, etc.).

data migration

A functionality to migrate data from an external storage system into Virtual Storage Software block in volume units.

disk controller

Hardware required to use a drive.

drive

A physical device that stores user data and the OS. Common name for SSDs and HDDs.

drive data relocation

Function of balancing data capacity among storage nodes (to optimize capacity efficiency of each storage node) when capacity becomes unbalanced among storage nodes due to storage node addition or removal.

event log

A file that records the operation of the system. In Virtual Storage Software block, it refers to the log for the purpose of fault notification.

Failover

Switching the cluster master (secondary) to the cluster master (primary) in the event of failure of the cluster master (primary).

fault domain

A group of storage nodes sharing power system and network switch. A configuration for making it possible to continue the operation of storage even if the storage nodes in a group collectively become abnormal.

initiator

An endpoint on the compute node side when accessing a volume from a compute node.

internode network

Network between storage nodes. Used for communication of user data and management information between storage nodes.

internode port

(Virtual machine) The virtual port that is on a storage node and connects to the internode network.

(Bare metal) The port that is on a storage node and connects to the internode network.

license key

Key to activate the corresponding license in Virtual Storage Software block.

maintenance blockage

See *Storage node maintenance blocking* in the Glossary.

maintenance node

VM that is configured inside some of the storage nodes, and which is used to configure and manage Virtual Storage Software block.

maintenance recovery

See *Storage node maintenance recovery* in the Glossary.

multi-tenancy function

Function to allow resources of a storage in a large storage system to be distributed to and shared by multiple tenants (companies and divisions). A storage distributed to each tenant is called VPS (Virtual Private Storage).

normal volume

Volume that is neither P-VOL, S-VOL, nor P/S-VOL.

other volume capacity

Total capacity of snapshot volumes (S-VOLs and P/S-VOLs).

OVA

An acronym for the Open Virtualization Appliance/Application. The following files are bundled into one tar ball.

1. OVF file contains the virtual machine attributes etc.
2. Disk image or ISO image created by certain Hypervisor software.
3. Manifest file contains hash value for each file (mf option).
4. Certification file for digital signage for Manifest files (cert option).

OVF

Acronym for Open Virtualization Format. OVF is a standard format designed to allow different virtualization software to exchange virtual machine image files with each other.

P-VOL

Volume of the copy source.

P/S-VOL

Volume having both the P-VOL and S-VOL attributes in a snapshot tree in cascade configuration.

physical node

In an environment where storage is used, a physical server that belongs to that environment.

program product license

A license provided on a per-function basis.

protection domain

Setting for limiting the range of failure if an error occurs in a storage node or the network between storage nodes.

provisioned volume capacity

Total capacity of normal volumes and snapshot volumes (P-VOLs).

rebuild

Function of automatically restoring redundancy of data whose redundancy was reduced due to a drive failure or storage node failure.

Rebuild capacity

Capacity in a storage pool secured for Data rebuild at the time of drive failure.

Representative storage node

A storage node that is used to configure a storage cluster in the setup procedure for the bare metal model. This node is different from a cluster master node (primary).

S-VOL

The copy destination volume.

scale out

A method of increasing the number of CPUs, memory capacity, and the number of drives by adding storage nodes to improve system performance and capacity.

scope

The range of resources that users can operate. A scope is set for a user group. A scope for a user is determined according to the user group to which the user belongs.

snapshot volume

Volume that is either a P-VOL, S-VOL, or P/S-VOL.

spare node

Standby storage node used for the spare node function.

spare node function

Function to allow restoration of redundancy by performing spare node switchover. Spare node switchover from a faulty storage node to a storage node that is registered as a standby storage node in the storage cluster is performed when the faulty storage node cannot be restored by the auto-recovery function.

storage cluster

A virtual storage system built from multiple storage nodes.

storage controller

Part of Virtual Storage Software block processes that manage storage node capacities and volumes.

storage controller relocation

Function of optimizing the number of the storage controllers of each storage node when the number of the storage controllers becomes unbalanced among storage nodes due to storage node addition or removal.

storage node

Physical server to which the CPU, memory, and drives that comprise Virtual Storage Software block are assigned. Alternatively, this term refers to a process group of Virtual Storage Software block software running on storage nodes.

storage node addition

A process of adding a storage node to a storage cluster.

Storage node auto-recovery

Function to execute self-diagnosis and self-recovery by a storage node to recover the storage node from server failures due to software factors (firmware, driver, and so on) or due to temporary network problems between storage nodes.

Storage node maintenance blocking

Process of separating a storage node from a storage cluster temporarily and placing the storage node in a status that allows for part replacement or other maintenance.

Storage node maintenance recovery

Process of returning a storage node to the available status again after it was blocked by manual operation or due to a failure.

storage node removal

A process of removing a storage node from a storage cluster.

storage node replacement

A functionality or process that manually recovers a blocked storage node.

Replace the following to recover the blocked storage node.

(Virtual machine) Storage node VM

(Bare metal) Physical node

storage pool

Logical user data storage area that combines multiple drives.

storage software

The Virtual Storage Software block software that realizes a storage cluster.

system administrator

Administrator who manages the entire system.

target

An endpoint on the storage cluster side when accessing a volume from a compute node.

temporary volume capacity

Total capacity of volumes created temporarily by Data migration and Capacity balance.

thin provisioning

Method of creating a virtual storage in which the minimum required capacity is initially secured, and then expanded as required.

virtual machine (VM)

Virtual machine.

virtual private storage

Virtual storage logically divided from a storage cluster in a multi-tenancy configuration.

volume

A logical device that mounts on a compute node to read or write user data.

volume migration

Moving volumes (existing on a storage node to be removed) to another storage node.

volume path

Connection information between a compute node and a volume. One of the setting information necessary for using a volume from a compute node.

VPS

Acronym for Virtual Private Storage. See *virtual private storage* in the Glossary.

VPS administrator

Administrator who manages a virtual private storage (VPS) in a multi-tenancy configuration.

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