



Hitachi Command Suite

Command Director

CLI Reference Guide

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Preface

This manual describes how to use the Hitachi Command Director CLI.

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Intended Audience

This document is intended for users of Hitachi Command Director. You should have a working knowledge of the following:

- Hitachi Device Manager, Hitachi Tuning Manager, and Hitachi Tiered Storage Manager.
- Storage array and performance concepts.
- Service Level Objectives (SLOs) and Service Level Agreements (SLAs).

Product Version

This document revision applies to Hitachi Command Director v8.0.1 or later.

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 can be found on the documentation CD or on the Hitachi Data Systems Support Portal: <https://portal.hds.com/>

Document revision level

Revision	Date	Description
MK-90HCMD004-00	July 2012	Initial release.
MK-90HCMD004-01	February 2013	Supersedes and replaces MK-90HCMD004-00
MK-90HCMD004-02	October 2013	Supersedes and replaces MK-90HCMD004-01
MK-90HCMD004-03	April 2014	Supersedes and replaces MK-90HCMD004-02
MK-90HCMD004-04	August 2014	Supersedes and replaces MK-90HCMD004-03

Referenced documents

The following Hitachi referenced documents are available for download from the Hitachi Data Systems Support Portal: <https://portal.HDS.com>





- *Hitachi Command Director User guide*, MK-90HCMD001
- *Hitachi Command Director Installation and Configuration guide*, MK-90HCMD002
- *Hitachi Command Director API Reference Guide*, MK-90HCMD005
- *Hitachi Command Director Release Notes*, RN-90HCMD003

Document conventions

This document uses the following typographic conventions:

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click OK.
<i>Italic</i>	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: <code>copy source-file target-file</code> Note: Angled brackets (< >) are also used to indicate variables.
Monospace	Indicates text that is displayed on screen or entered by the user. Example: <code>pairdisplay -g oradb</code>
< > angled brackets	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: <code>pairdisplay -g <group></code> Note: Italic font is also used to indicate variables.
[] 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	Indicates that you have a choice between two or more options or arguments. Examples: [a b] indicates that you can choose a, b, or nothing. { a b } indicates that you must choose either a or b.

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

Icon	Label	Description
	Note	Calls attention to important or additional information.
	Tip	Provides helpful information, guidelines, or suggestions for performing tasks more effectively.
	Caution	Warns the user of adverse conditions or consequences (for example, disruptive operations).
	WARNING	Warns the user of severe conditions or consequences (for example, destructive operations).

Conventions for storage capacity values

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

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

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

Logical capacity unit	Value
1 block	512 bytes
1 KB	1,024 (2^{10}) bytes
1 MB	1,024 KB or $1,024^2$ bytes
1 GB	1,024 MB or $1,024^3$ bytes
1 TB	1,024 GB or $1,024^4$ bytes
1 PB	1,024 TB or $1,024^5$ bytes
1 EB	1,024 PB or $1,024^6$ bytes

Accessing product documentation

Product user documentation is available on the Hitachi Data Systems Portal: <https://portal.hds.com>. Check this site for the most current documentation, including important updates that may have been made after the release of the product.

Getting help

[Hitachi Data Systems Support Portal](https://portal.hds.com) is the destination for technical support of your current or previously-sold storage systems, midrange and enterprise servers, and combined solution offerings. The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Support Portal for contact information: <https://portal.hds.com>

[Hitachi Data Systems Community](#) is a new global online community for HDS customers, partners, independent software vendors, employees, and prospects. It is an open discussion among these groups about the HDS portfolio of products and services. It is the destination to get answers, discover insights, and make connections. The HDS Community complements our existing Support Portal and support services by providing an area where you can get answers to non-critical issues and questions. **Join the conversation today!** Go to community.hds.com, register, and complete your profile.

Comments

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

Thank you!

Overview

The Hitachi Command Director (HCmD) command line interface (CLI) refers to commands that can be remotely executed from a remote client to the HCmD server.

- [About the Command Director CLI](#)
- [Installing and setting up the Command Director CLI on Windows](#)
- [Installing and setting up the Command Director CLI on Linux](#)
- [Removing the Command Director CLI](#)
- [Command syntax](#)
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- [Command output](#)
- [Using the help option](#)
- [HCmD CLI commands](#)
- [User Roles in the Command Director CLI](#)
- [Notes on executing commands](#)

About the Command Director CLI

The Command Director command line interface (HCmD CLI) communicates with the HCmD server to perform application management operations, such as bulk management of applications.



Note: To ensure compatibility, the version of the HCmD CLI client must match the exact version of the HCmD server.

Application management commands

Run the HCmD application management commands to manage applications in bulk using the CLI, and perform the following types of tasks:

- Delete applications using the **DeleteApplications** command. Note that you cannot use this command to delete logical group applications.
- Generate a CSV containing a list of applications that exist, along with the application details for each one using the **GenerateApplications** command.
- Generate a list of applications, volumes allocated to the applications, and the SLO profiles assigned to the application volumes in a CSV file using the **GetVolumeProfiles** command.
- Modify application-related information such as name (note that you cannot change a logical group application name), assigned SLO profiles, assigned tags, and associated email addresses using the **ModifyApplications** command.
- Modify SLO profiles assigned to application volumes using the **ModifyVolumeProfiles** command.

Connection mode

The Command Director server can operate in secure or unsecure mode. However, the CLI connection to the Command Director server is unsecured (in other words, it uses the HTTP protocol).

Command permissions

Run HCmD CLI commands in a command prompt window with administrator privileges (set to run as administrator).

Report generation commands

Use the following commands to list, generate, and save the report information to a CSV file for the only supported and available report using the HCmD CLI: Chargeback Overview.

- **GetReportList**
- **GetReport**



Note: All other HCmD reports can be accessed by using the Hitachi Command Director graphical user interface (GUI). A subset of reports is also supported in the HCmD REST API. For more information, see the *Hitachi Command Director User Guide* or the *Hitachi Command Director API Reference Guide*.

Installing and setting up the Command Director CLI on Windows

Install Command Director Server before installing the CLI.

The HCmD CLI package comes in a zip file located at: `HCmD-installation-folder\cli\windows\hcmdcli.zip` folder. Open the zip file and extract all files to a local directory. You can also extract the CLI package to a remote client (your computer) and connect to the HCmD server (using the HTTP protocol) for executing the commands.

Installing and setting up the Command Director CLI on Linux

Prerequisites

Install the Command Director server.

Procedure

1. Run the command `cd HCmD-Server-Installation-Directory/cli/linux`.
2. Run the command `gzip -d hcmdcli.tar.gz`.
3. Run the command `tar -xf hcmdcli.tar`.
4. Run the command `cd hcmdcli/bin`.
5. Perform CLI operations using `./hcmdCli.sh` from the bin folder, using the usual CLI command syntax. For example: `./hcmdCli.sh GetReportList -pwd manager`

Removing the Command Director CLI

To remove the Command DirectorCLI, delete the folder or directory. In Windows, the folder location is selected by the user.

In Linux, the default directory is `HCmD-Server-Installation-Directory/cli/linux/hcmdCli`.

Command syntax

When you execute a command in the Command Director CLI, you are submitting a request to the Command Director server to perform report generation and application management operations.

The general format for the command line values is:

```
hcmdcli [command] [options]
```

where:

- *command*
Submits requests to the Command Director server. The command names are not case-sensitive. You can enter them in uppercase, lowercase, or as a combination of both.
- *options*
Command arguments that modify the request to the Command Director server. For example, the options for report commands let you filter report data based on the report criteria you specify. Options are case-sensitive. Each option has a single character representation and an alternate word representation; for the single character, prefix the character with a single dash; for the word, prefix the word with two dashes. For example: `-p` or `--port`. Some options require an argument, which follows the option. For example, the `-u` option is followed by a user ID.

Common command options

You can execute commands with the following options:

Option	Argument	If run on the HCmD server:	If run remotely:	Description
<code>-u</code> or <code>--user</code>	user ID	Optional	Mandatory	A valid Command Director login user ID.
<code>-pwd</code> or <code>--password</code>	password	Mandatory	Mandatory	The Command Director server login password. It is case-sensitive.
<code>-ip</code>	IP address	Optional	Mandatory	Command Director server IP address.
<code>-p</code> or <code>--port</code>	port number	Optional	Mandatory	Command Director server port.

You can also set the options in the properties file. When you do so, you do not need to enter them from the command line.



Note: You can specify all options in the properties file except the password option.

If options are specified both in the properties file and from the command line, the options specified from the command line take precedence. For more information about the properties file and how to use it to execute commands, see [Using the properties file on page 15](#).

Using the properties file

Specify command options and their values in a properties file and include this file as a parameter to the `hcmdcli` command. For commands such as the report generation commands that are run frequently, using a properties file allows you to preset parameters and run multiple reports at a time.

The properties file is named `hcmdcli.properties` and is available in the `HCmD-CLI-installation-folder/hcmdcli/conf` folder.

The properties you can specify are:

- `hcmd.ip.address`: Command Director server IP address
- `hcmd.port`: Command Director server port number
- `hcmd.user.name`: Login user name
- `hcmd.timeout.period`: Time-out period applied to the connection between the CLI and the Command Director server.

The following properties are applicable only to the report generation commands:

- `hcmdcli.file.path`: Target file to store the generated reports. If no path is specified, then a default folder is created in the `hcmdcli-installation-folder/hcmdcli/bin` folder.

Example

For example, if you set the following values in the properties file:

- `hcmd.ip.address = 127.0.0.1`
- `hcmd.port = 25015`
- `hcmd.user.name = system`
- `hcmdcli.file.path= C:/out/out.csv`

and run the following command:

```
hcmdcli GetReport -pwd myPassword
```

you get the following output:

```
Completed generating and saving the CSV report to C:\out\out.csv.
```

Command output

The HCmD CLI returns an execution result on the console at the end of each command execution.

The following table lists the command output displayed when the command is executed successfully and when it fails with errors.

Condition	Output example
Command execution is successful	<p>For report commands: Completed generating and saving the CSV report to <i>output-csv-file</i>.</p> <p>For application management commands: File "<i>output-csv-file</i>" created.</p>
Command execution failed with errors	<p>For CLI command syntax validation errors: Invalid file specified for option 'f'. Only CSV files are accepted.</p> <p>For command execution errors (HCmD server-side execution errors): Line [<i>line-number</i>] Failed - User with email address <i>email-address</i> not found.</p>

Using the help option

Use the `help` option to display help information for a specific command or all commands.

Basic help

Basic help displays the format for commands and a list of commands and options.

To display basic help, run the following:

```
hcmdcli -pwd password -h
```

or

```
hcmdcli -pwd password --help
```

to obtain the following output:

```
usage: hcmdcli <command> [-h] [-ip <arg>] [-p <arg>] [-pwd <arg>] [-u <arg>]
```

<code>-h,--help</code>	This will print out the help menu
<code>-ip <arg></code>	HCmD Server IP Address
<code>-p,--port <arg></code>	HCmD Server Port
<code>-pwd,--password <arg></code>	HCmD Server Login Password. Required with any command
<code>-u,--user <arg></code>	HCmD Server Login User Name

Supported CLI commands:

1. GetReport
2. GetReportList
3. GetApplications
4. ModifyApplications

- 5. DeleteApplications
- 6. GetVolumeProfiles
- 7. ModifyVolumeProfiles

Command help

Command help explains the specific command functions and the options you can specify for those commands.

To display command help, run the following:

```
hcmdcli command -pwd password -h
```

or

```
hcmdcli command -pwd password --help
```

For example, to display help for the **ModifyVolumeProfiles** command, run:

```
hcmdcli ModifyVolumeProfiles -pwd myPassword -h
```

to obtain the following output:

```
usage: hcmdcli ModifyVolumeProfiles [-h] [--inputfile <arg>]
[-ip <arg>] [-p <arg>] [-pwd <arg>] [-u <arg>]
```

```
-h,--help This will print out the help menu
--inputfile <arg> Input file path
-ip <arg> HCmD Server IP Address
-p,--port <arg> HCmD Server Port
-pwd,--password <arg> HCmD Server Login Password. Required with
any command
-u,--user <arg> HCmD Server Login User Name
```

HCmD CLI commands

The HCmD CLI contains the following commands that are grouped within an HCmD operation type.

HCmD operation	Command	Description
Report generation	GetReportList on page 34	Use this command to display a list of reports you can generate.
	GetReport on page 35	Use this command to generate a report, and save the report data in CSV format to a default or user-specified folder.
Application management	GetVolumeProfiles on page 22	Use this command to generate a list of SLO profiles assigned to application volumes and save the SLO profile information to a CSV file.
	ModifyVolumeProfiles on page 24	Use this command to modify SLO profiles of application volumes in bulk.
	GetApplications on page 25	Use this command to generate a list of applications and save their details to a CSV file.
	ModifyApplications on page 27	Use this command to modify application details in bulk.

HCmD operation	Command	Description
	DeleteApplications on page 31	Use this command to delete applications in bulk.

User Roles in the Command Director CLI

The Command Director CLI supports two user roles; Admin and View. The roles are assigned in Device Manager. Users with the View role have limited access to operations performed in the CLI.

Users with the View role are unable to perform the operations listed below and the following error message displays: "ERR_10107 : The user does not have sufficient permissions to perform this operation."

- ModifyApplications
- DeleteApplications
- ModifyVolumeProfiles

For more information about user roles in Command Director, see the *Hitachi Command Director User Guide*.

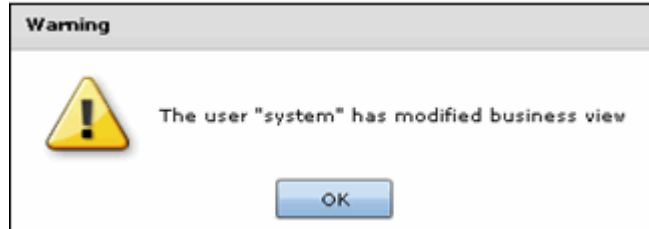
Notes on executing commands

Note the following when you execute a CLI command:

- Specifying password for all commands.
You must specify `-pwd` or `--password` for all commands executed at the command line interface or when using the properties file.
- Modifying the output CSV file that includes numeric defined columns.
You can modify the contents of the output CSV file obtained as an output from an application management command in a plain text editor like Microsoft® Notepad, or in the Microsoft Excel® application. However, in Excel, numeric defined columns are changed to date format. One example is the Volume column generated by the `GetVolumeProfiles` command. To work with such information in Excel, use the following procedure:
 1. Open the file in any plain text editor, such as Notepad.
 2. Copy the file contents, and paste it into a blank worksheet in Excel.
 3. In Excel, select the entire contents, and then select Data > Text to Columns.
 4. In the **Convert Text to Columns** wizard, select the Original data type as Delimited. Select Comma as the Delimiter, select the column (for example, the Volume column) data format as text, and close the wizard.

5. Save the file in CSV format (or as an Excel spreadsheet if you want to retain the formatting).
- Notification in HCmD web user interface for application management commands.

When you modify SLO profile details of application volumes using the **ModifyVolumeProfiles** command, modify applications using the **ModifyApplications** command, or delete applications using the **DeleteApplications** command, a warning dialog opens in the Resources tab to notify the user about the application and SLO profile modifications. The following is an example of a Warning dialog box that is displayed in the HCmD web user interface:



Application management commands

This module describes the commands you can use to manage applications in bulk using the HCmD CLI.

- [GetVolumeProfiles](#)
- [ModifyVolumeProfiles](#)
- [GetApplications](#)
- [ModifyApplications](#)
- [DeleteApplications](#)

GetVolumeProfiles

Use the `GetVolumeProfiles` command to obtain a list of applications, volumes allocated to the applications, and the SLO profiles assigned to the application volumes in a CSV file.

Syntax

```
hcmdcli GetVolumeProfiles -pwd
      password -outputfile
      filename [-appnamelike
      search-string] [-appsearchmode {all | tagged |
      untagged}] [-tags {cat1[tag1] cat2[tag2]...catn[tagn]}] [-
      tagsearchmode {all | any}]
```

Options

Option	Description
-pwd	The Command Director server login password.
-outputfile	The CSV file generated by the command. Specify the file name complete with full directory path, for example <code>C:/mygeneratedlist/output.csv</code> .
-appnamelike	Application name to search. You can enter a complete or partial application name enclosed in double quotation marks.
-appsearchmode	Specify whether to include all, tagged, or untagged applications. Do not use this option with the <code>tags</code> or <code>tagsearchmode</code> option.
-tags	Specify tag category pairs in the format <code>category[tag]</code> with spaces separating multiple tag category pairs. You can specify up to 50 such pairs. Do not use this option with the <code>appsearchmode</code> option.
-tagsearchmode	Specify whether to search for all (default) or any tags specified in the <code>tags</code> option. Do not use this option with the <code>appsearchmode</code> option.

For common options you can specify with the command, see [Command syntax on page 14](#).

Output

The output CSV file includes information in the following format:

First line (header):

```
Application Name, Storage System, Volume, SLO Profile, Volume
Label, Pool ID, Pool Name, Storage Type, Storage Names
```

Second and subsequent lines include values for the following fields:

- `Application Name`: The application name. For logical group applications, this is the qualified application name derived from Device Manager storage groups.

- **Storage System:** Name of the storage system specified in Device Manager. If this name is not specified in Device Manager, it is the storage system model and serial number (for example, VSP 25210).
- **Volume:** The volume ID.
- **SLO Profile:** The SLO profile assigned to the application volume.



Note: For EMC volumes this field will display `Unmonitored`. SLO profiles cannot be assigned to EMC volumes.

- **Volume Label:** The volume label specified in Device Manager. If the volume label is not specified, this field displays a hyphen.
- **Pool ID:** The HDP, HDT pool ID. If the volume is not part of a dynamic provisioning pool, this field will display a hyphen.
- **Pool Name:** The pool name specified in Device Manager. If the pool name is not specified in Device Manager, this field displays a hyphen. It also displays a hyphen when the volume is not part of a dynamic provisioning pool.
- **Storage Type:** The storage type of the application, whether `Host`, `LUNOwner`, `LGVolumes`, or `LGHost`. `LGVolumes` and `LGHost` refer to the logical group that is created with volumes and hosts in Device Manager. This column can have no values when the application is empty.
- **Storage Names:** The name of the storage resource based on the storage type.
 - If the storage type is `Host`, then it is the name of the host.
 - If the storage type is `LUNOwner`, then it is the name of the LUN Owner.
 - If the storage type is `LGVolumes`, then it is the name of the logical group that is created with volumes in Device Manager.
 - If the storage type is `LGHost`, then it is the name of the logical group that is created with hosts in Device Manager.

Examples

1. To obtain a list of SLO profiles assigned to volumes that are allocated to applications that contain "01_HBA" in their names, in a CSV file named `sloappname.csv`:

```
hcmdcli GetVolumeProfiles -pwd myPassword -outputfile c:\mygeneratedfiles\sloappname.csv -appnamelike '01_HBA'
```

2. To obtain a list of SLO profiles assigned to volumes that are allocated to applications tagged to either Americas or HR category, in a CSV file named `sloapptagged.csv`:

```
hcmdcli GetVolumeProfiles -pwd myPassword -outputfile C:\mygeneratedfiles\sloapptagged.csv -tags Geography[Americas] Function[HR] -tagsearchmode any
```

ModifyVolumeProfiles

Use the **ModifyVolumeProfiles** command to modify SLO profiles assigned to application volumes.

The **ModifyVolumeProfiles** command can be performed by users with the Admin role. For more information, see [User Roles in the Command Director CLI on page 18](#).



Note: SLO profiles cannot be assigned to EMC volumes. The SLO Profile field will display `Unmonitored`.

Prerequisites

Prepare the input file you must provide as input to the command:

1. Run the **GetVolumeProfiles** command to obtain a CSV file that includes a list of applications, volumes allocated to the applications, and SLO profiles assigned to the application volumes. The data rows in the CSV file are in the following field order with a comma that separates each field:

```
Application Name, Storage System, Volume, SLO Profile,  
Volume Label, Pool ID, Pool Name, Storage Type, Storage Names
```

2. Edit the CSV file and modify only the **SLO Profile** field as shown in the following format:

```
Application Name, Storage System, Volume, SLO Profile,  
Volume Label, Pool ID, Pool Name, Storage Type, Storage Names
```

To modify the existing SLO profile name, specify the new SLO profile name in this field. Make sure that the SLO profile you want to assign exists in HCMD, and specify the SLO profile name as it appears on the HCMD web user interface.

3. Save the CSV file with a different name.

Syntax

```
hcmdcli ModifyVolumeProfiles -pwd  
password -inputfile  
filename
```

Options

Option	Description
-pwd	The Command Director server login password.
-inputfile	The CSV file (obtained from the GetVolumeProfiles command) in which you modified the SLO profile information.

Option	Description
	Specify the file name with a CSV extension and include the file path.

For common options you can specify with the command, see [Command syntax on page 14](#).

Example

To modify SLO profiles for all volumes allocated to the 9715-01-HBA application:

1. Prepare the input CSV file:
 - a. In the output file obtained from the `GetVolumeProfiles` command, identify the application whose volume SLO profile you want to modify.
In the following figure, the volumes allocated to the application 9715-01-HBA are assigned to the Default SLO Profile.

Application Name	Storage System	Volume	SLO Profile	Volume Label	Pool ID	Pool Name	Storage Type	Storage Name5
Sun8	USP_V@172.17.79:139	00:00:A3	Gold	-	-	-	LUNOwner	Sun8
Win_2008_181	USP@172.17.79:55	02:B6	Brown	-	-	-	LUNOwner	Win_2008_181
VM3	VSP@172.17.41.75	00:00:0E	Silver	-	-	-	LUNOwner	VM3
9715-01_HBA1	USP_V@172.17.41.75	00:00:00	Default SLO Profile	-	-	-	LUNOwner	9715-01_HBA1
9715-01_HBA4	AMS2300@172.17.41.75	112	Default SLO Profile	-	-	-	LUNOwner	9715-01_HBA4
9715-01_HBA3	USP_V@172.17.41.75	00:00:00	Default SLO Profile	-	-	-	LUNOwner	9715-01_HBA3
Alpha_75_162	USP_V@172.17.41.75	00:00:00	Gold	-	-	-	LUNOwner	Alpha_75_162

- b. In the SLO Profile field, enter the new SLO profile name.
 - c. Save the file as `mod_vol.csv`.
2. Run the `ModifyVolumeProfiles` command using the input file `mod_vol.csv`:


```
hcmdcli ModifyVolumeProfiles -pwd myPassword -inputfile mod_vol.csv
```
3. Verify that the SLO profile information is modified by running the `GetVolumeProfiles` command to generate a CSV file that includes an updated list of SLO profiles for the application volumes. Alternatively, you can verify the change in the SLO Profile Details report for this application in the All Applications business view in HCmD web user interface.



Note: Volume profiles cannot be updated using this command when the application auto-create mode is logical group.

GetApplications

Use the `GetApplications` command to generate a CSV containing a list of applications existing in HCmD, along with the application details for each.

Syntax

```
hcmdcli GetApplications -pwd password -outputfile filename  
[-appnamelike search-string]  
[-appsearchmode {all | tagged | untagged}]  
[-tags {cat1[tag1] cat2[tag2]...catn>tagn}]  
[-tagsearchmode {all | any}]
```

Options

Option	Description
-pwd	The Command Director server login password.
-outputfile	The CSV file generated by the command. Specify the file name complete with full directory path, for example C:/mygeneratedlist/output.csv.
-appnamelike	Application name to search. You can enter a complete or partial application name enclosed in double quotation marks.
-appsearchmode	Specify whether to include all, tagged, or untagged applications. Do not use this option with the <code>tags</code> or <code>tagsearchmode</code> option.
-tags	Specify tag category pairs in the format <code>category[tag]</code> with spaces separating multiple tag category pairs. You can specify up to 50 such pairs. Do not use this option with the <code>appsearchmode</code> option.
-tagsearchmode	Specify whether to search for all or any tags specified in the <code>tags</code> option. Do not use this option with the <code>appsearchmode</code> option.

For common options you can specify with the command, see [Command syntax on page 14](#).

Output CSV file

The output CSV file includes information in the following format:

First line (header):

```
Application Name, SLO Profile, Tags, Emails, Storage Type,  
Storage Names
```

Second and subsequent lines include values for the following fields:

- **Application Name:** The application name. For logical group applications, this is the qualified application name.
- **SLO Profile:** The SLO profile assigned to the application.
- **Tags:** One or more tags specified in the format `category[tag]` assigned to the application. If the application is not assigned any tag, this field displays a hyphen.
- **Emails:** One or more email addresses associated with the application. If the application does not include any email address, this field displays a hyphen.

- **Storage Type:** The storage type of the application: Refer to the logical group that is created with volumes and hosts in Device Manager.
 - Host
 - LUNOwner
 - LGVolumes
 - LGHost
 - LGVolumes
 - LGHost
- **Storage Names:** The name of the storage resource based on the storage type.
 - If the storage type is `Host`, then it is the name of the host.
 - If the storage type is `LUNOwner`, then it is the name of the LUN Owner.
 - If the storage type is `LGVolumes`, then it is the name of the logical group that is created with volumes in Device Manager.
 - If the storage type is `LGHost`, then it is the name of the logical group that is created with hosts in Device Manager.

Examples

- To generate a CSV file named `appname.csv` with a list of applications that include "05_HBA_17" in their names :

```
hcmdcli GetApplications -pwd myPassword -outputfile
c:\mygeneratedlist\appname.csv -appnamelike "05_HBA_17"
```

- To generate a CSV file named `apptagged.csv` with a list of applications that are tagged to both Geography and Function categories:

```
hcmdcli GetApplications -pwd myPassword -outputfile
c:\mygeneratedlist\apptagged.csv -tags
Geography[Europe] Function[HR]-tagsearchmode all
```

ModifyApplications

Use the **ModifyApplications** command to modify the following information:

- Application name
 - You cannot change the name of a logical group application.
- SLO profile assigned to the application
- Tags assigned to the application
- Email addresses associated with the application

The **ModifyApplications** command can be performed by users with the Admin role. For more information, see [User Roles in the Command Director CLI on page 18](#).

Prerequisites

Prepare the input file you must provide as input to the command:

1. Run the `GetApplications` command to obtain a CSV file that includes a list of applications and application details. The data rows in the CSV file are in the following field order with a comma that separates each field:

```
Application Name, SLO Profile, Tags, Emails, Storage Type,  
Storage Names
```

2. Edit the CSV file:

- To modify the application name, specify the new name after the `Storage Names` field. For example, in the following field order, `New Name` is the new application name information you include in the input file:

```
Application Name, SLO Profile, Tags, Emails, Storage Type,  
Storage Names, New Name
```

The application name must not exceed 256 characters.

- To modify the SLO profile, specify the new SLO profile you want to assign to the application volumes in the `SLO Profile` field. Make sure that the SLO profile you want to assign exists in HCmD, and specify the SLO profile name as it appears in the HCmD web user interface.

Modifications to SLO profiles are applied only to the applications. The associated volumes are unaffected by this change unless you enter `true` to confirm that you want to apply the SLO profile modification to application volumes after the `New Name` field in the input file, as shown in the following example:

```
Application Name, SLO Profile, Tags, Emails, Storage Type,  
Storage Names, New Name, true
```

Enter `false` (default) if you do not want to apply the SLO profile modification to application volumes. For a logical group application, the value of this field is always `true`.

- To modify existing tags assigned to the application, specify new tags in the format `category[tag]` in the `Tags` field. To specify multiple values, enter the category-tag pairs separated by commas and enclose the group in double quotation marks. For example,

```
"Geography[Americas],Geography[APAC],Function[IT],Function[  
Marketing]"
```

You can change the category-tag pair by assigning another pair that exists in HCmD, or you can create a new category and tag names. Category names and tag names cannot exceed 64 characters. Do not use reserved words for new categories or tags. For a list of reserved words, refer to the topic on "Managing custom tags and tag categories section" in the module on Managing resources in the *Hitachi Command Director User Guide*.

To unassign existing tags, enter a hyphen or leave the field blank.

- To modify the email address associated with the application, specify the new email address in the `Emails` field. To specify multiple values,

enter email addresses separated by commas and enclosed in double quotation marks. For example,

```
"johndoe@hds.com", "jane.wills@hds.com".
```

To remove an existing email address, enter a hyphen or leave the field blank.

3. Save the CSV file with a different name.

Syntax

```
hcmdcli ModifyApplications -pwd  
password -inputfile  
filename
```

Options

Option	Description
-pwd	The Command Director server login password.
-inputfile	The CSV file (obtained from the <code>GetApplications</code> command) in which you modified the application information. Specify the file name with a CSV extension and include the file path.

For common options you can specify with the command, see [Command syntax on page 14](#).

Examples

To modify application information for application name ESX_76_15:

1. Prepare the input CSV file:

- a. In the output file obtained from the `GetApplications` command, identify the application (ESX_76_15) you want to modify. In the following figure, the circled entry identifies the row that includes the ESX_76_15 application information you want to modify. To modify the SLO Profile, Tags, Emails, Storage type, or Storage name information, specify the new information for the respective fields in the same order as shown in the following figure.

A	B	C	D	E	F
Application Name	SLO Profile	Tags	Emails	Storage Type	Storage Names
Blade17_ESX101_G005-Win_75_16_GSDC-Blade17_ESX101_HBA1_GSDC_Esx78_101_GSDC_Linux_78_34_gsdc_qa4_75_16_GSDC_SUN_75_87_Win_75_181	Default SLO Profile	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	hdvmqa@manager.com,system@manager.com	LUNOwner	Blade17_ESX101_G005-Win_75_16_GSDC-Blade17_ESX101_HBA1_GSDC_Esx78_101_GSDC_Linux_78_34_gsdc_qa4_75_16_GSDC_SUN_75_87_Win_75_181
Blade6_ESX_245_97	Default SLO Profile	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdvmqa@manager.com	LUNOwner	Blade6_ESX_245_97
5_HNAS_64_201_Node2_HNA	Default SLO Profile	-	-	LUNOwner	ESX_78_140_GSDC_ESX_184_RH_245_HNAS_64_201_Node2_HNAS_Merc_64_201_SSE_Merc_Cluster
ESX_76_15	Default SLO Profile	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdvmqa@manager.com	LUNOwner	ESX_76_15
ESX_76_17	Default SLO Profile	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdvmqa@manager.com	LUNOwner	ESX_76_17
ESX_78_100	Default SLO Profile	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdvmqa@manager.com	LUNOwner	ESX_78_100

- b. To change the application name, specify a new name for the application after the `Storage Names` field, as shown in the following figure.

Application Name	SLO Profile	Tags	Emails	Storage Type	Storage Names	New Name
ESX_76_15	Default SLO Profile	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdvmqa@manager.com	LUNOwner	ESX_76_15	ESX_GSDC_2012

- c. To assign a different SLO Profile to this application, enter a SLO profile name that exists in HCMD in the `SLO Profile` field, as shown in the following figure:

Application Name	SLO Profile	Tags	Emails	Storage Type	Storage Names	New Name
ESX_76_15	Gold	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdvmqa@manager.com	LUNOwner	ESX_76_15	ESX_GSDC_2012

To apply the SLO profile change to all volumes associated with this application, enter `true` after the `New Name` field, as shown in the following figure:

Application Name	SID Profile	Tags	Emails	Storage Type	Storage Names	New Name	
ESX_76_15	Gold	Geography[Americas],Geography[APAC],Function[IT],Function[Marketing]	system@manager.com,hdemo@manager.com	LUNOwner	ESX_76_15	ESX_GSDC_2012	<input checked="" type="checkbox"/>

2. Save the file as `mod_app.csv`.
3. Run the **ModifyApplications** command using the input file `mod_app.csv`:

```
hcmdcli ModifyApplications -pwd myPassword -inputfile mod_app.csv
```
4. Verify that the application information is modified by running the **GetApplications** command to obtain a CSV file that shows the changes you made to the application.

DeleteApplications

Use the **DeleteApplications** command to delete applications from HCMD. You cannot use this command to delete logical group applications.

The **DeleteApplications** command can be performed by users with the Admin role. For more information, see [User Roles in the Command Director CLI on page 18](#).

Prerequisites

Prepare the input file you must provide as input to the command:

1. Run the **GetApplications** command to obtain a CSV file that includes a list of applications and application details.
2. Edit the CSV file to include only those applications you want to delete.
3. Save the CSV file with a different name.

Syntax

```
hcmdcli DeleteApplications -pwd
    password -inputfile
    filename
```

Options

Option	Description
<code>-pwd</code>	The Command Director server login password.
<code>-inputfile</code>	The CSV file (obtained from the GetApplications command) in which you included only applications you want to delete. Specify the file name with a CSV extension and include the file path.

For common options you can specify with the command, see [Command syntax on page 14](#).

Example

To delete applications with names that include ESX:

1. In the output file generated by the **GetApplications** command, identify the applications with ESX in their names, as shown in the following figure:

Application Name	SLO Profile	Tags	Emails	Storage Type	Storage Names
172.17.37.50_W2003R2_Olivia_50	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com	LUNOwner	172.17.37.50_W2003R2_Olivia_50
1D-scras3-05_1D-scras3-06_1D-scras3-05_3D-scras3-06	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com	LUNOwner	1D-scras3-05_1D-scras3-06_3D-scras3-05_3D-scras3-06
2D-scras3-07_2D-scras3-08_4D-scras3-07_4D-scras3-08	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com	LUNOwner	2D-scras3-07_2D-scras3-08_4D-scras3-07_4D-scras3-08
aiX_75_68_GSDC-SUN-75-154_GSDC_AIK7_68_GSDC_AIK_75_68	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com	LUNOwner	154_GSDC_AIK7_68_GSDC_AIK_75_68
Blade17_ESX101_G005-101_GSDC_SUN_75_87_Win_75_181	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com,hdvmo	LUNOwner	Blade17_ESX101_G005-78_101_GSDC_SUN_75_87_Win_75_181
Blade6_ESX_245_97	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	system@manager.com,hdvmo	LUNOwner	Blade6_ESX_245_97
ESX_75_30_GSDC_ESX_75_30	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com,hdvmo	LUNOwner	ESX_75_30_GSDC_ESX_75_30
ESX_76_15	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	system@manager.com,hdvmo	LUNOwner	ESX_76_15
ESX_76_17	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	system@manager.com,hdvmo	LUNOwner	ESX_76_17
ESX_78_100	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	system@manager.com,hdvmo	LUNOwner	ESX_78_100
del-750-6	Default SLO Profile	Geography[Americas],Geography[APAC],Function() T Function[Marketing]	hdvmoq@manager.com,system@manager.com	LUNOwner	del-750-6

2. Review details of the applications you want to delete and confirm the applications to delete.
3. Delete rest of the applications from the file, and save the file as `del_app.csv`.
4. Run the **DeleteApplications** command using the input file `del_app.csv`:

```
hcmdcli DeleteApplications -pwd myPassword -inputfile del_app.csv
```
5. Verify that the applications are deleted by running the **GetApplications** command to generate an updated CSV file that does not include the deleted applications.

Report generation commands

This module describes the commands you can use to generate the supported report and save its report information to a CSV file.

- [GetReportList](#)
- [GetReport](#)
- [Report information in CSV file](#)

GetReportList

Use the `GetReportList` command to obtain the Chargeback Overview report available in HCmD.



Note: Only the Chargeback Overview report is supported using the HCmD command line interface. For more information about this report, see [Generating a Chargeback Overview report on page 35](#). Other reports are supported in the HCmD REST API.

Syntax

password

```
hcmdcli GetReportList -pwd password
```

By default, the HCmD CLI displays the command output in your command window. However, you can redirect the output to a file using the redirect character (`>`). For example:

```
hcmdcli GetReportList -pwd password > filename
```

Options

Option	Description
<code>-pwd</code>	The Command Director server login password.

For common options you can specify with the command, see [Command syntax on page 14](#).

Example

To obtain the currently supported report:

```
hcmdcli GetReportList
```

The output is similar to the following:

```
Report Name: STANDARD_REPORTS/CHARGEBACK/CHARGEBACK_OVERVIEW  
Category: CHARGEBACK
```



Note: Only the Chargeback Overview report is supported and described in this guide. To access all other reports managed and monitored by HCmD, see the *Hitachi Command Director API Reference Guide* for details.

GetReport

Use the `GetReport` command to generate the Chargeback Overview report, and you can save the report data to a CSV file in the default or a specific folder.

You can specify report criteria as part of the command input to include only the information that meets the criteria, and limit the amount of data saved in the CSV file. For more information about report criteria, see [About the Command Director CLI on page 12](#).



Note: To access other reports that are managed and monitored by HCmD, use the REST API. For more information, see the *Hitachi Command Director API Reference Guide*.

Prerequisites

Run the `GetReportList` command to list the Chargeback Overview report.

Syntax

```
hcmdcli GetReport -pwd password -rn reportname[-f filename]
```

Options

Option	Description
<code>-pwd</code>	The Command Director server login password.
<code>-rn</code>	Specify the report name obtained from the <code>GetReportList</code> command output.
<code>-f</code>	Specify the absolute file path to save the generated report data in a CSV file. If you do not specify the file name as an argument to this option, the report is saved in the same location where you run this command.

For common options you can specify with the command, see [Command syntax on page 14](#).

Generating a Chargeback Overview report

Run the `GetReportList` command to view the criteria for the Chargeback Overview report. The following table provides the criteria details.

For this report, you must specify the attribute listed in the following table:

Attribute (criteria)	Operator	Allowable value	Value or range	Multiple Values allowed?
-storagesystem	in (including)	String	Storage system name	Yes

Example

To generate the Chargeback Overview report for a Virtual Storage Platform G1000 and save the data to the `C:/out.csv` file:

```
hcmdcli GetReport -pwd myPassword -rn STANDARD_REPORTS/
CHARGEBACK/
CHARGEBACK_OVERVIEW -storagesystem in vspG1000 -f C:/out.csv
```

Output

To view the Chargeback Overview report information included in the output CSV file, see [Chargeback overview report on page 36](#).

Report information in CSV file

This module describes the information included in the CSV file for the Chargeback Overview report. You can use the Command Director API to access all of the other storage management reports that are managed and monitored by Command Director.

Chargeback Overview report

The Chargeback Overview report included in the output CSV file generated by the `GetReport` command provides a list of application volumes and their details to enable you to charge your customers on capacity usage of the storage systems based on volume, logical path, tier, or disk type.

The output file includes the following information:

- `Volume`: Volume ID.
- `Volume label`: The volume label specified in Device Manager. If it is not specified, this field will include a hyphen.
- `Storage System`: Name of the storage system specified in Device Manager. If it is not specified, it is the storage system model and serial number.
- `Model`: Storage system model type.
- `Volume type`: Type of volume; for example, standard, CVS, LUSE, DPVOL, CoW-VOL.
- `Pool ID`: The HDP pool ID. If the volume is not part of a HDP pool a hyphen appears.
- `Pool name`: Name of the storage pool name the volume belongs to.

- **Tier:** Tier the volume belongs to. When volumes are part of more than one tier, this field displays multiple values.
- **RAID level:** RAID level of the Parity Group the volume belongs to. If the volume is part of a pool, a hyphen appears.
- **Disk type:** Disk type of Parity Group the volume belongs to. A hyphen appears if the volume is part of a pool.
- **Disk capacity:** Capacity of a single disk in the storage system in KB. If the volume is part of a pool, a hyphen appears.
- **Logical group path:** The logical group path as defined in Device Manager.
- **# of Applications:** Number of applications the volume belongs to.
- **Application:** Name of the application the volume belongs to.
- **SLO Profile:** SLO Profile assigned to the volume. For EMC volumes, the message `Unmonitored` appears. SLO profiles cannot be assigned to EMC volumes.
- **Capacity:** The volume capacity in KB.
- **Consumed capacity:** The total used capacity (in KB) if the volume is part of a HDP pool.
- **External volume:** External volume ID. If the volume is an EMC volume, a hyphen appears.
- **External storage system:** Name of the external storage system to which the volume belongs.
- **Virtual Model:** The virtual model name of the migration source.
- **Virtual Serial No.:** The virtual serial number of the migration source.
- **Virtual LDEV:** The virtual LDEV ID (in hexadecimal) of the migration source.



Note: The following fields are not supported for EMC volumes: `Pool ID`, `Tier`, `Logical group path`, `SLO Profile`, `External volume`, `External storage system`, `Virtual Model`, `Virtual Serial No.`, and `Virtual LDEV`. A hyphen will appear in the field(s) to indicate that no field value is available.

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