IBM Tivoli Storage Productivity Center for Replication for System z
Version 5.1

Command-line Interface User's Guide

SC27-4055-00

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Note:
Before using this information and the product it supports, read the information in "Notices" on page 143.

This edition applies to V5, R1 of IBM Tivoli Storage Productivity Center for Replication for System z (product numbers 5698-Z11 and 5698-Z12) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this guide

This section briefly describes the content and the audience of this publication and explains how the information in this publication is organized.

This guide provides definitions, syntax, and examples for these command-line interface (CLI) commands that are used for the varieties of IBM® Tivoli® Storage Productivity Center for Replication:

- IBM Tivoli Storage Productivity Center for Replication Two Site Business Continuity
- IBM Tivoli Storage Productivity Center for Replication Three Site Business Continuity
- IBM Tivoli Storage Productivity Center for Replication Basic Edition for System z®
- IBM Tivoli Storage Productivity Center for Replication for System z

Intended audience

This publication is intended for users of the CLI program for IBM Tivoli Storage Productivity Center for Replication.

Command-line interface conventions

This topic provides information about using the CLI program for IBM Tivoli Storage Productivity Center for Replication. It includes information about command conventions and modes, command format requirements, and other usage information.

Presentation of command information

This topic describes how information is presented in the command descriptions.

A *syntax diagram* uses symbols to represent the elements of a command and to specify the rules for using these elements. A *keyword* represents the name of a command, flag, parameter, or argument. Required key words indicate the parameters or arguments that must be specified for the command.

Syntax diagrams conventions

To read syntax diagrams, follow the path of the line.

- Required keywords are displayed on the main path line. Mutually exclusive required keywords are stacked vertically. Optional key words indicate the parameters or arguments you can choose to specify for the command. Optional keywords appear under the main path line. Mutually exclusive optional keywords are stacked vertically.
- The main path line begins with double arrowheads (>>) and ends with two arrowheads facing each other (><). If a diagram is longer than one line, each line to be continued ends with a single arrowhead (>) and the next line begins with a single arrowhead. The -->< symbol indicates the end of the syntax diagram.
- A dash (-) indicates that you must supply parameters from the stdin file rather than entering parameters.

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- An arrow returning to the start of an item means you can repeat the item. A character or space within the arrow means you must separate repeated items with that character or space.
- A stack of items followed by an arrow returning to the start of the stack means that you can select more than one item or, in some cases, repeat a single item.
- When a group of parameters is lengthy or a section is used more than once in a command, it is shown as a separate fragment following the main diagram.

Syntax diagrams use position to indicate required, optional, and default values for keywords, variables, and operands:

- If an element is shown on the line, the element is required. If an element is shown under the line, the element is optional. If an element is shown over the line, the element is the default.
- If an operand has a default value, the operand is shown both over and under the main line. A value under the main line indicates that the operand must be specified. You must specify the default value or one of the other valid values that are shown. If an operand is not specified, the default value over the main line is used.
- When one or more items are shown under the main line, all of the items are optional.

Command emphasis

The following typefaces are used to show command emphasis:

boldface
Text in **boldface** represents command names.

italics Text in *italics* is used for variables for which you supply actual values, such as a default directory or the name of a cluster.

`monospace`
Text in `monospace` identifies the data or commands that you type, samples of command output, examples of program code or messages from the system, or names of command flags, parameters, arguments, and name-value pairs.

Special characters

The following special characters are used in the command descriptions:

minus sign (-)
Flags are prefixed with a `minus sign` (-). Flags define the action of a command or modify the operation of a command. You can use multiple flags, followed by parameters, when you issue a command. This character cannot be used as the first character of an object name.

vertical bar (|)
A vertical bar signifies that you choose only one value.

For example, `[ a | b ]` indicates that you can choose a, b, or nothing. Similarly, `{ a | b }` indicates that you must choose either a or b.

quotation marks (" ")
Quotation marks around a string indicate that the value can include spaces, for example, "my session name."

brackets ([ ])
Brackets indicate optional options, parameters, and arguments.

braces ({ })
Braces indicate a required choice between two or more options or arguments.

ellipsis (...)
Ellipses indicate repetition or multiple values or arguments.

Command entry

This topic describes how to enter commands in a valid format.

Order of parameters

Parameters can be entered in any order, with the following exceptions:

- The first argument following the command name must be the action that is to be performed.
- If you are performing an action on a specific object, the object ID or name must be the last argument in the line.

Multiple values

For any commands that accept multiple input values of the same type, delimit the values with a comma with no spaces in the input string (for example, `-vol 3,5,8,9`).

For any commands that require multiple value types in one string, delimit the value types with a period. For example, if a volume requires a device number and a volume number, you might specify `-vol FCA86.3,FCA78.5,FCA96.8`. When input values are of different types but specified in the same flag, use a colon. For example, to specify a minimum and maximum value in the same flag, you would type `–size min:max`.

Multiple arguments

IBM Tivoli Storage Productivity Center for Replication supports multiple arguments for the commands **chauth**, **chsess**, **lsdevice**, **lssess**, **lssessactions**, **lsvol**, and **rmsess**. If you invoke a command with multiple arguments, the command will be applied for each of the arguments. For example, you might issue the following command to remove `session_a`, `session_b`, and `session_c`.

```
#rmsess session_a session_b session_c
```

When a command runs on more than one argument, the CLI program establishes a single security session to run the command on each of the multiple arguments.

Volumes and locations

The following volume values are valid:

ESS devices
Valid volume values include the device type, component type, device ID, subsystem ID, logical subsystem ID, and volume ID, with each separated by a period or colon. For example:

ESS single volume
`ESS:2105.65312:VOL:202F (ESS:ELEMENTTYPE.DEVICEID:VOL:LSSVOLNUM)`

User-defined objects

These are the requirements for valid user-defined object names:

- User-defined object names can be 250 characters or fewer, unless otherwise noted.
- Valid characters are A-Z, a-z, 0 - 9, dash (-), underscore (_), period (.), and colon (:).
- Object names must start with an alphanumeric character.
- Most object names cannot contain any blank spaces. However, you can include blanks in session names and location names.
- Do not translate user-defined objects or otherwise modify them from the user's entry (they should remain case-sensitive).

User-defined descriptions

These are the requirements for valid user-defined descriptions:

- If a description contains spaces, it must be enclosed in matching double quotation marks or single quotation marks.
- If a description that is already enclosed in matching quotation marks includes an asterisk, the asterisk must be preceded by an escape character, for example, `-desc "This is the \* pool"`.
- If a description that is already enclosed in matching quotation marks includes quotation marks or single quotation marks within the actual text string, these characters must be escaped. For example, -desc `"This is Hanna\'s description"` or `–desc "This is the pool I call \"Foo\"."`
- User-defined descriptions can be 250 characters or fewer. They cannot contain any leading blank spaces.
- User-defined descriptions should not be translated or otherwise modified from the user's entry, (that is they should remain case-sensitive).
- The CLI is sensitive to case when interpreting user-defined object names given as input. For example, object `F00` is different than object `foo`.

Command modes

You can use the command line interface (CLI) to run a single command or a series of commands, either interactively or from a script.

Single-shot mode

If you want to run only a single command, specify the **csmcli** program and the command that you want to run from the shell prompt, for example:

```
shell> csmcli lslocation
Location  Details
=================
1         Boulder
3         Marana
2         Tucson
shell>
```

Interactive mode

If you want to run several commands, start an CLI session using the **csmcli** program with no parameters or arguments, and then enter each command at the `csmcli>` shell prompt, for example:

```
shell> csmcli
csmcli> rmsess exmp_session
Are you sure that you want to remove session exmp_session? [y/n]:y
Session exmp_session removed
csmcli> exit
shell>
```

Script mode

If you want to run a set of commands that you defined in a file, use the **csmcli** program with the -script parameter, for example:

```
shell> tpctool -script ~/bin/containersetup
shell>
```

You can add comments to the script file by placing a pound sign (#) in the first column, for example:

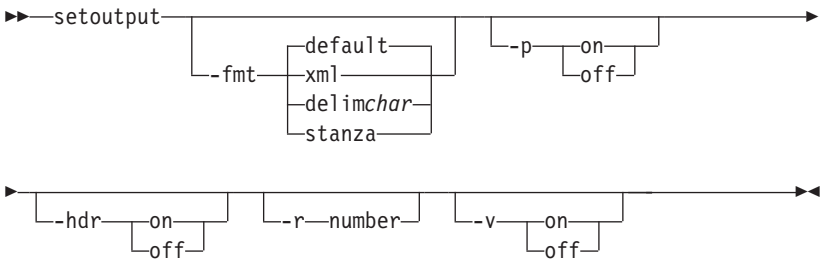
```
# This script file lists the default storage pool.
lspool -l -type default
```

The CLI program recognizes these built-in commands in interactive mode:

setoutput

Specifies various command-output format options. All settings specified with **setoutput** remain in effect for the duration of the interactive command session unless reset either with a command option or with **setoutput**. With no options, **setoutput** displays the current settings in the default output format. Settings from the **setoutput** command do not apply to help pages; help pages are shown in text output only.

Syntax



Parameters and arguments:

-fmt { default | xml | delim | stanza }

Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the

delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

help Displays a list of commands available from the CLI session.

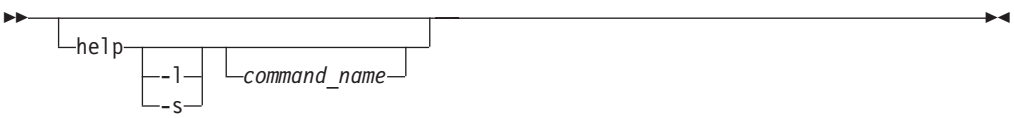
exit Exits from the CLI session.

quit Exits from the CLI session.

User assistance for commands

You can get user assistance for the any **csmcli** command using the **help** command.

Syntax



Parameters

-l Displays a list of all available commands and syntax for each if no other options are specified. If a command name is also specified, this option displays syntax for that command.

-s Displays a list of all available commands and a brief description of each if no other options are specified. If a command name is also specified, this option displays a brief description for that command.

command_name
Displays detailed help for the specified command

Description

If this command is invoked without any parameters, it displays a list of all available commands.

You can use the command-help parameters (**-help**, **-h**, or **-?**) that are supported by each command to display a detailed description of the specified command. For more information about the command-help parameters, see the description for each command.

Output from command processing

This topic describes command output and how to specify the output format.

Confirmation prompts

When commands might cause an irrecoverable operation, loss of data, memory drain, or a long-running task, or might have an impact on concurrent operations, you receive an interactive confirmation prompt that asks if you are sure that you want to continue with the specific action, such as:

```
Are you sure you want to xxx? Y/N
```

All confirmation prompts accept the following input:

YES, yes, Y, y
Confirm action and continue.

NO, no, N, n
Cancel action.

Messages

Messages are returned in the format of IWNC*xxxxy*, IWNR*xxxxy*, IWNH*xxxxy*, or IWNE*xxxxy*, where *xxxx* is the number of the message and *y* indicates that the message type is I (information), W (warning), or E (error).

Each CLI command issues a return value and message. These messages are output as follows:

- Warning and informational messages are written to stdout.
- Error messages are written to stderr.
- Messages include an explanation of the problem, if one exists.

Suppression of confirmation prompts and messages

You can use these flags to modify command input:

- To force destructive action, such as making a volume even if the LUN already has a label, use the **-f** flag. This flag suppresses confirmation and error messages.
- To suppress confirmation prompts and messages, use the **-quiet** flag. This flag answers `yes` to all confirmation prompts.

Exit codes

The following exit codes apply to all commands that you enter using the CLI program.

Table 1. Exit codes for CLI commands

Code	Category	Description
0	Success	The command was successful.
2	Syntax error	The syntax of the command was not correct.
3	Connection error	A connectivity error or protocol error occurred.
4	Server error	An error occurred during a function call to the application server.
5	Authentication error	An error was detected during authentication checking.
6	Application error	An error occurred during processing that is performed by the MetaProvider client application.

Notes:

- In single-shot mode, an exit code is provided after each command.
- In interactive and script mode, an exit code is not provided after each command. Instead, output is echoed to stdout for status information.
- In single-shot and interactive mode, with commands that act on more than one argument if one or more operations fail, the CLI will:
  - Complete execution of all operations that it can continue executing
  - Report on all successful completions
  - Report on any failures
- In script mode, the CLI will operate the same way. However, if one or more operations fail in the file specified, the CLI issues a failure exit code and automatically exits from the script mode after the failed command.

Options for setting the output format of listings

The standard format parameters set the output format of the listing (**ls**) commands in the CLI program. These parameters can be used either in one of the listing commands or in the **setoutput** command. The format settings remain in effect for the duration of the session or until you reset the parameters either by specifying these parameters in a listing command (commands that start with `ls`) or using the **setoutput** command.

- **-p** specifies whether to display one page of text at a time or all text at once.
- **off** displays all text at one time. This is the default value when the **csmcli** command is run in single-shot mode.
- **on** displays one page of text at time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

- **-r number** specifies the number of rows per page to display when the **-p** parameter is on. The default value is 24. You can specify a value of 1 - 100.
- **-fmt** specifies the format of the output. You can specify one of the following values:
  - **default** specifies that output be displayed in a tabular format using spaces as the delimiter between the columns. This is the default value.
  - **delim character** specifies that output be displayed in a tabular format using the specified character to separate the columns. If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.
  - **xml** specifies that output using XML format.
  - -**hdr** specifies whether to display the table header. Use the default value of **on** to display the table header. This is the default value. Use **off** to hide the table header.
- **-v** specifies whether to enable verbose mode. Use the default value of **off** to disable verbose mode. This is the default value. Use **on** to enable verbose mode.

These standard listing options modify command output in any CLI mode:

- **ls*object*-s** lists only the objects without other columns of information. For example, `lssess –s` lists only the name header and the session names.
- **ls*object*-l** lists all the objects with all defined columns, including the description.

Example of using the setoutput command to define output formats

You can set output formats using the **setoutput** command in interactive or script modes or using the corresponding standard command options in single-shot mode.

setoutput with no options

When you issue **setoutput** with no options, the CLI always displays the current output settings in the default format (space-separated plain-text table), regardless of the values of the output settings. For example, enter the following command:

```
csmcli> setoutput
Paging   Rows   Format   Header     Verbose
=========================================
off      -      default  on         off
```

setoutput –fmt delim char

To obtain long output in comma-separated format for the default storage pool only, enter the following commands:

```
csmcli> setoutput –fmt delim ,
csmcli> lssess –l –type default
```

The following output is then returned:

```
Name,Status,State,Copy Type,
Recoverable,Copying,Copy Sets,Error
============================================================
session1,Inactive,Defined,Global Mirror Failover/Failback w/ Practice,
No,No,8,No
session2,Inactive,Defined,Global Mirror Failover/Failback,
No,No,0,No
```

To turn off headers, enter the command as shown in the following example:

```
csmcli> setoutput –fmt delim , -hdr off
csmcli> lssess –l –type default
```

The output would then be returned as follows:

```
session1,Inactive,Defined,Global Mirror Failover/Failback w/ Practice,
No,No,8,No
session2,Inactive,Defined,Global Mirror Failover/Failback,
No,No,0,No
```

setoutput –fmt xml

To obtain the long output in XML format for the default storage pool only, enter the following command:

```
csmcli> setoutput –fmt xml
csmcli> lssess –l –type default
```

The output is then returned in XML format as shown in the following example:

```
<IRETURNVALUE>
<INSTANCE CLASSNAME="STC_StoragePool"><PROPERTY NAME="Name" TYPE="string">
<VALUE>DEFAULT_POOL</VALUE></PROPERTY><PROPERTY NAME="PoolType" TYPE="uint32">
<VALUE>1</VALUE></PROPERTY><PROPERTY NAME="PartitionSize" TYPE="uint64">
<VALUE>16</VALUE></PROPERTY>
<PROPERTY NAME="AlertPercentage" TYPE="uint16"><VALUE>80</VALUE></PROPERTY>
<PROPERTY NAME="Size" TYPE="uint64"><VALUE>0</VALUE></PROPERTY>
<PROPERTY NAME="SizeAllocated" TYPE="uint64">
<VALUE>0</VALUE></PROPERTY><PROPERTY NAME="SizeAllocatedPercentage" TYPE="uint16">
<VALUE>0</VALUE></PROPERTY>
<PROPERTY NAME="NumberOfVolumes" TYPE="uint32"><VALUE>0</VALUE></PROPERTY>
<PROPERTY NAME="Description" TYPE="string"><VALUE>Default storage pool</VALUE>
</PROPERTY></INSTANCE>
</IRETURNVALUE>
```

setoutput –fmt default

To return the output format to the default (space-separated columns), enter the command as follows:

```
csmcli> setoutput –fmt default
csmcli> lssess –l type default
```

The output is then returned as follows:

```
Name     Type    Size(GB)  Used(GB)  Used(%)  Alert(%)  Volumes
=================================================================
DEFAULT  Default 10000     2500      25       80        10

Partition Size(MB)  Description
=======================================
64                  Default Storage Pool
```

setoutput –fmt stanza

When columns are wide, output can be difficult to visually align. However, the stanza format option eliminates this problem. To obtain long output in stanza format for the default storage pool only, enter the command as follows:

```
csmcli> setoutput -fmt stanza
csmcli> lssess –l –type default
```

The output is then returned in the following format:

```
Name                 DEFAULT
Type                 Default
Size (GB)            10000
Used (GB)            2500
Used (%)             25
Alert (%)            80
Volumes              10
Partition Size (MB)  64
```

```
Description           Default storage pool

Name                  Personnel
Type                  System
Size (GB)             10000
Used (GB)             2500
Used (%)              25
Alert (%)             80
Volumes               20
Partition Size (MB)   64
Description           Personnel data
```

Accessing the Tivoli Storage Productivity Center for Replication Information Center

This topic explains how to access the Tivoli Storage Productivity Center for Replication Information Center.

You can access the information center in the following ways:

- On the publications CD, a readme.txt file describes how to start the information center depending on platform and mode.
- The Tivoli Storage Productivity Center for Replication graphical user interface includes a link to the information center.
- Go to the Web at http://publib.boulder.ibm.com/infocenter/tivihelp/v59r1/index.jsp .

Publications and related information for Tivoli Storage Productivity Center for Replication for System z publications

This section lists the publications in the IBM Tivoli Storage Productivity Center for Replication library and other related publications.

Information Centers

You can browse product documentation in the IBM Tivoli Storage Productivity Center for Replication for System z Information Center at:

http://publib.boulder.ibm.com/infocenter/tivihelp/v59r1/index.jsp

Publications

The IBM Publications Center website offers customized search functions to help you find the publications that you need. Some publications are available for you to view or download free of charge. You can also order publications. The publications center displays prices in your local currency. You can access the IBM Publications Center on the web at www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss

The IBM Publications Center website also offers you a notification system for IBM publications. Register and you can create your own profile of publications that interest you. The publications notification system sends you a daily email that contains information about new or revised publications that are based on your profile. Access the publications notification system from the IBM Publications Center on the web at www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss to subscribe.

The following publications make up the IBM Tivoli Storage Productivity Center for Replication for System z library:

IBM Tivoli Storage Productivity Center for Replication for System z Installation and Configuration Guide
: This guide contains instructions for installing and configuring the product on z/OS®.

Program Directory for IBM Tivoli Storage Productivity Center for Replication Basic Edition for System z
: This Program Directory includes installation instructions associated with IBM Tivoli Storage Productivity Center for Replication Basic Edition for System z.

Program Directory for IBM Tivoli Storage Productivity Center for Replication for System z
: This Program Directory presents information concerning the material and procedures associated with the installation of IBM Tivoli Storage Productivity Center for Replication for System z.

Program Directory for IBM WebSphere® Application Server for z/OS V7.0
: This Program Directory presents information related to installing WebSphere Application Server for z/OS V7.0.

Program Directory for IBM WebSphere Application Server OEM Edition for z/OS V7.0
: This Program Directory presents information related to installing WebSphere Application Server OEM Edition for z/OS V7.0.

Program Directory for IBM WebSphere Application Server for z/OS V8.0
: This Program Directory presents information related to installing WebSphere Application Server for z/OS version 8.0.

IBM Tivoli Storage Productivity Center for Replication for System z User's Guide
: This guide contains task-oriented instructions for using the product graphical user interface (GUI) to manage copy services.

IBM Tivoli Storage Productivity Center for Replication for System z Command-Line Interface User's Guide
: This guide provides information about how to use the product command-line interface (CLI).

IBM Tivoli Storage Productivity Center for Replication for System z Problem Determination Guide
: This guide assists administrators or users who are troubleshooting problems with the product.

WebSphere Application Server for z/OS product website
: This website provides information about WebSphere Application Server for z/OS, including links to sources of related information such as Redbooks, white papers, and ebooks. To view the website, go to http://www-01.ibm.com/software/webservers/appserv/zos_os390/.

Redbooks and white papers

Performance Monitoring and Best Practices for WebSphere on z/OS
: This IBM Redbooks® publication provides a structure that you can use to set up an environment that is tuned to meet best performance and catch eventual performance bottlenecks.

Web resources

There are multiple websites and information center topics that relate to IBM Tivoli Storage Productivity Center for Replication.

Websites

- IBM Tivoli Storage Productivity Center Suite

  www-03.ibm.com/systems/storage/software/center/

  This website describes the feature, benefits, and specifications of Tivoli Storage Productivity Center and Tivoli Storage Productivity Center for Replication. It also provides links to product support, Rebooks and white papers, and other related information.

- Tivoli Storage Productivity Center Technical Support

  www.ibm.com/support/entry/portal/Overview/Software/Tivoli/Tivoli_Storage_Productivity_Center

  This website provides links to downloads and documentation for all currently supported versions of Tivoli Storage Productivity Center and Tivoli Storage Productivity Center for Replication.

- IBM WebSphere Application Server

  www.ibm.com/software/webservers/appserv/was/

  This website describes the WebSphere Application Server offerings and provides links for downloading a trial version, purchasing WebSphere Application Server, and viewing online publications and demos.

- IBM DB2 Software

  www.ibm.com/software/data/db2/

  This website describes the DB2 offerings and provides links for downloading a trial version, purchasing DB2, and viewing analyst reports, online publications, and demos.

- IBM System Storage® Disk Systems

  www.ibm.com/servers/storage/disk/

  This website provides links to learn more about the IBM System Storage disk systems products and offerings, including DS6000™ and DS8000®. It also provides links for viewing support and services, software and solutions, and other resources.

- IBM System Storage SAN Volume Controller

  www.ibm.com/servers/storage/software/virtualization/svc/index.html

  This website describes the IBM System Storage SAN Volume Controller offering and provides links for requesting a quote for and purchasing System Storage SAN Volume Controller and viewing online publications, white papers, and case studies.

- IBM Storwize V7000 Unified

  www.ibm.com/systems/storage/disk/storwize_v7000/index.html

  This website describes the Storwize® V7000 and Storwize V7000 Unified offerings and provides links for requesting a quote and viewing online publications and white papers.

- IBM XIV Storage System

  www.ibm.com/systems/storage/disk/xiv

  This website describes the XIV® system offering and provides links for requesting a quote for an XIV system and viewing online publications, white papers, and demos.

- System z (and z/OS)

  www.ibm.com/systems/z/

  This website provides links to learn more about IBM System z offerings and software. It also includes information about upcoming webcasts, blogs, and demos.

Forums

- Tivoli Forums

  www.ibm.com/developerworks/forums/tivoli_forums.jspa

  This website provides a forum that you can use to discuss issues pertaining to Tivoli Storage Productivity Center, Tivoli Storage Productivity Center for Replication, and other Tivoli products. This website includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.
- Technical Exchange Webcasts

  www-01.ibm.com/software/sysmgmt/products/support/supp_tech_exch.html

  This website provides webcasts in which technical experts share their knowledge and answer your questions. Visit this site often to see upcoming topics and presenters or to listen to previous webcasts.

Providing feedback about publications

Your feedback is important to help IBM provide the highest quality information. You can provide comments or suggestions about the documentation from the IBM Tivoli Storage Productivity Center for Replication Information Center.

Go to the information center at http://publib.boulder.ibm.com/infocenter/tivihelp/v59r1/index.jsp and click **Feedback** at the bottom of the information center Welcome page or topic pages.

Chapter 1. Customizing the command-line interface

This information describes how to customize the command-line interface.

Configuring the command-line interface

This information describes how to modify the properties files to configure the command-line interface.

There are three properties files that are used to configure the command-line interface:

repcli.properties
Contains the server and port information used to communicate with the IBM Tivoli Storage Productivity Center for Replication server and the command-line interface.

rmserver.properties
Contains configuration information about logging.

tpcrcli-auth.properties
Contains authorization information for signing on to the CLI automatically without entering your user name and password.

Setting up automatic login to the CLI

You can set up the command line interface to automatically log you in without specifying your user name or password each time you issue a **csmcli** command or enter the **csmcli** shell. Use the `tpcrcli-auth.properties` file to create a persistent copy of the user name and encrypted password used for automatic authentication and authorization.

Perform these steps to set up automatic login authentication:

1. Locate the `tpcrcli-auth.properties` template file. The template is located in the following directories by default, based on the operating system running on the management server.

Operating system	Default directory
Windows	*install_root*\cli
AIX® and Linux	*install_root*/cli
z/OS	*tpcr_production_root*/cli

2. Create a directory named `tpcr-cli` in your home directory (for example, `C:\Documents and Settings\joe\tpcr-cli\` on Windows) and copy the template to this directory.
3. Edit the file, and add your user name and password.
4. Issue a **csmcli** command or enter the **csmcli** shell to encrypt the password in the `tpcrcli-auth.properties` file.

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Chapter 2. csmcli command descriptions

The following table provides a brief description and authorization role for each command in the command-line interface.

Sessions and copy sets

Command	Description	Roles
"chsess" on page 17	Use the **chsess** command to change the description or options set of an existing session. To change the session type, you must delete the session and create a new one.	Administrator Operator
"cmdsess" on page 27	Use the **cmdsess** command to run a specific action against a session.	Administrator Operator
"exportcsv" on page 33	Use the **exportcsv** command to export the copy sets in a session to a comma-separated values (CSV) file or to the console. You are prompted to overwrite the CSV file if it exists.	Administrator Operator Monitor
"importcsv" on page 38	Use the **importcsv** command to parse a comma-separated values (CSV) file to create copy sets for a session.	Administrator
"lscpset" on page 44	Use the **lscpset** command to list the IDs of copy sets in a session.	Administrator Operator Monitor
"lscptypes" on page 46	Use the **lscptypes** command to display all the supported session (copy) types that you can use with the **mksess** command.	Administrator Operator Monitor
"lspair" on page 63	Use the **lspair** command to list the copy pairs for a specified role pair or to list the copy pairs for a specified copy set.	Administrator Operator Monitor
"lsparameter" on page 67	Use the **lsparameter** command to list Metro Mirror heartbeat setting.	Administrator Operator Monitor
"lsrolepairs" on page 74	Use the **lsrolepairs** command to display role pairs in a session.	Administrator Operator Monitor
"lsrolescpset" on page 77	Use the **lsrolescpset** command to list the volume roles in the specified session.	Administrator Operator Monitor
"lssess" on page 79	Use the **lssess** command to display sessions and their status.	Administrator Operator Monitor
"lssessactions" on page 82	Use the **lssessactions** command to list all the session actions (commands) that can be run for a session.	Administrator Operator Monitor
"lssessdetails" on page 84	Use the **lssessdetails** command to display the details of a session.	Administrator Operator Monitor
"mkcpset" on page 102	Use the **mkcpset** command to create copy sets.	Administrator Operator

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Command	Description	Roles
"mksess" on page 106	Use the **mksess** command to create a session.	Administrator Operator
"rmcpset" on page 113	Use the **rmcpset** command to remove a copy set.	Administrator Operator
"rmsess" on page 118	Use the **rmsess** command to remove a session.	Administrator Operator
"setparameter" on page 122	Use the **setparameter** command to set the system parameters.	Administrator
"showcpset" on page 124	Use the **showcpset** command to display properties for a copy set.	Administrator Operator Monitor
"showsess" on page 132	Use the **showsess** command to display properties for a selected session, including name, description, group managed, and copy type.	Administrator Operator Monitor

Storage systems and connections

Command	Description	Roles
"adddevice" on page 7	Use the **adddevice** command to add a storage system.	Administrator
"addmc" on page 9	Use the **addmc** command to add a management console connection and all the storage systems that are managed by that management console.	Administrator
"addstorsys" on page 10	Use the **addstorsys** command to add a specific storage system and its volumes that are attached to the IBM Tivoli Storage Productivity Center for Replication server to the IBM Tivoli Storage Productivity Center for Replication configuration through a z/OS connection.	Administrator
"chdevice" on page 13	Use the **chdevice** command to change user names and passwords for accessing storage systems.	Administrator
"chlocation" on page 15	Use the **chlocation** command to change the location associated with the specified storage systems.	Administrator
"chmc" on page 16	Use the **chmc** command to set or change the hardware credentials for the hardware management console (HMC).	Administrator
"chvol" on page 26	Use the **chvol** command to change the protection setting associated with a volume.	Administrator
"lsavailports" on page 42	Use the **lsavailports** command to display the port configuration types for a specific path.	Administrator Operator Monitor
"lsdevice" on page 49	Use the **lsdevice** command to list storage systems and properties.	Administrator Operator Monitor
"lslocation" on page 57	Use the **lslocation** command to list all defined locations.	Administrator Operator Monitor
"lslss" on page 58	Use the **lslss** command to list the logical subsystems (LSSes) for the specified DS or ESS storage system. You can use this output with the **mkpath** command.	Administrator Operator Monitor

Command	Description	Roles
"lsmc" on page 61	Use the **lsmc** command to display a summary of management consoles and settings.	Administrator Operator Monitor
"lspath" on page 69	Use the **lspath** command to display paths between ESS and DS devices. You can then use this information for a remote copy.	Administrator Operator Monitor
"lspool" on page 71	Use the **lspool** to list pools that are on XIV systems.	Administrator Operator Monitor
"lsstorcandidate" on page 94	Use the **lsstorcandidate** command to list the storage systems that can be discovered through an IBM z/OS connection. This command does not list storage systems that are already added to the IBM Tivoli Storage Productivity Center for Replication configuration.	Administrator Operator Monitor
"lsvol" on page 96	Use the **lsvol** command to display detailed information about volumes.	Administrator Operator Monitor
"mkpath" on page 105	Use the **mkpath** command to create a Fibre Channel path or paths between a source logical subsystem (LSS) and a target LSS.	Administrator Operator
"rmdevice" on page 114	Use the **rmdevice** command to remove a direct connection to a storage system.	Administrator
"rmmc" on page 117	Use the **rmmc** command to remove a management console.	Administrator
"rmpath" on page 117	Use the **rmpath** command to remove a path or paths between a source logical subsystem (LSS) and a target LSS.	Administrator Operator
"rmstorsys" on page 120	Use the **rmstorsys** command to remove a specific storage system and its volumes that are attached to the IBM Tivoli Storage Productivity Center for Replication server from the IBM Tivoli Storage Productivity Center for Replication configuration through a z/OS connection.	Administrator
"showdevice" on page 125	Use the **showdevice** command to display storage system properties.	Administrator
"showmc" on page 131	Use the **showmc** command to display the properties of a management console.	Administrator

Management servers

Command	Description	Roles
"hareconnect" on page 37	Use the **hareconnect** command to reconnect the active and standby servers for high availability (HA).	Administrator
"hatakeover" on page 38	Use the **hatakeover** command to change the standby server to the active server.	Administrator
"lshaservers" on page 53	Use the **lshaservers** command to show the status of each active and standby management server.	Administrator Operator Monitor

Command	Description	Roles
"lssnmp" on page 93	Use the **lssnmp** command to list the SNMP managers to which IBM Tivoli Storage Productivity Center for Replication is configured to send SNMP alerts.	Administrator Operator Monitor
"mkbackup" on page 101	Use the **mkbackup** command to create a backup of IBM Tivoli Storage Productivity Center for Replication configuration data (including storage systems, sessions, and copy sets) in the zero-administration embedded repository.	Administrator
"mklogpkg" on page 104	Use the **mklogpkg** command to create a log package. The log package is written to the file that is specified in the properties file.	Administrator
"mksnmp" on page 109	Use the **mksnmp** command to add a specified manager to the list of servers to which SNMP traps are sent. SNMP traps are not specific to any particular session. All traps for any session are sent to each server.	Administrator
"rmactive" on page 111	Use the **rmactive** command to remove an active management server.	Administrator
"rmsnmp" on page 119	You can use the **rmsnmp** command to remove the specified manager from the list of servers to which SNMP traps are sent.	Administrator
"rmstdby" on page 119	Use the **rmstdby** command to remove a standby management server.	Administrator
"setasstdby" on page 121	Use the **setasstdby** command to set a management server to be the standby management server of another active management server.	Administrator
"setstdby" on page 123	Use the **setstdby** command to set the standby management server for an active management server.	Administrator
"showha" on page 130	Use the **showha** command to display the high-availability status.	Administrator Operator Monitor
"ver" on page 135	Use the **ver** command to display the current version of IBM Tivoli Storage Productivity Center for Replication.	Administrator Operator Monitor

Security

Command	Description	Roles
"chauth" on page 11	Use the **chauth** command to change the authorization level of a user.	Administrator
"lsauth" on page 40	Use the **lsauth** command to lists the name, authorization level, and session permission for each user or user group.	Administrator Operator Monitor
"mkauth" on page 100	Use the **mkauth** command to grant monitor, administrator, or operator authorization to a user.	Administrator
"rmauth" on page 112	Use the **rmauth** command to remove monitor, administrator, or operator authorization from a user or user group.	Administrator

Command	Description	Roles
"whoami" on page 136	Use the **whoami** command to display the name of the user that is currently logged in.	Administrator Operator Monitor

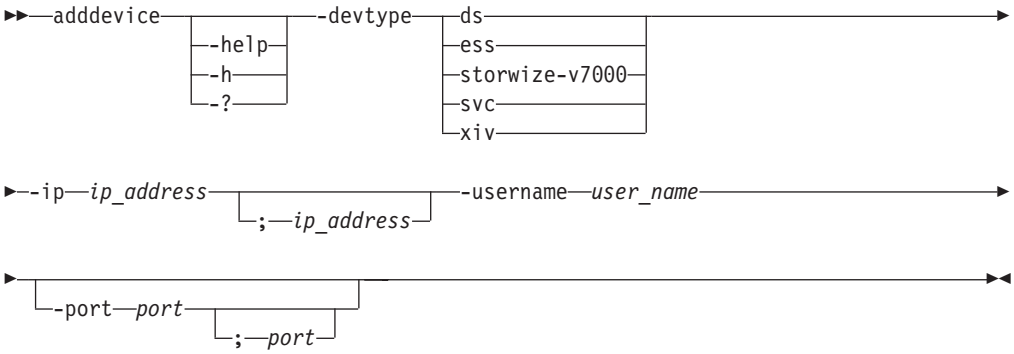
adddevice

Use the **adddevice** command to add a storage system.

To add a storage system that is attached through an IBM z/OS connection, use the **addstorsys** command.

To change the location of a storage system, use the **chlocation** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-devtype { ds | ess | storwize-v7000 | svc | xiv}
Specifies the type of storage system. Supported storage systems are:

- **ds**: IBM System Storage DS8000 or System Storage DS6000
- **ess**: IBM TotalStorage Enterprise Storage Server® Model 800
- **storwize-v7000**: IBM Storwize V7000 and IBM Storwize V7000 Unified
- **svc**: IBM System Storage SAN Volume Controller
- **xiv**: IBM XIV Storage System

-ip *ip_address*[;*ip_address*]
Specifies the IP address or host name of the clusters or nodes that are used by the storage system.

The following storage systems use two clusters. You must specify the IP address or host name for each cluster using a semicolon between the addresses (for example, `192.0.2.0;192.0.2.1`):

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

The following storage systems use one node and require only one address or host name:

- System Storage SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

XIV system uses multiple nodes. Specify the IP address or host name for one node and the remaining nodes are discovered automatically.

-username *user_name*[;*user_name*]
Specifies the user name for the clusters or nodes.

For the following storage systems, you can provide one user name, which is used for both clusters, or you can specify two user names. If you have separate user names, include a semicolon between the user name for cluster 0 and cluster 1.

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

For the following storage systems, provide one user name:

- System Storage SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified
- XIV system

Important: After you enter the parameters for the **adddevice** command, you are prompted to enter the password for this user name. The password is not displayed in the command window.

-port *port*[;*port*]
Specifies the port to use for accessing the clusters or nodes.

For the following storage systems, you can provide one port number, which is used for both clusters, or you can provide two port numbers. If you have separate port numbers, include a semicolon between the port for cluster 0 and cluster 1. The default port number is 2433.

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

For XIV system, provide one port number, which is used for all nodes. The default port number is 7778.

The following storage systems do not require this parameter.

- System Storage SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

Examples

Adding a TotalStorage Enterprise Storage Server Model 800 storage system

The following command adds a TotalStorage Enterprise Storage Server Model 800 storage system to Tivoli Storage Productivity Center for Replication.

```
csmcli> adddevice -devtype ess -ip sts596c0;sts596c1 -username admin
```

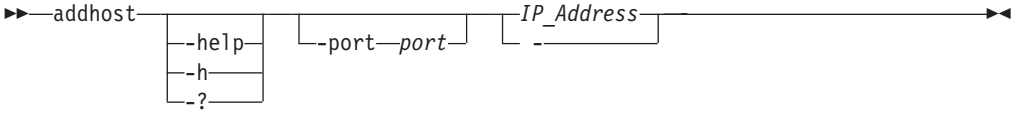
The following output is returned:

```
Please enter a password for the device cluster 0 userid of admin:
 IWNH1612I  The connection sts596c0:sts596c1 was successfully added.
```

addhost

Use the **addhost** command to add host system connections to the IBM Tivoli Storage Productivity Center for Replication server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-port *port*
This is an optional parameter that specifies the port to use to access the host system. If a port is not specified, the default port 9930 is used.

IP_Address **|** **-**
Specifies the IP address or host name of the host system.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

- **Adding host systems**

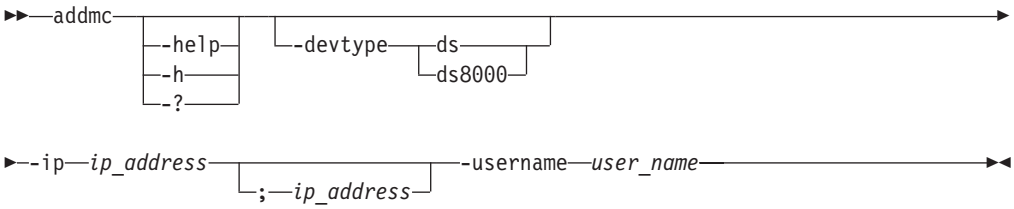
  The following command shows how to add a host system with IP address 9.11.223.43. In this example, you could omit the -port parameter because port 9930 is the default.

  ```
  csmcli> addhost -port 9930  9.11.223.43
  ```

addmc

Use the **addmc** command to add a management console connection and all the storage systems that are managed by that management console.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-devtype { ds | ds8000 }
Specifies the type of hardware device. You can specify either `ds` or `ds8000`.

-ip *ip_address*[;*ip_address*]
Specifies the IP addresses of the management consoles to be added. For dual-management console configurations, both IP addresses must be specified with a semicolon in between (for example, `192.0.2.0;192.0.2.1`).

-username *user_name*
Specifies the user name for the management console. For dual management console configurations, the management consoles must have the same user name.

Important: After you enter the parameters for the **addmc** command, you are prompted to enter the password for this user name. For security, the password is not displayed in the command window.

Example

Adding a management console

The following command adds a management console to IBM Tivoli Storage Productivity Center for Replication.

```
csmcli> addmc -devtype ds -ip 127.0.0.1 -username admin
```

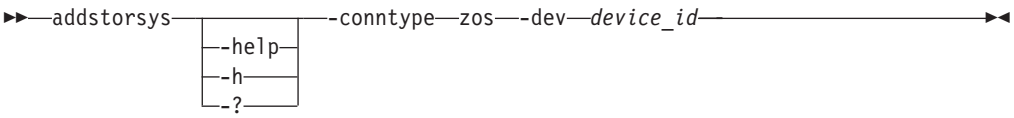
The following output is returned:

```
Please enter a password for the device userid of admin:
IWNH1612I  The connection HMC:127.0.0.1 was successfully added.
```

addstorsys

Use the **addstorsys** command to add a specific storage system and its volumes that are attached to the IBM Tivoli Storage Productivity Center for Replication server to the IBM Tivoli Storage Productivity Center for Replication configuration through a z/OS connection.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-conntype zos
Specifies the type of connection that the storage system uses. Currently, you can specify only `zos` for a z/SO connection.

-dev *device_id*
Specifies the ID of the DS or ESS storage system that is to be added to the IBM Tivoli Storage Productivity Center for Replication configuration.

Tip: Use the **lsdevice** command to display a list of valid storage system IDs.

Description

Important:

- You must have Administrator privileges to run this command.
- You can run this command only from the IBM Tivoli Storage Productivity Center for Replication server that is installed on a system running z/OS.
- You can use this command to add only DS and ESS type storage systems.

If the storage system has been previously added through another connection type, then z/OS is added to the storage system's connection types.

To add a storage system that is attached through a direct connection, use the **adddevice** command. To add a storage system that is attached through a hardware-management-console (HMC) connection, use the **addmc** command.

To change the location of the storage system, use the **chlocation** command.

Example

1. **Adding an ESS storage system**

   This example illustrates how to add the storage system with ID ESS:BOX:2105.12345 to the IBM Tivoli Storage Productivity Center for Replication configuration through the z/OS connection.

   ```
   csmcli> addstorsys -dev ESS:BOX:2105.12345 -conntype zos
   ```

   The following output is returned:

   ```
   IWNH1612I  The connection ESS:BOX:2105.12345 was successfully added.
   ```

2. **Adding an DS8000 storage system**

   This example illustrates how to add the storage system with ID DS8000:BOX:2107.MV492 to the IBM Tivoli Storage Productivity Center for Replication configuration through the z/OS connection.

   ```
   csmcli> addstorsys -dev DS8000:BOX:2107.MV492 -conntype zos
   ```

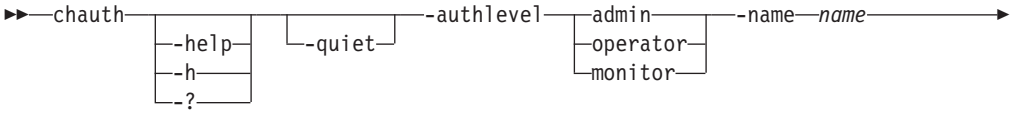
   The following output is returned:

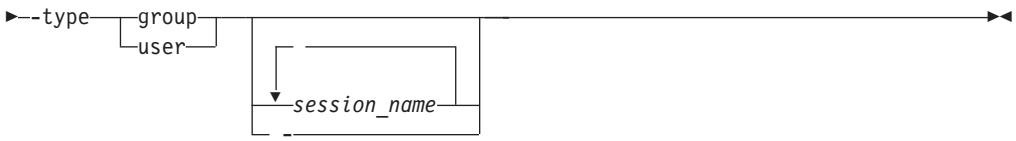
   ```
   IWNH1619I  The storage device 2107.MV492 at ZOS was successfully added.
   ```

chauth

Use the **chauth** command to change the authorization level of a user.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

-authlevel { admin | operator | monitor }
Specifies the new authorization level. You can specify one of these authorization levels: `admin`, `operator`, or `monitor`.

-name *name*
Specifies a user ID or group name for which you are changing the authorization level.

-type group | user
Specifies whether authorization is to be changed for a user group or user.

session_name... **|** **-**
Specifies one or more sessions that the user can access. Separate multiple session names using a blank space. Use this parameter when you are changing the authorization level from user to operator. This parameter does not apply to monitors or administrators.

If no session name is specified, all sessions are used by default, unless another filter is used.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

1. **Changing user authorization to administrator**

   The following command changes the authorization level for the user `csmuser` to operator privileges with permission to manage session `session1`.

   ```
   csmcli> chauth -name csmuser -type user -authlevel operator session1
   ```

   The following output is returned:

   ```
   Are you sure you want to change access for user csmuser? [y/n]:y
    IWNR4016I  Successfully granted the session operator role to csmuser.

    IWNR4026I  Successfully granted permission for session session1 for
   user Guest.
   ```

2. **Changing user authorization to monitor**

   The following command changes the authorization level for the user `Guest` to monitor privileges.

   ```
   csmcli> chauth -name Guest -type user -authlevel monitor
   ```

   The following output is returned:

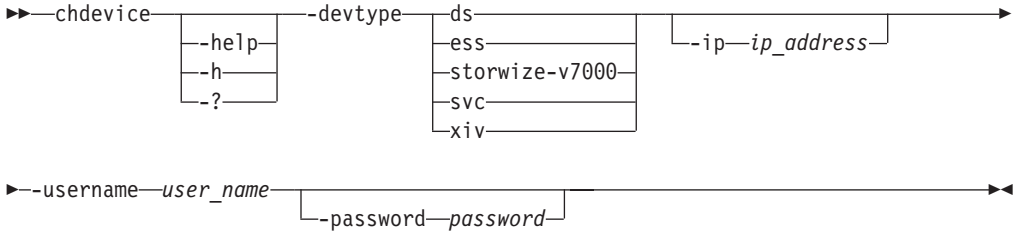
   ```
   Are you sure you want to change access for user Guest? [y/n]:y
    IWNR4017I  Successfully granted the monitor role to Guest.
   ```

chdevice

Use the **chdevice** command to change user names and passwords for accessing storage systems.

Tip: To change the location of storage systems, use the **chlocation** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-devtype { ds | ess | storwize-v7000 | svc | xiv }
Specifies the type of storage system. Supported devices are:

- **ds**: IBM System Storage DS8000 or System Storage DS6000
- **ess**: IBM TotalStorage Enterprise Storage Server Model 800
- **storwize-v7000**: IBM Storwize V7000 and IBM Storwize V7000 Unified
- **svc**: IBM System Storage SAN Volume Controller
- **xiv**: IBM XIV Storage System

-ip *ip_address* **[;***ip_address***]**
Specifies the IP address or host name of the clusters or nodes that are used by the storage system.

The following storage systems use two clusters. You must specify the IP address or host name for each cluster using a semicolon between the addresses (for example, `192.0.2.0;192.0.2.1`):

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

The following storage systems use one node and require only one address or host name:

- System Storage SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

XIV system uses multiple nodes. Specify the IP address or host name for one node and the remaining nodes are discovered automatically.

Tip: To list the IP address of storage system clusters or nodes, use the **lsdevice** command.

-username *user_name* **[;***user_name***]**
Specifies the user name for the clusters or nodes that are used by the storage system. Enter the user name or user names that you want to change. If you want to change passwords associated with user names (but not the user names), enter the currently valid user names.

For the following storage systems, you can provide one user name, which is used for both clusters, or you can specify two user names. If you have separate user names, include a semicolon between the user name for cluster 0 and cluster 1.

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

For the following storage systems, provide one user name:

- System Storage SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified
- XIV system

-password *password* **[;***password***]**
If you want to change passwords, enter the new passwords for the user names that you specified. If you want to change user names, but not the passwords associated with the user names, enter the currently valid passwords. If you do not enter a password, you are prompted to do so.

Examples

Changing user names and passwords

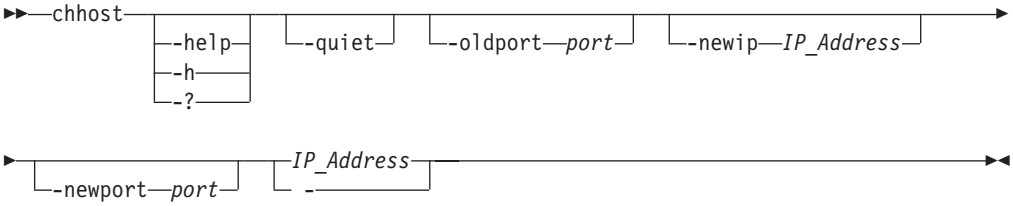
The following command shows how to change the IP address or host name and port number for a host system connection. The following output is returned:

```
Please enter a password for the device cluster 0 userid of admin:
IWNH1613I User profile information for the storage device at
ds8kboxc0.domain.company.com;ds8kboxc1.domain.company.com was successfully updated.
```

chhost

Use the **chhost** command to change credentials for host systems that are connected to the IBM Tivoli Storage Productivity Center for Replication server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-oldport *port*
Specifies the old port number for the host system connection to be modified.

-newip *IP_Address*
Specifies the new IP address or host name of the host system connection to be modified.

-newport *port*
Specifies the new port number for the host system connection to be modified.

IP_Address **|** **-**
Specifies the IP address or host name of the host system connection to be modified.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Changing host system credentials

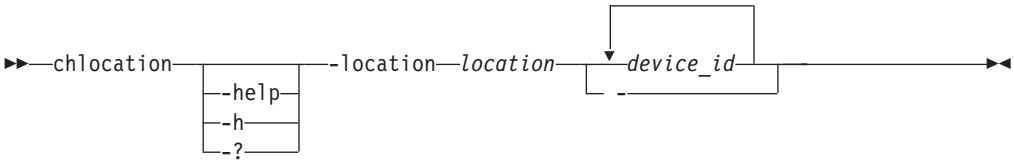
The following command shows how to change the IP address or host name and port number for a host system connection.

```
csmcli> chhost -oldport 9930  -newip 9.11.224.23  -newport 9931  9.11.223.43
```

chlocation

Use the **chlocation** command to change the location associated with the specified storage systems.

Syntax



Parameters

-help **|** **-h** **|** **-?**
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-location *location*
Specifies the location to associate with the specified storage systems. The location can be up to 32 alphanumeric characters.

device_id... **|** **-**
Specifies the ID of one or more storage systems whose location is to be changed, separated by a space.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Tip: Use the **lsdevice** command to list the valid storage system IDs.

Description

Important: You must have Administrator privileges to run this command.

To list the locations that have already been associated with storage systems, use the **lslocation** command.

Example

Changing the location of multiple storage systems

The following command changes the location of multiple storage systems to Tucson.

```
tpctool> lshtype -user me -pwd mypass -url myhost:myport -dev 2105.22232+0
```

The following command changes the location of multiple storage systems to Tucson.

```
csmcli> chlocation -location Tucson ESS:BOX:2105.18596 DS8000:BOX:2107.NK791
```

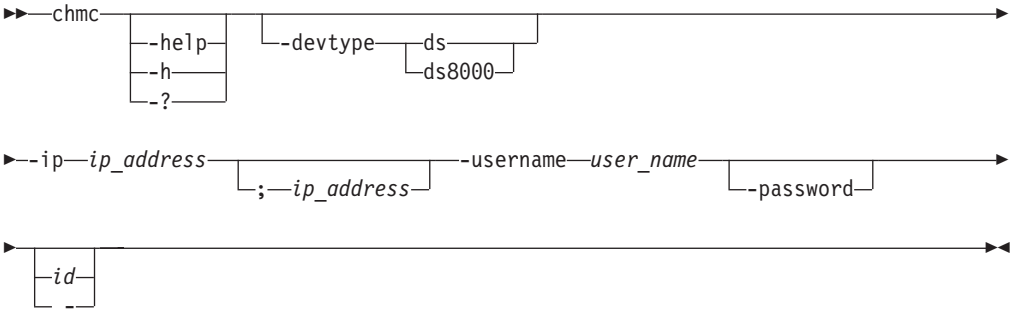
The following output is returned:

```
IWNH1222I  The site location for storage system ESS:BOX:2105.18596 was
successfully changed to Tucson.

IWNH1222I  The site location for storage system DS8000:BOX:2107.NK791 was
successfully changed to Tucson.
```

chmc

Use the **chmc** command to set or change the hardware credentials for the hardware management console (HMC).

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-devtype ds | ds8000
Specifies the hardware type.

-ip *ip_address*[;*ip_address*]
Specifies the IP addresses of the primary and secondary management consoles. For single HMC configurations only one IP address is necessary. For dual HMC configurations, two IP addresses must be specified separated with a semicolon (;).

-username *user_name*
Specifies the user names of the management console.

-password
Prompts you for a new password for the device.

id | **-**
Specifies the ID of the management console to change.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Tip: Use the **lsmc** command to list the management console IDs.

Description

To change the location of a storage system behind a HMC connection, use the **chlocation** command.

Example

Changing hardware credentials

The following command change the user name and password for the HMC with ID HMC:127.0.0.1 and IP address 9.11.222.33.

```
csmcli> chmc -devtype ds -ip 127.0.0.1 -username admin -password HMC:127.0.0.1
```

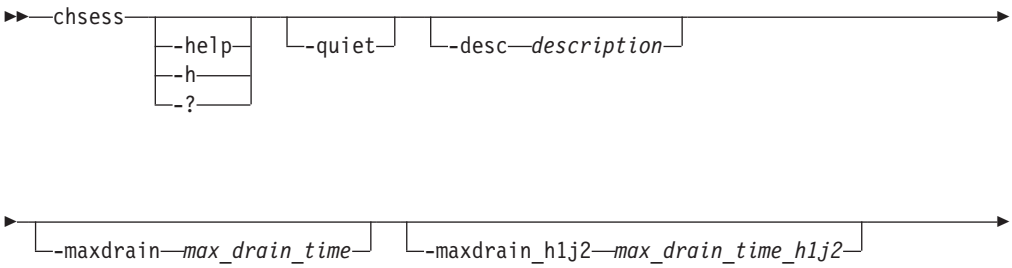
The following output is returned:

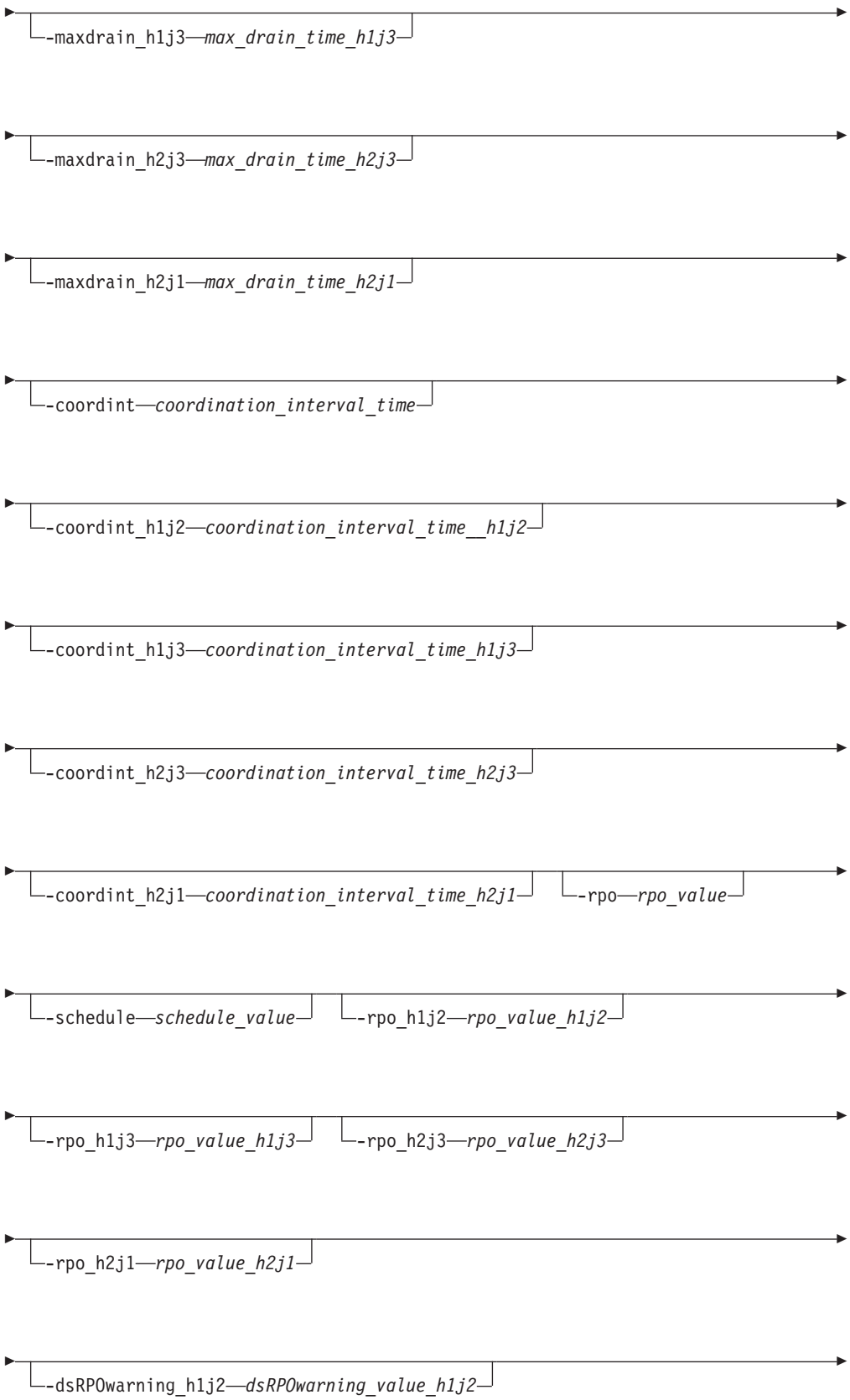
```
Please enter a password for the device userid of admin: ******
 IWNH1613I  The storage device at HMC:127.0.0.1 successfully updated.
```

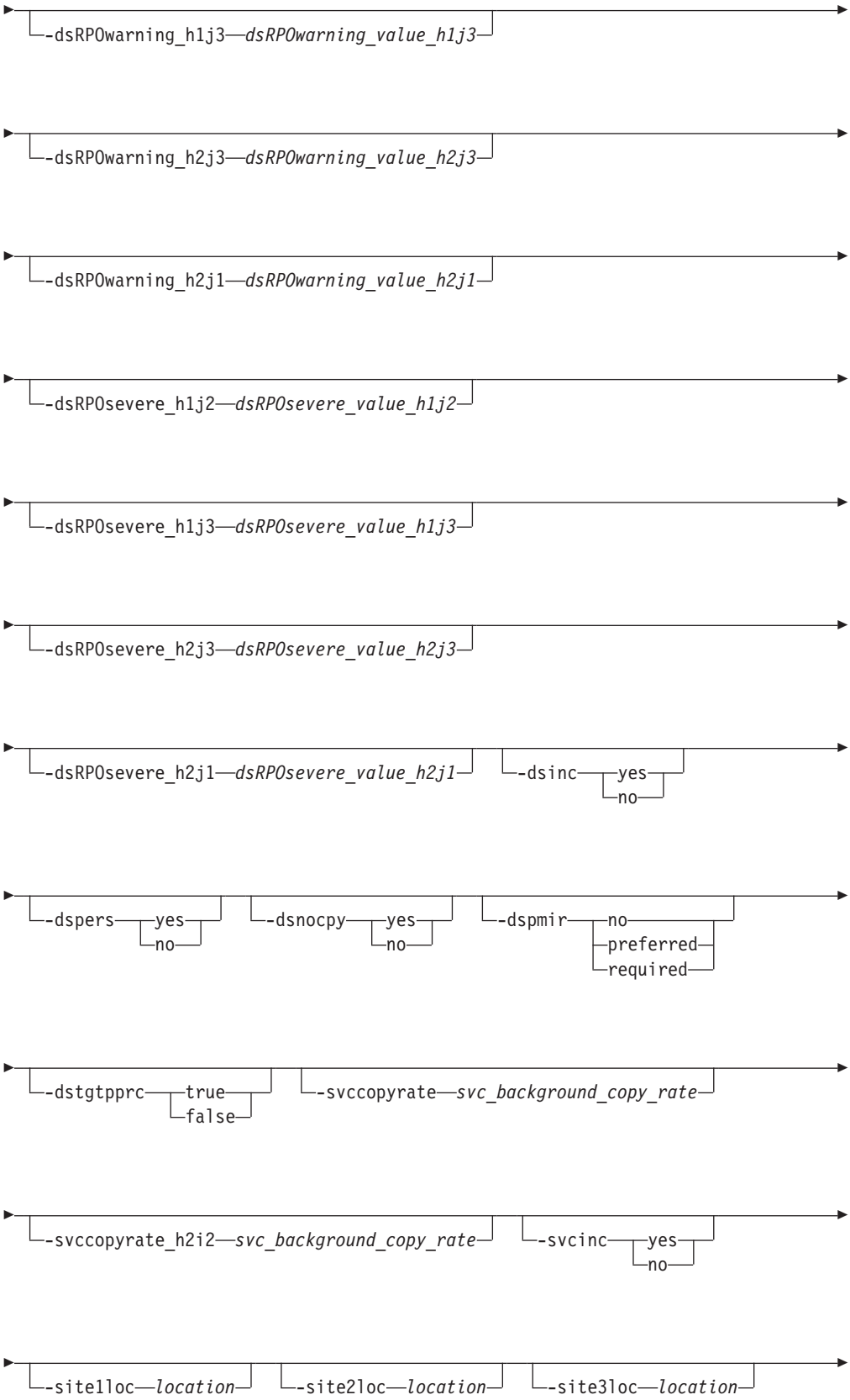
chsess

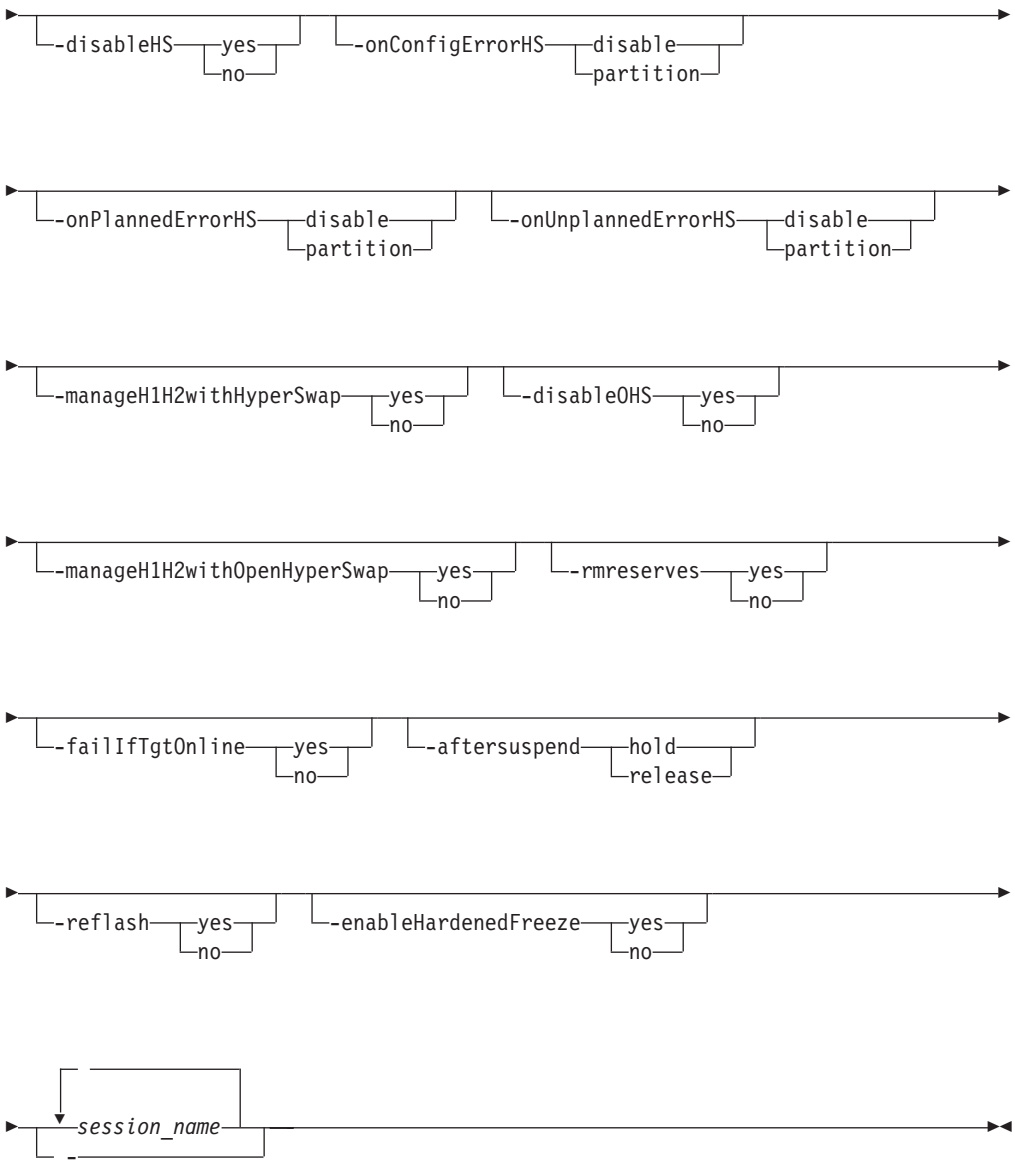
Use the **chsess** command to change the description or options set of an existing session. To change the session type, you must delete the session and create a new one.

Syntax




-maxdrain_h1j3—max_drain_time_h1j3—
-maxdrain_h2j3—max_drain_time_h2j3—
-maxdrain_h2j1—max_drain_time_h2j1—
-coordint—coordination_interval_time—
-coordint_h1j2—coordination_interval_time__h1j2—
-coordint_h1j3—coordination_interval_time_h1j3—
-coordint_h2j3—coordination_interval_time_h2j3—
-coordint_h2j1—coordination_interval_time_h2j1—
-rpo—rpo_value—
-schedule—schedule_value—
-rpo_h1j2—rpo_value_h1j2—
-rpo_h1j3—rpo_value_h1j3—
-rpo_h2j3—rpo_value_h2j3—
-rpo_h2j1—rpo_value_h2j1—
-dsRPOwarning_h1j2—dsRPOwarning_value_h1j2—


-dsRPOwarning_h1j3—dsRPOwarning_value_h1j3
-dsRPOwarning_h2j3—dsRPOwarning_value_h2j3
-dsRPOwarning_h2j1—dsRPOwarning_value_h2j1
-dsRPOsevere_h1j2—dsRPOsevere_value_h1j2
-dsRPOsevere_h1j3—dsRPOsevere_value_h1j3
-dsRPOsevere_h2j3—dsRPOsevere_value_h2j3
-dsRPOsevere_h2j1—dsRPOsevere_value_h2j1
-dsinc
yes
no
-dspers
yes
no
-dsnocpy
yes
no
-dspmir
no
preferred
required
-dstgtpprc
true
false
-svccopyrate—svc_background_copy_rate
-svccopyrate_h2i2—svc_background_copy_rate
-svcinc
yes
no
-site1loc—location
-site2loc—location
-site3loc—location



Parameters

Restriction: Parameters that begin with ds, such as -dsinc, apply only to TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, and System Storage DS6000. For practice sessions, the -dspers parameter is available only for System Storage DS8000 version 4.2, or later.

Parameters that begin with svc, such as -svcinc, apply only to System Storage SAN Volume Controller, Storwize V7000, and Storwize V7000 Unified.

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-desc *description*
Specifies the new description for the session. This description can have up to 250 alphanumeric characters. If the description contains white space, enclose it in single quotation marks.

-maxdrain *max_drain_time*
Specifies the new maximum drain time for Global Mirror type sessions. This parameter is meant to be used by advanced users.

If you specify **-maxdrain 0**, the DS storage system uses its default value instead of zero. Any other positive integer in the valid range is accepted by the DS storage system. However, when a zero is sent to the DS storage system, the DS storage system is instructed to set the value back to its default value.

The **-maxdrain** parameter is related to the DS **-drain** parameter. The default value for the **-drain** parameter is 30 seconds; the maximum value for the **-maxdrain** parameter is 65 535 seconds. For more information, see the **mkgmir** command in the *IBM TotalStorage DS8000 Command-Line Interface User's Guide*. The **-maxdrain_h1j3** and **-maxdrain_h2j3** parameters relate to a Metro Global Mirror session. The **-maxdrain_h1j3** parameter refers to the Global Mirror portion of a Metro Global Mirror session when the session is running from site 1 to site 3 and the **-maxdrain_h2j3** parameter refers to the Global Mirror portion of a Metro Global Mirror session that is running between site 2 and site 3.**-maxdrain_h2j1** relate to a Global Mirror session. The **-maxdrain_h2j1** parameter refers to the Global Mirror portion of a Metro Global Mirror session when the session is running between site 2 and site 1.

-coordint *coordination_interval_time*
Specifies the new coordination interval time for Global Mirror type sessions. This parameter is meant to be used by advanced users. **-coordint_h1j3**, **-coordint_h2j1**, and **-coordint_h2j3** relate to the role pair.

-rpo *rpo_value*
For TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, or System Storage DS6000, this value specifies the new consistency group interval time in seconds for the XX-XX role pair. The value of data exposure for the session will trend toward this value. This parameter applies only to Global Mirror session types and copy types where RPO is mapped. A value of `0` specifies that the storage system continuously attempt to form consistency groups. Parameters **-rpo_h1j2**, **-rpo_h1j3**, **-rpo_h2j1**, and **-rpo_h2j3** relate to the role pair.

For the XIV system, this value specifies the RPO threshold for the session in seconds. The **–rpo** parameter works with the **–schedule** parameter to determine the following:

- How often the XIV system attempts to form a consistency group.
- Whether the RPO value exceeds the threshold.

If the RPO on the storage system exceeds the RPO threshold for the session, the session changes to the Severe state and an alert is generated. The possible range of values is 30 - 86400. The default is 30.

-schedule *schedule*
For an XIV system Global Mirror session, this option specifies how often the XIV system should form a consistency group to ensure consistency on the secondary side and achieve the RPO that is set by the **-rpo** option.

The following are the possible values for **–schedule**: `{never | min_interval | 00:00:30 | 00:00:40 | 00:00:50 | 00:01:00 | 00:01:10 | 00:01:20 |`

00:01:30 | 00:01:40 | 00:01:50 | 00:02:00 | 00:05:00 | 00:10:00 |
00:15:00 | 00:30:00 | 01:00:00 | 02:00:00 | 03:00:00 | 04:00:00 |
06:00:00 | 08:00:00 | 12:00:00}

The default is min_interval, which is 20 seconds.

-dsRPOwarning *dsRPOwarning_value*
Specifies whether an alert is generated when an RPO threshold is exceeded for a role pair. This parameter applies only to Global Mirror and Metro Global Mirror sessions.

The range of values is 0 - 65535. The default is 0, which specifies that no alerts are generated.

Parameters **-dsRPOwarning_h1j2**, **-dsRPOwarning_h1j3**, **-dsRPOwarning_h2j1**, and **-dsRPOwarning_h2j3**, and relate to the role pair.

-dsRPOsevere *dsRPOsevere_value*
Specifies whether an alert is generated and the session status is changed to Severe when an RPO threshold is exceeded for a role pair. This parameter applies only to Global Mirror and Metro Global Mirror sessions.

The range of values is 0 - 65535. The default is 0, which specifies that no alerts are generated.

Parameters **-dsRPOsevere_h1j2**, **-dsRPOsevere_h1j3**, **-dsRPOsevere_h2j1**, and **-dsRPOsevere_h2j3** relate to the role pair.

-dsinc { yes | no }
For a point-in-time session, specifies whether the FlashCopy® relationship is incremental for the next Flash or Start command. Valid values are yes or no.

-dspers { yes | no }
Specifies whether the next FlashCopy relationship for this session will be persistent. Valid values are yes or no.

-dsnocpy { yes | no }
For a point-in-time session, specifies whether the FlashCopy relationship is established with a background copy for the next Flash or Start command. Valid values are yes or no.

-dspmir { no | preferred | required }
Specifies the Preserve Mirror option for storage systems. You must specify no, preferred, or required. If this option is not specified, the default is no preserve mirror options.

-dstgtpprc { true | false }
Allows the FlashCopy target volume to be a remote mirror and copy source volume if the option is set to true. This parameter must be set to true for the **dspmir** parameter to take effect. The default option for this parameter is false.

-svccopyrate *svc_background_copy_rate*
Specifies the copy rate that the storage systems use to perform the background copy of the FlashCopy relationships. Specify a percentage of 0 - 100; the default is 50.

When you specify 0, you are specifying the equivalent of the no-copy option for a TotalStorage Enterprise Storage Server or System Storage DS series FlashCopy session. If the session is performing a background copy when you change the option, Tivoli Storage Productivity Center for Replication immediately modifies the background copy rate of the consistency group on the storage system.

The consistency group immediately uses the new rate to complete the background copy that it is performing.

-svccopyrate_h2i2 *svc_background_copy_rate*
Specifies the copy rate that the storage systems use to perform the background copy of the FlashCopy role pair. Specify a percentage of 0 - 100; the default is 50.

A value of 0 is the equivalent of specifying the no-copy option for a TotalStorage Enterprise Storage Server or System Storage DS series FlashCopy session. If the session is performing a background copy when you change the option, Tivoli Storage Productivity Center for Replication immediately modifies the background copy rate of the consistency group on the storage system. The consistency group immediately uses the rate to complete the background copy that it is performing.

-svcinc {yes | no }
For a point-in-time session, specifies whether the FlashCopy relationship for the storage systems is incremental for the next Flash or Start command. Valid values are `yes` or `no`.

-site1loc *location*
Specifies a location to associate with the site 1 volume role.

-site2loc *location*
Specifies a location to associate with the site 2 volume role.

-site3loc *location*
Specifies a location to associate with the site 3 volume role.

-disableHS { yes | no }
Disables HyperSwap® in Basic HyperSwap, Metro Mirror Failover/Failback with HyperSwap, and Metro Global Mirror with HyperSwap sessions. If HyperSwap detects a triggering event while it is disabled, it does not perform a swap.

Issuing the **-disableHS no** parameter resets the disable command (**-disableHS yes**), but does not necessarily mean that HyperSwap is enabled. It might mean only that HyperSwap is no longer disabled for operator reasons. This would be the case, for example if the HyperSwap address spaces were not started, a new member was in the process of joining the sysplex, or there was a HyperSwap in progress.

To determine the reasons that HyperSwap might be disabled, see the Session Messages panel by selecting the **View Messages** from the **Actions** list on the Sessions panel.

This parameter is applicable only if the `-manageH1H2withHyperSwap` parameter is set to `yes`.

-onConfigErrorHS { disable | partition }
Specifies the policy for the action to be taken for a configuration error. Valid policies are:

disable
HyperSwap is disabled.

partition
New member is not allowed to join the sysplex and is partitioned out.

All members of a z/OS sysplex must be able to access all devices in a Basic HyperSwap, Metro Mirror Failover/Failback with HyperSwap, or Metro Global Mirror with HyperSwap session. If a new member joining the sysplex cannot

access all devices, it fails validation and it must be partitioned out of the sysplex, or HyperSwap must be disabled until the problem is resolved.

Similarly, all members of the sysplex must be able to perform HyperSwap commands. If the HyperSwap API address space is unavailable on one system, that system must either be partitioned out of the sysplex, or HyperSwap must be disabled until the problem is resolved.

-onPlannedErrorHS { disable | partition }
This optional parameter specifies the policy for the action to be taken when an error occurs during a planned HyperSwap: partition or disable. Valid policies are:

disable
HyperSwap processing is stopped and backed up, and HyperSwap is disabled.

partition
Systems that cannot perform the swap are partitioned out of the sysplex, and the HyperSwap continues with the remaining members of the sysplex. This is the default value.

-onUnplannedErrorHS { disable | partition }
Specifies the policy for the action to be taken when an error occurs during an unplanned HyperSwap. Valid policies are:

disable
HyperSwap processing is stopped and backed up, HyperSwap is disabled, and a permanent I/O error is returned to any users of the failing device.

partition
Systems that cannot perform the swap are partitioned out of the sysplex, and the HyperSwap continues with the remaining members of the sysplex. This is the default value.

-manageH1H2withHyperSwap { yes | no }
Enables Basic HyperSwap support for Metro Mirror Failover/Failback and Metro Global Mirror sessions.

yes
The following HyperSwap options are supported for the Metro Mirror Failover/Failback or Metro Global Mirror session:
- **-disableHS yes | no**
- **-onConfigErrorHS disable | partition**
- **-onPlannedErrorHS disable | partition**
- **-onUnplannedErrorHS disable | partition**

no HyperSwap options are not supported. All Metro Mirror Failover/Failback and Metro Global Mirror functions are still supported.

-disableOHS { yes | no }
Disables Open HyperSwap in Metro Mirror Failover/Failback sessions. This parameter is applicable only if the `manageH1H2withOpenHyperSwap` parameter is set to `yes`. The default option for this parameter is `no`.

-manageH1H2withOpenHyperSwap { yes | no }
Enables Open HyperSwap support for Metro Mirror Failover/Failback sessions.

yes
The following Open HyperSwap option is supported for the Metro Mirror Failover/Failback session:
- **-disableOHS{ yes | no }**

no Open HyperSwap options are not supported. All Metro Mirror Failover/Failback functions are still supported. If no is specified and the session had previously loaded a configuration on the hosts and one of the volumes is OPEN, the manageH1H2withOpenHyperSwap option remains yes.

-rmreserves { yes | no }
Removes the persistent reserve on the target volume to allow the establishment of a Metro Mirror session. Once set on, the setting for the **-rmreserves** parameter continues to persist for a session, and the setting remains until you remove it. However, warnings are displayed to indicate that the value is set when you attempt to start the session.

-failIfTgtOnline { yes | no }
Determines whether the **Start** command fails if the target is online. If the parameter is set to yes, the target is determined to be online to a host, and **Start** command will fail.

Notes:
- Tivoli Storage Productivity Center for Replication cannot determine with absolute certainty whether the target is online to a host.
- This parameter affects only count key data (CKD) volumes.
- Online means that path groups are present. A path group is necessary, but is not enough to indicate that the volume is online. For example, an LPAR that is not part of a sysplex can be taken down (for example, through a power-off without a shutdown) and path groups will display as present, but no LPAR will have the volume online. That is, the path groups are present, but z/OS software might think the volumes are offline.

-aftersuspend{ hold | release }
(Metro Mirror sessions) Specifies the session operation after a suspend occurs. Valid policies are:

hold Does not allow any updates to the primary volume after a suspend.

release
allow updates to the primary volume after a suspend.

-reflash { yes | no }
Specifies whether a FlashCopy replication should be created between the I2 and J2 volumes after the recovery of a Global Mirror session. Valid values are yes or no. If you enter no, a FlashCopy replication is created only between the I2 and H2 volumes.

-enableHardenedFreeze { yes | no }
Specifies whether the z/OS Input/Output Supervisor (IOS) is used to manage freeze operations. If this parameter is set to yes, the following actions can occur:
- A freeze can occur regardless of whether the Tivoli Storage Productivity Center for Replication server is started or stopped.
- You can include z/OS system volumes such as paging, database, and WebSphere Application Server hierarchical file system (HFS) volumes as Metro Mirror volumes in the session. When you set the **-enableHardenedFreeze** parameter to yes, IOS manages the freeze operations for all Metro Mirror volumes in the session, which prevents Tivoli Storage

Productivity Center for Replication from freezing the volumes and possibly freezing itself. This parameter does not enable IOS to manage freeze operations for Global Mirror volumes.

If the **-manageH1H2withHyperSwap** parameter is set to yes, this parameter is ignored. IOS support for managing freeze operations is included with HyperSwap.

Requirement: This parameter requires two z/OS address spaces: the Basic HyperSwap Management address space and the Basic HyperSwap API address space. For instructions about how to start these address spaces, see the information about preparing to use Basic HyperSwap from z/OS in the *IBM Tivoli Storage Productivity Center for Replication for System z Installation and Configuration Guide*.

session_name... | **-**
Specifies the name of the session that is to be modified.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Changing the description of a session

The following command changes the description of the session session1 to MGM session.

```
csmcli> chsess -desc "MGM session" session1
```

The following output is returned:

```
Are you sure you want to change session session1? [y/n]:y

IWNR1124I  The description for session session1 was modified successfully.
The new description is MGM session.
```

Changing the session site locations

The following command changes location of each site in Metro Global Mirror session session1.

```
csmcli> chsess -site1loc Boulder -site2loc Tucson -site3loc Marana session1
```

The following output is returned:

```
IWNR1096I  The locations for sessions session1 and Site 3 were set successfully.
```

Disabling HyperSwap

The following command disables HyperSwap for session session1.

```
csmcli> chsess -disableHS yes session1
```

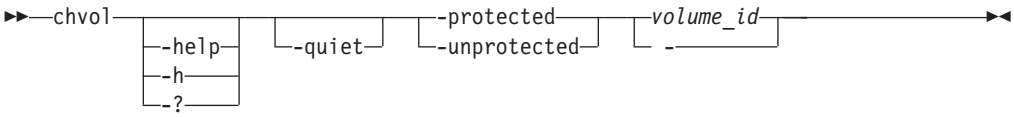
The following output is returned:

```
IWNR5411E  Basic HyperSwap is disabled by operator for session session1.
```

chvol

Use the **chvol** command to change the protection setting associated with a volume.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-protected
Marks the volume or volumes as protected. It specifies that the volumes cannot be used in an add copy set action.

-unprotected
Marks the volume or volumes as unprotected. It specifies that the volumes can be used in an add copy set action.

volume_id **|** **-**
Specifies a volume ID for which to can change the protection setting.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

1. **Protecting volumes**

   The following command marks the volume with ID DS8000:2107.04131:VOL:0001 as protected.

   ```
   csmcli> chvol -protected DS8000:2107.04131:VOL:0001
   ```

   The following output is returned:

   ```
   Are you sure you want to change volume DS8000:2107.04131:VOL:0001? [y/n]:y
    IWNE9300I  The set protection command completed without any errors. There
   were 1 element(s) protected and 0 element(s) unprotected.

   IWNE9302I  The element DS8000:2107.04131:VOL:0001 has been protected.
   ```

2. **Unprotecting volumes**

   The following command marks the volume with ID DS8000:2107.04131:VOL:0001 as unprotected.

   ```
   csmcli> chvol -unprotected DS8000:2107.04131:VOL:0001
   ```

   The following output is returned:

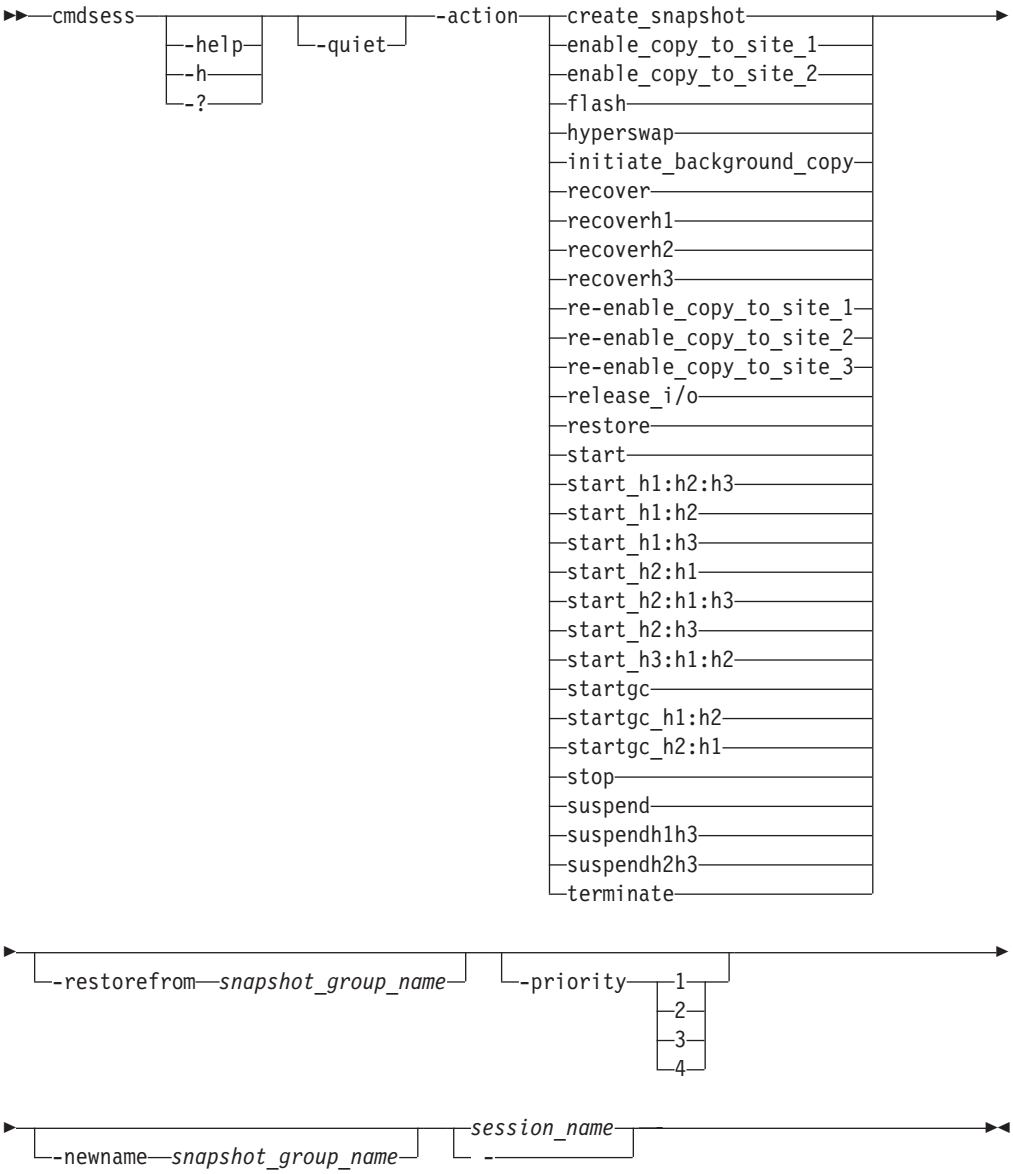
   ```
   Are you sure you want to change volume DS8000:2107.04131:VOL:0001? [y/n]:y
    IWNE9300I  The set protection command completed without any errors. There
   were 0 element(s) protected and 1 element(s) unprotected.

   IWNE9303I  The element DS8000:2107.04131:VOL:0001 has been unprotected.
   ```

cmdsess

Use the **cmdsess** command to run a specific action against a session.

Tip: To list all of the session actions that can be run for a session, use the **lssessactions** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

-action *action_type*
Specifies the action type (command) depending on the state and type of session. The possible action types are displayed in the syntax diagram and are described in the *IBM Tivoli Storage Productivity Center User's Guide* and *IBM Tivoli Storage Productivity Center for Replication for System z User's Guide*.

-restorefrom *snapshot_group_name*
Specifies the name of the snapshot group that you want to use to restore the data in the H1 volumes for the session. The snapshot group must be in the session.

This parameter is required if the **-action** parameter value is `restore`.

-priority { 1 | 2 | 3 | 4}
Specifies the priority in which the snapshot group will be deleted from the session. The value is the number 1 - 4. A value of 1 specifies that the snapshot group is deleted last. A value of 4 specifies that the snapshot group is deleted first.

This parameter is optional and only used if the **-action** parameter value is `create_snapshot`.

-newname *snapshot_group_name*
Specifies the new name for the snapshot group.

This parameter is optional and only used if the **-action** parameter value is `create_snapshot`.

session_name **|** **-**

Specifies the name of the session that the action will run against.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Starting a session

The following command runs the **Start H1->H2->H3** action on session `session1`:

```
csmcli> cmdsess -action start_h1:h2:h3 session1
```

The following output is returned:

```
IWNR1813W  This command will initiate the copying of data from Site 1 to
Site 2 and Site 3 for session session1, overwriting any data on Site 2 and
Site 3 for any inactive copy sets. For ESS/DS devices, exactly one path will
be established between each LSS pair without existing paths. Do you want to
continue? [y/n]:y

 IWNR1027I  The command Start H1->H2->H3 in session session1 has completed
successfully.
```

Reversing the direction of replication

The following command runs the **Enable Copy to Site 1** action on session `session1` without prompting for confirmation:

```
csmcli> cmdsess -quiet -action enable_copy_to_site_1 session1
```

The following output is returned:

```
IWNR1027I  The command Enable Copy to Site 1 in session session1 has
completed successfully.
```

Creating a snapshot group in an XIV system Snapshot session

The following command creates a snapshot group in session `snap1`:

```
csmcli> cmdsess -action create_snapshot snap1
```

The following output is returned:

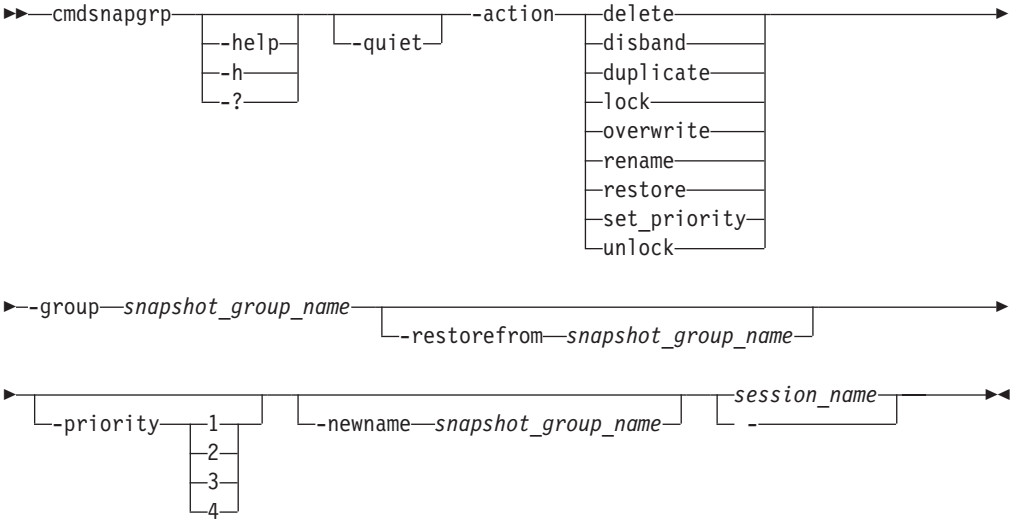
```
IWNR1855W  This command will create a new snapshot group containing snapshots of the
source volumes in session snap1. Do you want to continue? [y/n]:y
IWNR1026I  The Create Snapshot command in session snap1 has completed.
```

cmdsnapgrp

Use the **cmdsnapgrp** command to run a specific action against a snapshot group that is in an IBM XIV Storage System Snapshot session.

A snapshot group is a grouping of snapshots of individual volumes in a consistency group at a specific point in time.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

-action *action_type*
Specifies the action that you want to complete for a snapshot group in a session. The valid values are:

delete Deletes the snapshot group and all the individual snapshots that are in the group from the session and from XIV system.

If the deleted snapshot group is the last snapshot group that is associated with the session, the session returns to the Defined state.

disband
Disbands the snapshot group. When a snapshot group is disbanded, the snapshot group no longer exists. All snapshots in the snapshot group become individual snapshots that are no longer associated to the consistency group or the session.

After a snapshot group is disbanded, it is no longer shown in or managed by IBM Tivoli Storage Productivity Center for Replication. If the disbanded snapshot group is the last snapshot group that is associated with the session, the session returns to the Defined state.

duplicate
Duplicates the snapshot group. When a snapshot group is duplicated, a new snapshot group is created with new snapshots for all volumes that are in the duplicated group. A name for the duplicated snapshot group is generated automatically by XIV system.

lock Locks a snapshot group. If the snapshot group is locked, write operations to the snapshots within the snapshot group are prevented. By default, a snapshot group is locked when it is created.

This action is valid only if the snapshot group is unlocked.

overwrite
Overwrites the snapshot group to reflect the data that is on the master volume.

rename
Renames the snapshot group.

To specify the new name, use the **-newname** parameter.

restore
Restores the contents of a snapshot group using another snapshot group in the session. Both of the snapshot groups must contain the same subset of volumes.

To specify the snapshot group from which you want to restore, use the **-restorefrom** parameter.

set_priority
Sets the priority in which a snapshot group is deleted. The value is the number 1 - 4. A value of 1 specifies that the snapshot group is deleted last. A value of 4 specifies that the snapshot group is deleted first.

To set the deletion priority, use the **-priority** parameter.

unlock
Unlocks a snapshot group. If the snapshot group is unlocked, write operations to the snapshots within the snapshot group are enabled and the snapshot group is shown as modified if you run the **lssnapgrp** command.

This action is valid only if the snapshot group is locked.

-group *snapshot_group_name*
Specifies the name of the snapshot group that you want to run the action against.

-restorefrom *snapshot_group_name*
Specifies the name of the snapshot group that you want to use to restore the snapshot group that is defined by the **-group** parameter.

This parameter is required if the **-action** parameter value is `restore`.

-priority { 1 | 2 | 3 | 4}
Specifies the priority in which the snapshot group will be deleted from the session. The value is the number 1 - 4. A value of 1 specifies that the snapshot group is deleted last. A value of 4 specifies that the snapshot group is deleted first.

This parameter is required if the **-action** parameter value is set_prioirity.

-newname *snapshot_group_name*
Specifies the new name for the snapshot group.

This parameter is required if the **-action** parameter value is rename.

session_name | **-**

Specifies the name of the session that contains the snapshot group.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Deleting a snapshot group

The following command deletes the snapshot group snap1_002.snap_group_00018 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_00018 -action delete -quiet snap1
```

The following output is returned:

```
IWNR1322I The Delete command has completed for snapshot groups
snap1_002.snap_group_00018 in session snap1.
```

Disbanding a snapshot group

The following command disbands the snapshot group snap1_002.snap_group_00017 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_00017 -action disband -quiet snap1
```

The following output is returned:

```
IWNR1322I The Disband command has completed for snapshot groups
snap1_002.snap_group_00017 in session snap1.
```

Duplicating a snapshot group

The following command duplicates the snapshot group snap1_002.snap_group_0001 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_0001 -action duplicate -quiet snap1
```

The following output is returned:

```
IWNR1322I The Duplicate command has completed for snapshot groups
snap1_002.snap_group_0001 in session snap1.
```

Locking a snapshot group

The following command locks the snapshot group snap1_002.snap_group_0001 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_0001 -action lock -quiet snap1
```

The following output is returned:

```
IWNR1322I The Lock command has completed for snapshot groups
snap1_002.snap_group_0001 in session snap1.
```

Overwriting a snapshot group

The following command overwrites the snapshot group snap1_002.snap_group_0001 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_0001 -action overwrite -quiet snap1
```

The following output is returned:

```
IWNR1322I The Overwrite command has completed for snapshot groups
snap1_002.snap_group_0001 in session snap1.
```

Renaming a snapshot group

The following command renames the snapshot group snap1_002.snap_group_00016 to snapgroup1 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_00016 -action rename
-newname snapgroup1 -quiet snap1
```

The following output is returned:

```
IWNR1326I The snapshot group snap1_002.snap_group_00016 in session snap1 was renamed
to snapgroup1.
```

Restoring a snapshot group

The following command restores the snapshot group snap1_002.snap_group_0001 from snap1_002.snap_group_00017 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_0001 -action restore
-restorefrom snap1_002.snap_group_00017 -quiet snap1
```

The following output is returned:

```
IWNR1325I The snapshot group snap1_002.snap_group_0001 in session snap1 was
restored from snapshot group snap1_002.snap_group_00017.
```

Setting the deletion priority for a snapshot group

The following command sets a deletion priority of 4 for the snapshot group snap1_002.snap_group_0001 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_0001 -action set_priority -priority 4
-quiet snap1
```

The following output is returned:

```
IWNR1324I The deletion priority for snapshot groups snap1_002.snap_group_0001
in session snap1 was set to 4.
```

Unlocking a snapshot group

The following command unlocks the snapshot group snap1_002.snap_group_0001 in the session snap1.

```
csmcli> cmdsnapgrp -group snap1_002.snap_group_0001 -action unlock -quiet snap1
```

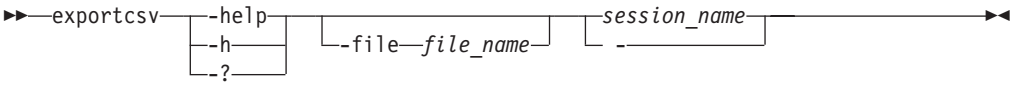
The following output is returned:

```
IWNR1322I The Unlock command has completed for snapshot groups
snap1_002.snap_group_0001 in session snap1.
```

exportcsv

Use the **exportcsv** command to export the copy sets in a session to a comma-separated values (CSV) file or to the console. You are prompted to overwrite the CSV file if it exists.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-file *file_name*
Specifies the name and path of the CSV file. If you do not specify this parameter, the CSV output is displayed on the command-line interface.

session_name **|** **-**
Specifies the name of the session from which you are exporting the copy sets.

Examples

Exporting copy sets to a file

The following command exports the copy sets in session `session1` to the file `c:\session1.csv`.

```
csmcli> exportcsv -file c:\session1.csv session1
```

The following output is returned:

```
Exporting...
IWNC6506I  The export copy set command for session session1 succeeded.  The
file was exported to the path: c:\session1.csv.
```

Exporting copy sets to standard out

The following command exports the copy sets in session `session1` to standard output.

```
csmcli> exportcsv session1
```

The following output is returned:

```
Exporting...
#203
#Metro Global Mirror w/ Practice
#Aug 25 1:44:16 PM

H1,H2,H3,I3,J3
DS8000:2107.NK791:VOL:1500,DS8000:2107.MW931:VOL:1500,
DS8000:2107.04131:VOL:1500,DS8000:2107.04131:VOL:1505,
DS8000:2107.04131:VOL:150A
DS8000:2107.NK791:VOL:1501,DS8000:2107.MW931:VOL:1501,
DS8000:2107.04131:VOL:1501,DS8000:2107.04131:VOL:1506,
DS8000:2107.04131:VOL:150B
DS8000:2107.NK791:VOL:1502,DS8000:2107.MW931:VOL:1502,
DS8000:2107.04131:VOL:1502,DS8000:2107.04131:VOL:1507,
DS8000:2107.04131:VOL:150C
DS8000:2107.NK791:VOL:1503,DS8000:2107.MW931:VOL:1503,
DS8000:2107.04131:VOL:1503,DS8000:2107.04131:VOL:1508,
DS8000:2107.04131:VOL:150D
DS8000:2107.NK791:VOL:1504,DS8000:2107.MW931:VOL:1504,
DS8000:2107.04131:VOL:1504,DS8000:2107.04131:VOL:1509,
DS8000:2107.04131:VOL:150E
```

```
ESS:2105.FCA57:VOL:1500,DS8000:2107.NF111:VOL:1505,
DS8000:2107.04131:VOL:1600,DS8000:2107.04131:VOL:1605,
DS8000:2107.04131:VOL:160A
ESS:2105.FCA57:VOL:1501,DS8000:2107.NF111:VOL:1506,
DS8000:2107.04131:VOL:1601,DS8000:2107.04131:VOL:1606,
DS8000:2107.04131:VOL:160B
ESS:2105.FCA57:VOL:1502,DS8000:2107.NF111:VOL:1507,
DS8000:2107.04131:VOL:1602,DS8000:2107.04131:VOL:1607,
DS8000:2107.04131:VOL:160C
ESS:2105.FCA57:VOL:1503,DS8000:2107.NF111:VOL:1508,
DS8000:2107.04131:VOL:1603,DS8000:2107.04131:VOL:1608,
DS8000:2107.04131:VOL:160D
ESS:2105.FCA57:VOL:1504,DS8000:2107.NF111:VOL:1509,
DS8000:2107.04131:VOL:1604,DS8000:2107.04131:VOL:1609,
DS8000:2107.04131:VOL:160E

IWNR1301I  The export of a copy set for session session1 succeeded.
```

Exporting copy sets to standard out (XIV system sessions)

The following command exports the copy sets in the XIV system Global Mirror Failover/Failback session `xiv_gm_1` to standard output.

```
csmcli> exportcsv xiv_gm_1
```

The following output is returned. For all XIV system session types, the volume nickname rather than the volume ID is provided in the output. In the following out example, `myvolume` is the volume nickname for both the H1 and H2 volumes.

```
Exporting...
#xiv_gm_1
#Global Mirror Failover/Failback
##Aug 25 9:48:26 AM

H1,H2
XIV:VOL:7803448:myvolume,XIV:VOL:7804988:myvolume

IWNR1301I The export of a copy set for session xiv_gm_1 succeeded.
```

exportgmdata

Use the **exportgmdata** command to export data for a Global Mirror role pair to a comma-separated value (CSV) file. You can then use the data in the CSV file to analyze trends in your storage environment that affect your recovery point objective (RPO).

Attention: Because historical data is purged when you delete a session or set the management server as the standby server, export data before you perform these actions.

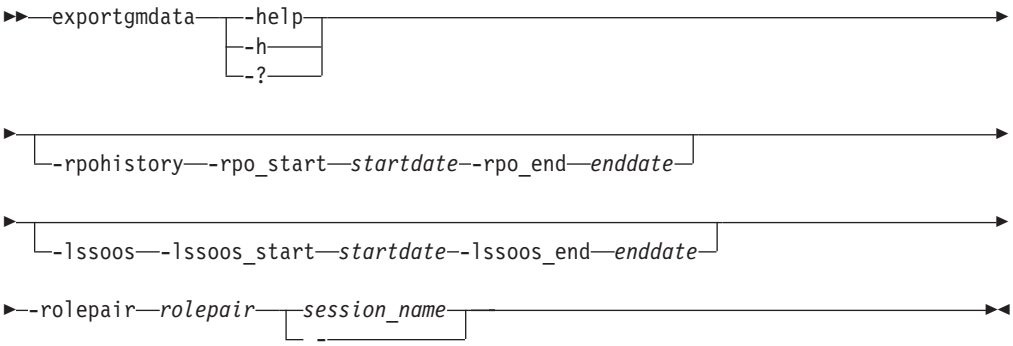
This command can create two types of CSV files: a file that contains data about the RPO and a file that contains data about logical subsystem (LSS) out-of-sync tracks. You can use both files to better analyze trends.

For example, the file that contains data for the RPO might show that the RPO threshold is often exceeded on a particular day and time. You can then view the file that contains data for LSS out-of-sync tracks to see whether a particular LSS or set of LSSs have high out-of-sync track values for that day and time.

Syntax

This command is available for the following storage systems:

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS6000
- System Storage DS8000



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-rpohistory
Specifies that the CSV file contains data for the RPO. The data includes the average RPO for the dates that you select and information related to the formation of consistency groups.

-rpo_start *startdate*
Specifies the start date for the RPO data that is in the CSV file. The format is yyyy-mm-dd.

By default, the date range maximum is 31 days of data.

This parameter is required if the **-rpohistory** parameter is present.

-rpo_end *enddate*
Specifies the end date for the RPO data that is in the CSV file. The format is yyyy-mm-dd.

This parameter is required if the **-rpohistory** parameter is present.

-lssoos
Specifies that the export file contains data for the out-of-sync tracks in that are in the LSSs.

-lssoos_start *startdate*
Specifies the start date for the LSS out-of-sync track data that is in the CSV file. The format is yyyy-mm-dd.

By default, the date range maximum is seven days of data.

This parameter is required if the **-lssoos** parameter is present.

-lssoos_end *enddate*
Specifies the end date for the LSS out-of-sync track data that is in the CSV file. The format is yyyy-mm-dd.

This parameter is required if the **-lssoos** parameter is present.

-rolepair *rolepair*
Specifies the role pair for which you are exporting the data.

session_name | **-**
Specifies the name of the session for which you are exporting the data.

Examples

Exporting RPO data to an export file

The following command exports RPO data to the file session1H1-J2rpo2012-02-28-16-18-25.csv. The confirmation message contains the path to the file.

```
csmcli> exportgmdata -rpohistory -rpo_start 2012-02-01 -rpo_end 2012-02-28
-rolepair h1-j2 gmsession1
```

The following output is returned:

```
IWNR1262I The data for session gmsession1 was exported.
The CSV file is located on the server at: C:\Program Files\IBM\TPC\
ewas\profiles\ReplicationServerProfile\exportdir\
gmsession1H1-J2rpo2012-02-28-16-18-25.csv
```

Exporting LSS out-of-sync track data to an export file

The following command exports LSS out-of-sync track data to the file session1H1-J2lssoos2012-02-28-16-45-46.csv. The confirmation message contains the path to the file.

```
csmcli> exportgmdata -lssoos -lssoos_start 2012-02-01 -lssoos_end 2012-02-08
-rolepair h1-j2 gmsession1
```

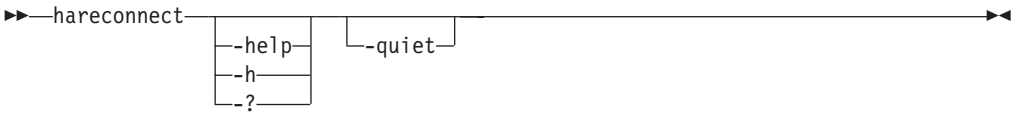
The following output is returned:

```
IWNR1262I The data for session gmsession1 was exported.
The CSV file is located on the server at: C⌂:\Program Files\IBM\TPC\
ewas\profiles\ReplicationServerProfile\exportd⌂ir\
gmsession1H1-J2lssoos2012-02-28-16-45-46.csv
```

hareconnect

Use the **hareconnect** command to reconnect the active and standby servers for high availability (HA).

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

Example

Reconnecting the active and standby management servers

The following command reconnect the active and standby management servers.

```
csmcli> hareconnect
```

The following output is returned:

```
IWNR3052I  Successfully reconnected with the high availability server
tpc1.storage.tucson.ibm.com from the server tpc2.storage.tucson.ibm.com
```

hatakeover

Use the **hatakeover** command to change the standby server to the active server.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

Description

Note: For the several commands that implement high-availability with the definition of a standby server, the standby server must be at the same level of IBM Tivoli Storage Productivity Center for Replication code as the active server.

Example

Changing the standby server to the active server

The following command changes the standby server to the active server.

```
csmcli> hatakeover
```

The following output is returned:

```
IWNR3063I  Successfully issued the takeover to the standby server
tpc2.storage.tucson.ibm.com with the active HA server
tpc1.storage.tucson.ibm.com.
```

importcsv

Use the **importcsv** command to parse a comma-separated values (CSV) file to create copy sets for a session.

The CSV file is parsed and copy sets are created from the data in the file. The CSV file must contain data for all the necessary roles in the session for which the copy sets are being created.

The following is an example CSV file for storage systems other than XIV system.

```
#Session1,
#FlashCopy,
#Oct 2 10:03:18 AM

H1,T1
DS8000:2107.FRLL1:VOL:1004,DS8000:2107.FRLL1:VOL:1104
DS8000:2107.FRLL1:VOL:1011,DS8000:2107.FRLL1:VOL:1101
DS8000:2107.FRLL1:VOL:1005,DS8000:2107.FRLL1:VOL:1105
```

Each line represents source and target volumes for the copy sets. The values for the volumes consist of the following information delimited by a colon:

- The storage system type
- The numeric value for the storage system type (this is not included for all storage system types)
- The serial number
- The volume ID preceded by `VOL:`.

The following is an example CSV file for an XIV system.

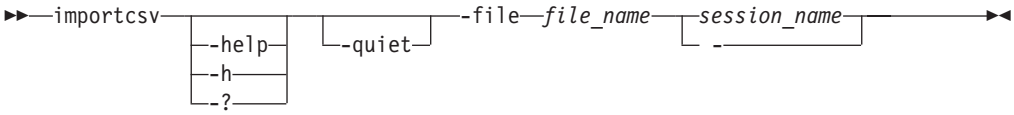
```
#xiv_gm_1
#Global Mirror Failover/Failback
##Aug 25 9:48:26 AM

H1,H2
XIV:VOL:7803448:myvolume,XIV:VOL:7804988:myvolume
```

The values for the volumes consist of the following information delimited by a colon:

- The storage system type
- The serial number preceded by `VOL:`.
- The volume ID or volume nickname. In the preceding example, the volume nickname `myvolume` is provided.

Commented lines in a CSV file must start with #.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

-file *file_name*
A required parameter that specifies the name of the CSV file.

session_name | **-**
Specifies the name of the session for which you are creating copy sets.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Importing a CSV file for a System Storage DS8000 session

The following command imports the file name `exportcsvtest.csv` into session `session1` without prompting for a confirmation.

```
csmcli> importcsv -quiet -file exportcsvtest.csv session1
```

The following output is returned:

```
IWNR2001I  The pair was successfully created in session session1 for copy set
DS8000:2107.FRLL1:VOL:1004 with source DS8000:2107.FRLL1:VOL:1004 and target
DS8000:2107.FRLL1:VOL:1104.

IWNR2001I  The pair was successfully created in session session1 for copy set
DS8000:2107.FRLL1:VOL:1011 with source DS8000:2107.FRLL1:VOL:1011 and target
DS8000:2107.FRLL1:VOL:1101.

IWNR2001I  The pair was successfully created in session session1 for copy set
DS8000:2107.FRLL1:VOL:1005 with source DS8000:2107.FRLL1:VOL:1005 and target
DS8000:2107.FRLL1:VOL:1105.
```

Importing a CSV file for a XIV system session

The following command imports the file name `xiv_gm_1.csv` into session `xiv_gm_1` without prompting for a confirmation.

```
csmcli> importcsv -quiet -file xiv_gm_1.csv xiv_gm_1
```

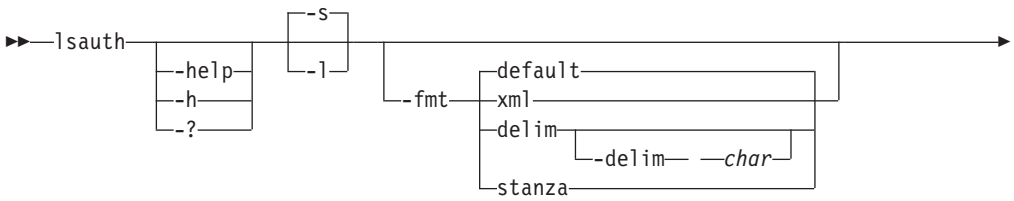
The following output is returned:

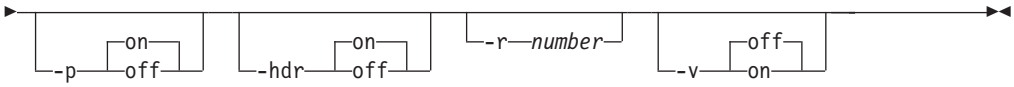
```
IWNR2001I  The pair was successfully created in session xiv_gm_1 for copy set
XIV:VOL:7803448:myvolume with source XIV:VOL:7803448:myvolume and target
XIV:VOL:7804988:myvolume.
```

lsauth

Use the **lsauth** command to lists the name, authorization level, and session permission for each user or user group.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information about each user and user group, including the name, classification, and role.

-l Displays detailed information for each user and user group, including:

Column label	Details
User name	The user name for each authorization and session that the user has permission to manage.
Classification	The type: `user` or `group`.
Role	The role: `Administrator`, `Operator`, or `Monitor`
Session	The session name if the role is Operator, or a dash (-) if the role is Administrator or Monitor.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

Example

1. **Listing all users and user groups**

   The following command lists all currently defined users and user groups.

   ```
   csmcli> lsauth
   ```

   The following output is returned:

   ```
   Name    Classification Role
   ===================================
   csmuser User           Administrator
   ```

2. **Listing detailed authorization information**

   The following command lists detailed information about the user csmuser.

   ```
   csmcli> lsauth -l
   ```

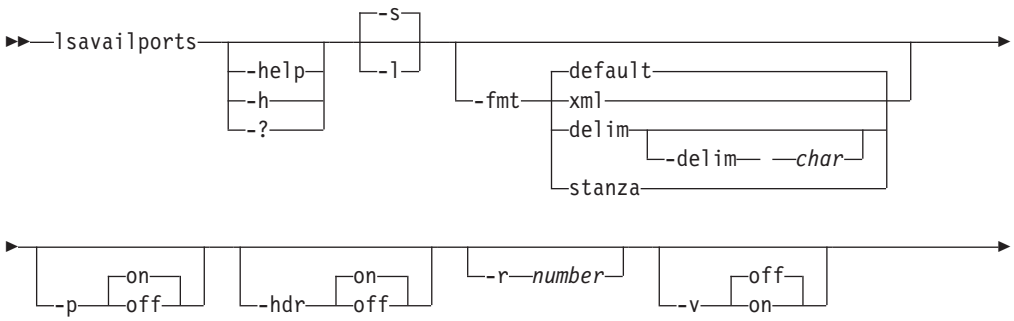
   The following output is returned:

   ```
   Name    Classification Role          Session
   ============================================
   csmuser User           Administrator -
   ```

lsavailports

Use the **lsavailports** command to display the port configuration types for a specific path.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Displays default information, including the source and target LSS and the type of port configuration.

-l
Displays detailed information for each port, including:

Column label	Details
Source	Origin of the path; for ESS, an LSS.
Target	Target of the path; for ESS, an LSS.
Type	The configuration of the port (such as Enterprise Systems Connection [ESCON®] or Fibre Channel).

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-src *source_lss*
Specifies the source LSS (for example, ESS:2105.FCA57:LSS:21).

-tgt *target_lss*
Specifies the target LSS (for example, ESS:2105.FCA57:LSS:21).

Example

Listing port configuration for paths

The following command lists the port configuration used for each path with source LSS DS8000:2107.04131:LSS:15 and target LSS ESS:2105.FCA57:LSS:15.

```
csmcli> lsavailports -src DS8000:2107.04131:LSS:15 -tgt ESS:2105.FCA57:LSS:15
```

The following output is returned:

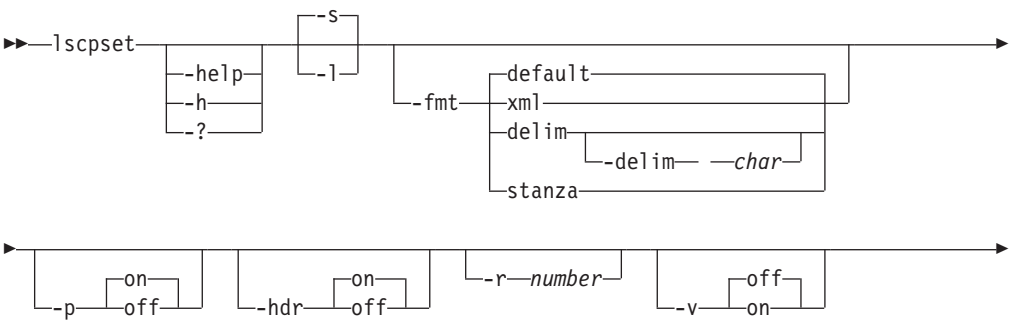
```
Source                           Target                         Type
==========================================================================
DS8000:2107.04131:LSS:15.0x0330  ESS:2105.FCA57:LSS:15.0x008C  Fibre Channel
DS8000:2107.04131:LSS:15.0x0110  ESS:2105.FCA57:LSS:15.0x000C  Fibre Channel
DS8000:2107.04131:LSS:15.0x0110  ESS:2105.FCA57:LSS:15.0x008C  Fibre Channel
DS8000:2107.04131:LSS:15.0x0110  ESS:2105.FCA57:LSS:15.0x0088  Fibre Channel
DS8000:2107.04131:LSS:15.0x0110  ESS:2105.FCA57:LSS:15.0x0028  Fibre Channel
```

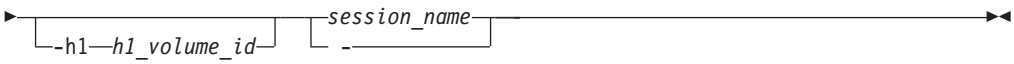
lscpset

Use the **lscpset** command to list the IDs of copy sets in a session.

Tip: Use the **showcpset** command to list the volumes in a copy set and use the **lsvol** command to display the status of volumes in a copy set.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s | -l
Displays the following information:

Column Label	Details
H1 Volume ID	The ID of the volume at host site 1 which is used to identify copy sets in a session
Session	The name of the session that contains the copy sets
Volumes	The number of volumes associated with the copy set

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-h1 *h1_volume_id*
Specifies the volume ID at host site 1.

session_name **|** **-**
Specifies the name of the session that contains the copy sets.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Listing the IDs of copy sets in a session

The following command lists copy set IDs and the number of volumes that are associated with the copy sets in a session called session1:

```
csmcli> lscpset session1
```

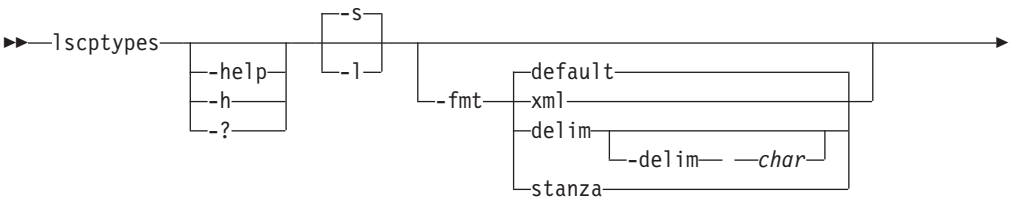
The following output is returned:

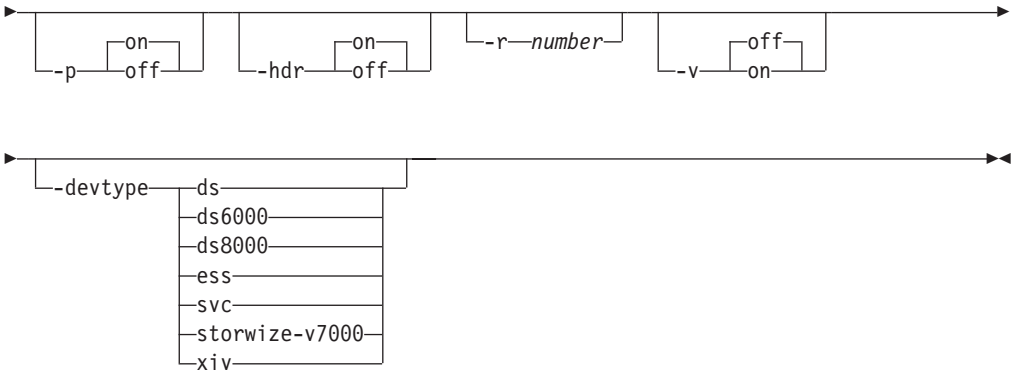
```
H1 Volume ID                Session       Volumes
=============================================
DS8000:2107.NK791:VOL:1500 session1      5
DS8000:2107.NK791:VOL:1501 session1      5
DS8000:2107.NK791:VOL:1502 session1      5
DS8000:2107.NK791:VOL:1503 session1      5
DS8000:2107.NK791:VOL:1504 session1      5
ESS:2105.FCA57:VOL:1500    session1      5
ESS:2105.FCA57:VOL:1501    session1      5
ESS:2105.FCA57:VOL:1502    session1      5
ESS:2105.FCA57:VOL:1503    session1      5
ESS:2105.FCA57:VOL:1504    session1      5
```

lscptypes

Use the **lscptypes** command to display all the supported session (copy) types that you can use with the **mksess** command.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Lists default information about the session types being used, including the full name and description.

-l
Displays detailed information for each session types, including:

Column label	Details
Copy Type	The abbreviated name of the session type that you can specify with the **mksess** command (for example, mgm).
Full Name	The full name of the session type (for example, Metro Global Mirror).
Device Types	The device types that are supported by the session type. The device type values are: `DS`, `DS6000`, `DS8000`, `ESS`, `SAN Volume Controller`, and `STORWIZE-V7000`, `XIV`.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-devtype { ds | ds6000 | ds8000 | ess | svc | storwize-v7000 | xiv }
Specifies the session types supported by hardware device.

Example

Listing all session types for a System Storage DS8000 or System Storage DS6000 session

The following command lists all the session types that you can use.

```
csmcli> lscptypes
```

The following output is returned:

```
Copy Type Full Name                                          Device Types
=============================================================================================================
fc        FlashCopy                                          DS8000, DS6000, ESS, SVC, STORWIZE-V7000
snap      Snapshot                                           XIV
mmsd      Metro Mirror Single Direction                      DS8000, DS6000, ESS, SVC, STORWIZE-V7000
mmfofb    Metro Mirror Failover/Failback                     DS8000, DS6000, ESS, SVC, STORWIZE-V7000
mmfofbxiv Metro Mirror Failover/Failback                     XIV
pmm       Metro Mirror Failover/Failback w/ Practice         DS8000, DS6000, ESS
pmmsvc    Metro Mirror Failover/Failback w/ Practice         SVC, STORWIZE-V7000
gmsd      Global Mirror Single Direction                     DS8000, DS6000, ESS
gmsdsvc   Global Mirror Single Direction                     SVC, STORWIZE-V7000
gmfofb    Global Mirror Failover/Failback                    DS8000, DS6000, ESS
gmfofbsvc Global Mirror Failover/Failback                    SVC, STORWIZE-V7000
gmfofbxiv Global Mirror Failover/Failback                    XIV
pgm       Global Mirror Failover/Failback w/ Practice        DS8000, DS6000, ESS
pgmsvc    Global Mirror Failover/Failback w/ Practice        SVC, STORWIZE-V7000
pgm2s     Global Mirror Either Direction w/ Two Site Practice DS8000, DS6000, ESS
mgm       Metro Global Mirror                                DS8000, ESS
pmgm      Metro Global Mirror w/ Practice                    DS8000, ESS
```

Listing session types supported for System Storage DS8000 and System Storage DS6000 storage systems

```
csmcli> lscptypes -devtype ds
```

The following output is returned:

```
Copy Type Full Name                                                 Device Types
=============================================================================================================
fc        FlashCopy                                                 DS8000, DS6000, ESS, SVC, STORWIZE-V7000
mmsd      Metro Mirror Single Direction                             DS8000, DS6000, ESS, SVC, STORWIZE-V7000
mmfofb    Metro Mirror Failover/Failback                            DS8000, DS6000, ESS, SVC, STORWIZE-V7000
pmm       Metro Mirror Failover/Failback w/ Practice                DS8000, DS6000, ESS
gmsd      Global Mirror Single Direction                            DS8000, DS6000, ESS
gmfofb    Global Mirror Failover/Failback                           DS8000, DS6000, ESS
pgm       Global Mirror Failover/Failback w/ Practice               DS8000, DS6000, ESS
pgm2s     Global Mirror Either Direction w/ Two Site Practice       DS8000, DS6000, ESS
mgm       Metro Global Mirror                                       DS8000, ESS
pmgm      Metro Global Mirror w/ Practice                           DS8000, ESS
```

Listing session types supported for an XIV system

```
csmcli> lscptypes -devtype xiv
```

The following output is returned:

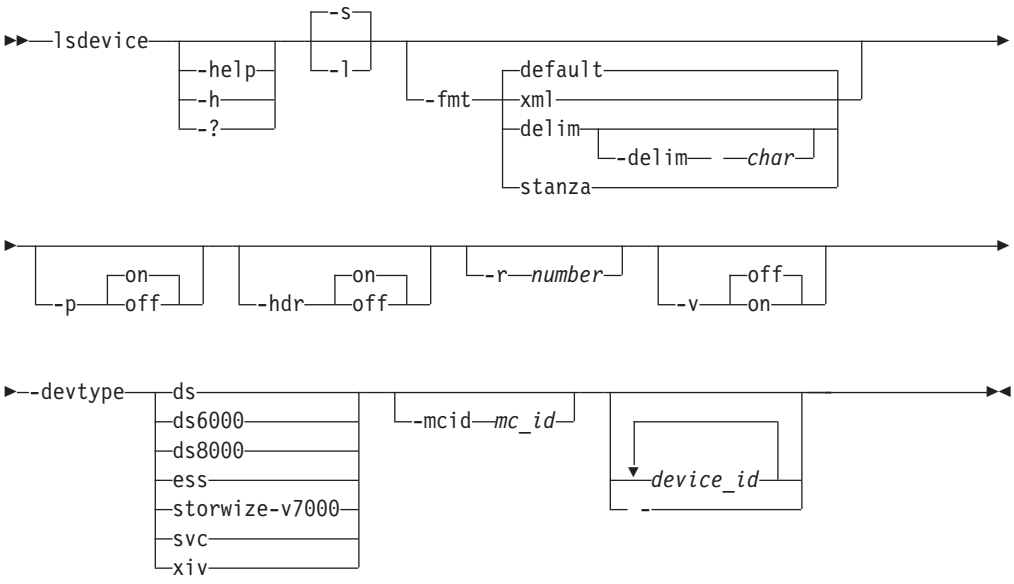
```
Copy Type Full Name                                                 Device Types
=============================================================================================================
snap      Snapshot                                                  XIV
mmfofbxiv Metro Mirror Failover/Failback                            XIV
gmfofbxiv Global Mirror Failover/Failback                           XIV
```

lsdevice

Use the **lsdevice** command to list storage systems and properties.

Tip: To list storage systems that can be discovered through an IBM z/OS connection, use the **lsstorcandidate** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Specifies that default information for each storage system is displayed. This information includes the device ID, connection type, device type, and local server connection status.

-l
Specifies that detailed information for each storage system is displayed, including:

Column Label	Details
Device ID	The name, nickname, or model-serial-manufacturer of the storage system.
Connection Type	The connection type: `Direct`, `HMC`, or `z/OS`.
Device Type	The storage system type: `DS6000`, `DS8000`, `ESS`, `SAN Volume Controller`, `STORWIZE-V7000`, or `XIV`.
Device IP Address	The IP address or host name for the nodes or clusters that are used by the storage system. If there are multiple nodes or clusters, the values in this column are delimited by a semicolon (for example, *ip_address*;*ip_address*).
Local Server Connection	The state of the direct connections to the local management server. If there are multiple servers, the values in this column are delimited by a semicolon (for example, *cluster0_status*;*cluster1_status*).
Remote Server Connection	The state of the direct connections to the remote management server. If there are multiple servers, the values in this column are delimited by a semicolon (for example, *cluster0_status*;*cluster1_status*).
Management Console ID	The ID of the Hardware Management Console (HMC). This parameter applies only to System Storage DS8000 storage systems that are using HMCs to connect.
Location	The location of the storage system.
Manufacturer	The manufacturer of the storage system.
Device Name	The user-defined name of the storage system.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want

to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-devtype { ess | ds | ds6000 | ds8000 | storwize-v7000 | svc | xiv}
Specifies the type of storage system. Supported storage systems are:

- **ds**: IBM System Storage DS8000 or System Storage DS6000
- **ds6000**: System Storage DS6000
- **ds8000**: IBM System Storage DS8000
- **ess**: IBM TotalStorage Enterprise Storage Server Model 800
- **storwize-v7000**: IBM Storwize V7000 and IBM Storwize V7000 Unified
- **svc**: IBM System Storage SAN Volume Controller
- **xiv**: IBM XIV Storage System

-mcid *mc_id*
Specifies storage systems that are connected through a specific management console.

device_id... **|** **-**
Specifies one or more storage systems by ID. The storage system ID is in the element ID format (for example, `ess:box:2105.fca57`). Separate multiple storage system IDs with a space.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Listing all System Storage DS8000 and System Storage DS6000 storage systems

The following command lists information for all System Storage DS8000 and System Storage DS6000 series storage systems.

```
csmcli> lsdevice -devtype ds
Device ID             Connection Type Device Type Local Server Connection
==========================================================================
DS8000:BOX:2107.04131 Direct          DS8000      Connected;Connected
DS8000:BOX:2107.MW931 Direct          DS8000      Connected;Connected
DS8000:BOX:2107.NF111 Direct          DS8000      Connected;Connected
DS8000:BOX:2107.NK791 Direct          DS8000      Connected;Connected
DS6000:BOX:1750.AAXYA Direct          DS6000      Connected;Connected
```

Listing detailed attributes for a storage system

The following command lists detailed information for the storage system DS8000:BOX:2107.04131.

```
csmcli> lsdevice -devtype ds -l -fmt stanza DS8000:BOX:2107.04131
```

The following output is returned:

```
Device ID                DS8000:BOX:2107.04131
Connection Type          Direct
Device Type              DS8000
Device IP Address        stg8k05c0;stg8k05c1
Local Server Connection  Connected;Connected
Remote Server Connection -
Management Console ID    -
Location                 Boulder
Manufacturer             IBM
```

Listing all XIV systems

The following command lists information for a all XIV systems.

```
csmcli> lsdevice -devtype XIV
```

The following output is returned:

```
Device ID       Connection Type Device Type Local Server Connection
==================================================================
XIV:BOX:7803441 Direct          XIV         Connected;Connected;Connected
XIV:BOX:7803448 Direct          XIV         Connected;Connected;Connected
```

Listing detailed attributes for all XIV systems

The following command lists detailed information for all XIV systems.

```
csmcli> lsdevice -devtype XIV -l
```

The following output is returned:

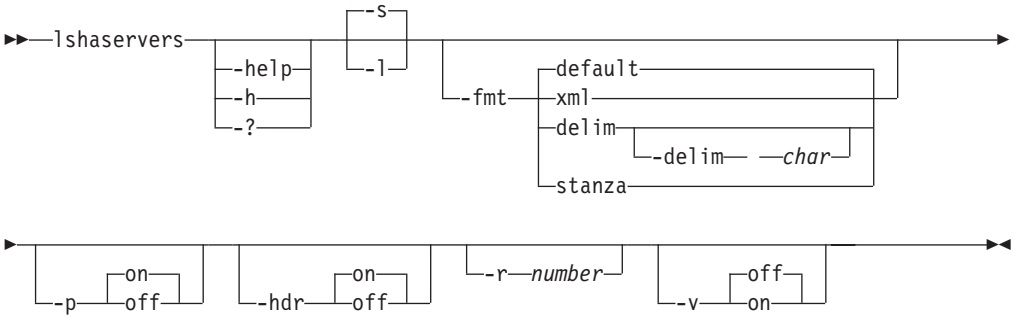
```
Device ID       Connection Type Device Type Device IP Address
============================================================================
XIV:BOX:7803441 Direct          XIV         tpcr_xiva2.storage.tucson.ibm.com
XIV:BOX:7803448 Direct          XIV         tpcr_xivb2.storage.tucson.ibm.com
Local Server Connection Remote Server Connection Management Console ID
==================================================================
Disconnected            -                        -
Disconnected            -                        -
```

```
Location Manufacturer Device Name
================================
Tucson   IBM          XIV_A
Phoenix  IBM          XIV_B
```

lshaservers

Use the **lshaservers** command to show the status of each active and standby management server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-l | -s
Displays detailed information for each management server, including:

Column label	Details
Server	The domain or IP address of the management server
Role	The role of management server: `Active` or `Standby`
Status	The status of the relationship
Port	The standby management server port number. This port is used for communication between the active and standby management server. This port number is initially set at installation time. **Important:** The standby management server port number must be the same on both the management server and the standby management server in a high-availability relationship. If you change the standby management server port number on either the management server or the standby management server, you must also change the port number on the other server.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

Example

Listing management server status

The following command lists the status of the active and standby management servers.

```
csmcli> lshaservers
```

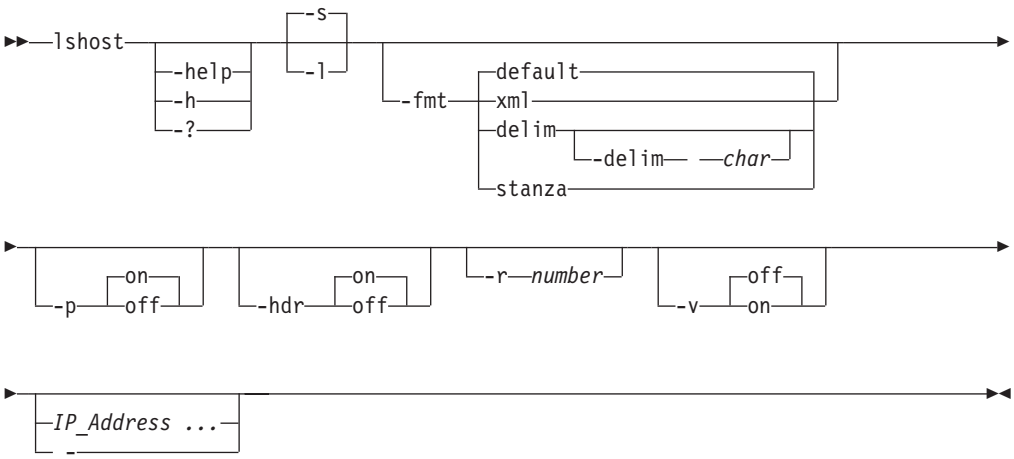
The following output is returned:

```
Server                       Role     Status        Port
=========================================================
tpc1.storage.tucson.ibm.com  ACTIVE   Synchronized  5120
tpc2.storage.tucson.ibm.com  STANDBY  Synchronized  5120
```

lshost

Use the **lshost** command to view host systems that have been added to IBM Tivoli Storage Productivity Center for Replication.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Specifies that default information for each host system is displayed.

-l Specifies that detailed information for each host system is displayed, including:

Column Label	Details
Host System	The IP address or host name of the host system.
Port	The port number for the connection to the host system.
Type	The type of host system.
Local Status	The status of the connection between the Tivoli Storage Productivity Center for Replication server and the host system.
Remote Status	In high availability environments that have an active and standby management server, the status of the connection between the remote Tivoli Storage Productivity Center for Replication server and the host system. If you are running the **lshost** command on the active server, the remote server is the standby server. If you are running the command on the standby server, the remote server is the active server.
Sessions	The sessions that are associated with the host system.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

IP_Address ... **|** **-**
If you want to view specific host systems only, specifies the IP address or host name of the host system that you want to view. You can enter multiple IP addresses or host names.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

- **Listing all host systems**

  The following command lists information about all host systems that have been added to Tivoli Storage Productivity Center for Replication.

  ```
  csmcli> lshost
  ```

The following output is returned:

```
Host System Port Type    Local Status Sessions
=====================================================
9.11.223.43 9930 AIX     Connected    MyMMSession
9.11.223.85 9990 Unknown Disconnected -
```

- **Listing detailed information for host systems**

  The following command lists detailed information about the host systems.

  ```
  csmcli> lshost -l
  ```

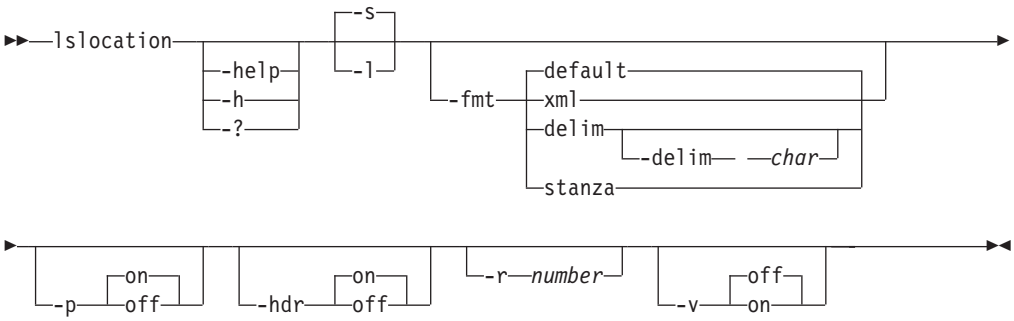
  The following output is returned:

  ```
  Host System Port Type    Local Status Remote Status Sessions
  ============================================================
  9.11.223.43 9930 AIX     Connected    Connected     -
  9.11.223.85 9990 Unknown Disconnected Disconnected  -
  ```

lslocation

Use the **lslocation** command to list all defined locations.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-l | -s
Displays detailed information for each location, including:

Column label	Details
Location	An integer representing the location.
Details	The alphanumeric text string that was given to the location. The string can be descriptive of the location.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

Example

Listing locations

The following command lists all locations.

```
csmcli> lslocation
```

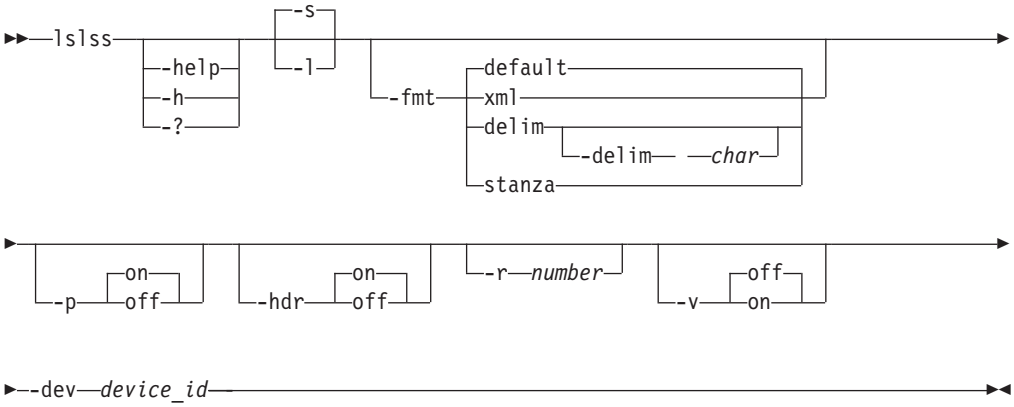
The following output is returned:

```
Location  Details
=================
1         Boulder
3         Marana
2         Tucson
```

lslss

Use the **lslss** command to list the logical subsystems (LSSes) for the specified DS or ESS storage system. You can use this output with the **mkpath** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-l | -s
Displays detailed information for each storage system, including:

Column label	Details
Device	Storage system of the LSSs
LSS ID	LSS identifier

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-dev *device_id*
Lists information for the specified DS or ESS storage system.

Example

Listing LSS for a storage system

The following command lists all available LSSs associated with the storage system DS8000:BOX:2107.04131.

```
csmcli> lslss -dev DS8000:BOX:2107.04131
```

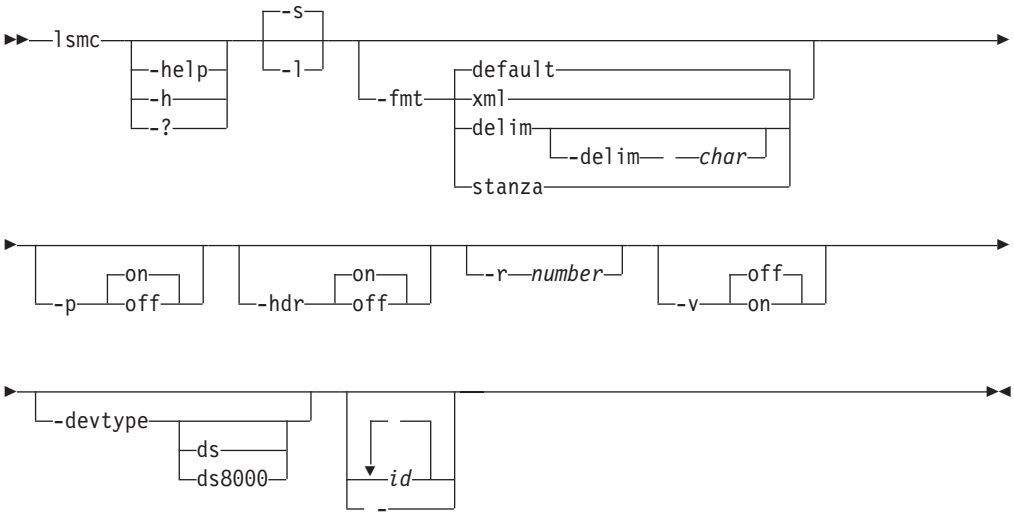
The following output is returned:

```
Device                LSS
==============================================
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:00
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:01
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:02
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:03
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:04
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:05
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:06
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:07
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:08
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:09
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:0A
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:0B
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:0C
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:0D
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:0E
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:0F
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:10
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:11
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:12
DS8000:BOX:2107.04131 DS8000:2107.04131:LSS:14
```

lsmc

Use the **lsmc** command to display a summary of management consoles and settings.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Displays default information for each management console, including the ID and local server connection.

-l Displays detailed information for each management console, including:

Column label	Details
Management console ID	The ID of the management console.
Management console IP	The cluster 0 IP address or domain.
Local Server Connection	The connection status of the management console to the local server.
Location	The associated location of the management console or `None`.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify **-fmt delim -delim** *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following **-fmt** parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-devtype ds | ds8000
Displays information for the specified device type. You can specify one of these values:

ds - any DS device

ds8000 - only DS8000 devices

id... **|** **-**
Displays only the threshold settings for one or more specified management console IDs. The management console ID is in the element ID format (for example, HMC:9.11.222.333). Separate multiple IDs with a blank space.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Listing management consoles

The following command lists the management consoles and settings for all DS storage systems.

```
csmcli> lsmc -devtype ds -l
```

The following output is returned:

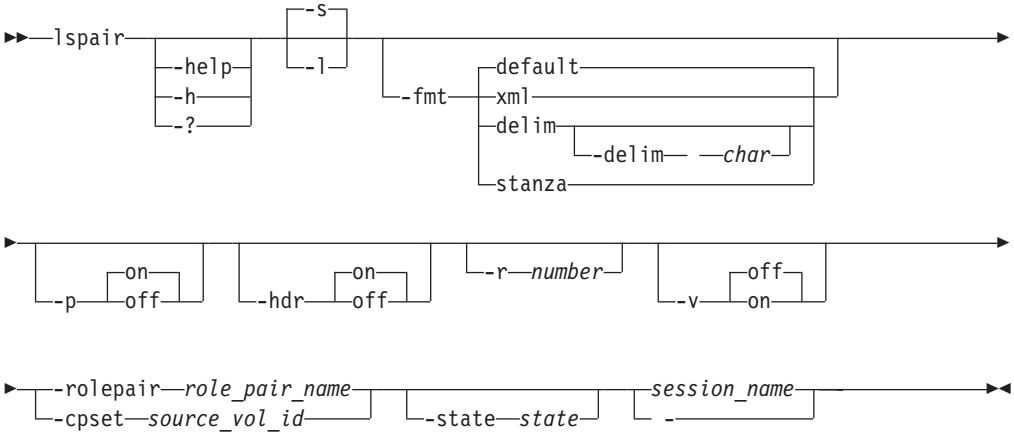
```
MC ID                    HMC:2002:90B:E006:222:9:11:223:2
MC IP address            2002:90b:e006:222:9:11:223:2
Local Server Connection  Connected
Location                 tucson
```

lspair

Use the **lspair** command to list the copy pairs for a specified role pair or to list the copy pairs for a specified copy set.

Important: The **lspair** command is not used for IBM XIV Storage System Snapshot sessions because copy pairs do not exist in this session type.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Specifies that default information for each copy pair is displayed. The default information is the source and target volumes in the pair and the role pair.

-l Displays detailed information for each copy pair, including:

Column Label	Details
Source Volume	The ID of the source volume in the copy pair.
Target Volume	The ID of the target volume in the copy pair.
Role Pair	The associated role pair for the copy pair. See the **-rolepair** for sample role pair values.

State	The state of the copy pair. The valid values include:
	`Defined`
	`Preparing`
	`Prepared`
	`TargetAvailable`
	`Suspended`
	`SuspendedInconsistent`

Column Label	Details
Recoverable	Specifies `Yes` or `No` to indicate if the copy pair is recoverable.
Copying	Specifies `Yes` or `No` to indicate if the copy pair is in the process of copying data.
Progress	The overall copy progress that is associated with the copy pair (if applicable).
New	Specifies `Yes` or `No` to indicate if the copy pair is a new pair.
Copy Set	The host site 1 volume ID of the copy set with which the copy pair is associated.
Timestamp	The date and time that the copy pair was suspended (if applicable).
Last Result	The last message that was issued for the copy pair. If message ends in `E` or `W`, the copy pair is an exception pair.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-rolepair *role_pair_name*
Specifies that only copy pairs that are associated with the specified role pair name are displayed. Role pair names are defined by the **lsrolepairs** command.

The following list provides sample role-pair names:
- h1-h2
- h1-h3
- h1-i1
- h1-i2
- h1-i3
- h1-j2
- h1-t1
- h2-i1
- h2-i2
- h2-i3
- h2-j1
- h2-j3
- h3-i3
- i1-j1
- i2-j2
- i3-j3

This parameter is mutually exclusive with the **-cpset** parameter.

-cpset *source_vol_id*
Specifies that only copy pairs that are associated with the specified source volume ID of a copy set are displayed.

This parameter is mutually exclusive with the **-rolepair** parameter.

-state *state*
Specifies that only copy pairs in a specified state are displayed. You can specify one of these states:
- Defined
- Preparing
- Prepared
- TargetAvailable
- Suspended
- SuspendedInconsistent

session_name **|** **-**
Specifies that only copy pairs for the specified session are displayed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Listing all copy pairs for a specific role pair

The following command lists the copy pairs that are associated with role pair h1-h2 in the session session1:

```
csmcli> lspair -rolepair h1-h2 session1
```

The following output is returned:

```
Source Volume               Target Volume               Role Pair
============================================================
DS8000:2107.NK791:VOL:1500  DS8000:2107.MW931:VOL:1500  H1-H2
DS8000:2107.NK791:VOL:1501  DS8000:2107.MW931:VOL:1501  H1-H2
DS8000:2107.NK791:VOL:1502  DS8000:2107.MW931:VOL:1502  H1-H2
DS8000:2107.NK791:VOL:1503  DS8000:2107.MW931:VOL:1503  H1-H2
DS8000:2107.NK791:VOL:1504  DS8000:2107.MW931:VOL:1504  H1-H2
ESS:2105.FCA57:VOL:1500     DS8000:2107.NF111:VOL:1505  H1-H2
ESS:2105.FCA57:VOL:1501     DS8000:2107.NF111:VOL:1506  H1-H2
ESS:2105.FCA57:VOL:1502     DS8000:2107.NF111:VOL:1507  H1-H2
ESS:2105.FCA57:VOL:1503     DS8000:2107.NF111:VOL:1508  H1-H2
ESS:2105.FCA57:VOL:1504     DS8000:2107.NF111:VOL:1509  H1-H2
```

Listing all copy pairs in a specific state

The following command lists the copy pairs that are associated with role pair h2-i3 in the session session1 and are in the Suspended state:

```
csmcli> lspair -rolepair h2-i3 -state Suspended session1
```

The following output is returned:

```
Source Volume              Target Volume              Role Pair
============================================================
DS8000:2107.MW931:VOL:1500 DS8000:2107.04131:VOL:1505 H2-I3
DS8000:2107.MW931:VOL:1501 DS8000:2107.04131:VOL:1506 H2-I3
DS8000:2107.MW931:VOL:1502 DS8000:2107.04131:VOL:1507 H2-I3
DS8000:2107.MW931:VOL:1503 DS8000:2107.04131:VOL:1508 H2-I3
DS8000:2107.MW931:VOL:1504 DS8000:2107.04131:VOL:1509 H2-I3
DS8000:2107.NF111:VOL:1505 DS8000:2107.04131:VOL:1605 H2-I3
DS8000:2107.NF111:VOL:1506 DS8000:2107.04131:VOL:1606 H2-I3
DS8000:2107.NF111:VOL:1507 DS8000:2107.04131:VOL:1607 H2-I3
DS8000:2107.NF111:VOL:1508 DS8000:2107.04131:VOL:1608 H2-I3
DS8000:2107.NF111:VOL:1509 DS8000:2107.04131:VOL:1609 H2-I3
```

Listing detailed information for all copy pairs for a specific copy set

The following command lists detailed information about the copy pairs that are associated with the copy set DS8000:2107.NK791:VOL:1500 in the session session1. The **-fmt stanza** parameter specifies that the output is displayed as one keyword-value pair per line.

```
csmcli> lspair -l -fmt stanza -cpset DS8000:2107.NK791:VOL:1500 session1
```

The following output is returned:

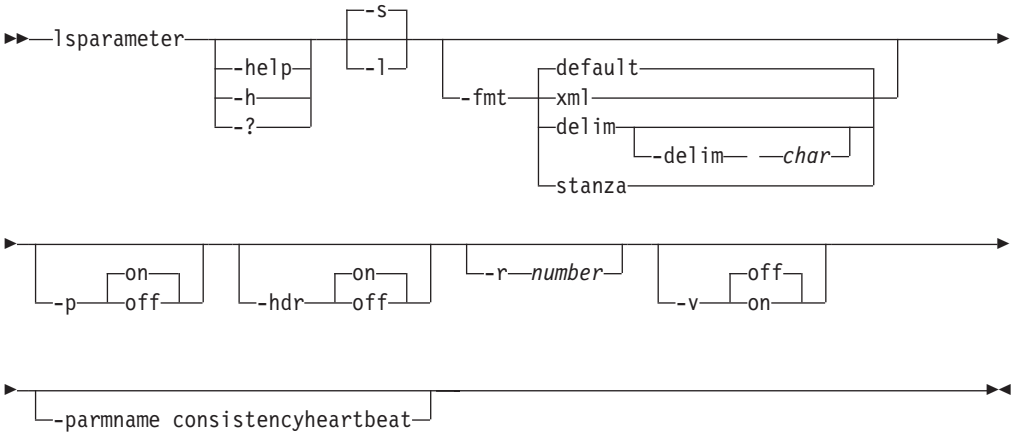
```
Source Volume DS8000:2107.04131:VOL:1500
Target Volume DS8000:2107.04131:VOL:1505
Role Pair     H3-I3
State         Defined
Recoverable   No
Copying       No
Progress      -
New           Yes
Copy Set      DS8000:2107.NK791:VOL:1500
Timestamp     n/a
Last Result   IWNR2024I

Source Volume DS8000:2107.04131:VOL:1505
Target Volume DS8000:2107.04131:VOL:150A
```

```
Role Pair     I3-J3
State         Defined
Recoverable   No
Copying       No
Progress      -
New           Yes
Copy Set      DS8000:2107.NK791:VOL:1500
Timestamp     n/a
Press Enter To Continue...

Last Result   IWNR2013I

Source Volume DS8000:2107.MW931:VOL:1500
Target Volume DS8000:2107.04131:VOL:150A
Role Pair     H2-J3
State         Defined
Recoverable   No
Copying       No
Progress      -
New           Yes
Copy Set      DS8000:2107.NK791:VOL:1500
Timestamp     n/a
Last Result   IWNR2024I

...
```

lsparameter

Use the **lsparameter** command to list Metro Mirror heartbeat setting.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information for each system parameter, including the parameter name and value.

-l Displays detailed information for each system parameter, including:

Column label	Details
Parameter Name	Value of the system parameter
Value	The value of the system parameter (for example, `Yes` or `No`).
Parm Name	Name of the system parameter

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-parmname consistencyheartbeat
Displays whether the Metro Mirror heartbeat is enabled (on) or disabled (off).

Example

1. **Listing all parameters**

   The following command lists detailed information about all parameters.

   Note: Only the heartbeat setting is currently supported and returned by this command.

   ```
   csmcli> lsparameter -l
   ```

   The following output is returned:

   ```
   Parameter Name                 Value Parm Name
   ========================================================
   The heartbeat function is set  on    consistencyheartbeat
   ```

2. **Displaying the Metro Mirror heartbeat setting**

   The following command displays the current setting for the Metro Mirror heartbeat.

   ```
   csmcli> lsparameter -parmname consistencyheartbeat
   ```

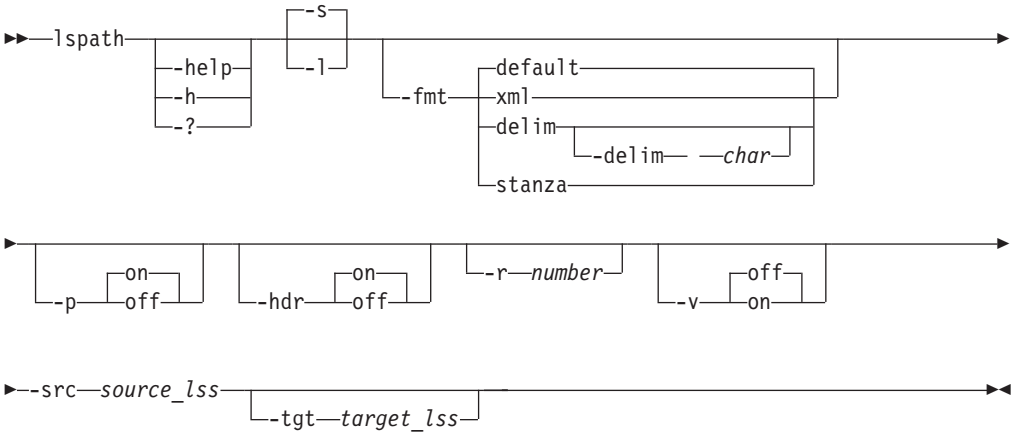
   The following output is returned:

   ```
   Parameter Name                 Value
   ==================================
   The heartbeat function is set  on
   ```

lspath

Use the **lspath** command to display paths between ESS and DS devices. You can then use this information for a remote copy.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information for each path, including the source and target LSS, path type, status, and whether the path was auto-generated.

-l Displays detailed information for each path, including:

Column label	Details
Source	Origin of the path. For ESS, this is an LSS. See the **mkpath** command for the format of this field.
Target	Target of the path. For ESS this is an LSS. See the **mkpath** command for the format of this field.
Type	ESCON (ESS or DS only) or Fibre Channel.
Status	Whether the path is currently established or not.
Auto-Generated	Yes, if the path was generated by the IBM Tivoli Storage Productivity Center for Replication component. No, if you specified the path.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-src *source_lss*
Specifies the source LSS. This must be specified in the format *type.serial.lss(hex).port(hex)* (for example, `ESS:2105.FCA18:LSS:10.00FF`).

-tgt *target_lss*
Specifies the target LSS. This must be specified in the format type.serial.lss(hex).port(hex) (for example, `ESS:2105.FCA18:LSS:10.00FF`).

Example

1. **Listing all paths with the same source LSS**

   The following command lists all paths that use source LSS `DS8000:2107.04131:LSS:15`.

   ```
   csmcli> lspath -src DS8000:2107.04131:LSS:15
   ```

   The following output is returned:

   ```
   Source                          Target                          Type
   ================================================================================
   DS8000:2107.04131:LSS:15.0x0330 DS8000:2107.NF111:LSS:15.0x0030 Fibre Channel
   DS8000:2107.04131:LSS:15.0x0110 ESS:2105.FCA57:LSS:15.0x000C    Fibre Channel
   DS8000:2107.04131:LSS:15.0x0110 DS8000:2107.NK791:LSS:15.0x0032 Fibre Channel

   Status      Auto-Generated
   ==========================
   Established Yes
   Established Yes
   Established Yes
   ```

2. **Listing information about a specific path**

   The following command lists information about the path with source LSS `DS8000:2107.04131:LSS:15`.

   ```
   csmcli> lspath -src DS8000:2107.04131:LSS:15 -tgt ESS:2105.FCA57:LSS:15
   ```

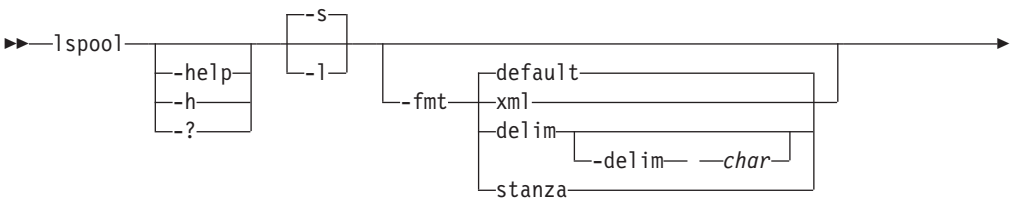
   The following output is returned:

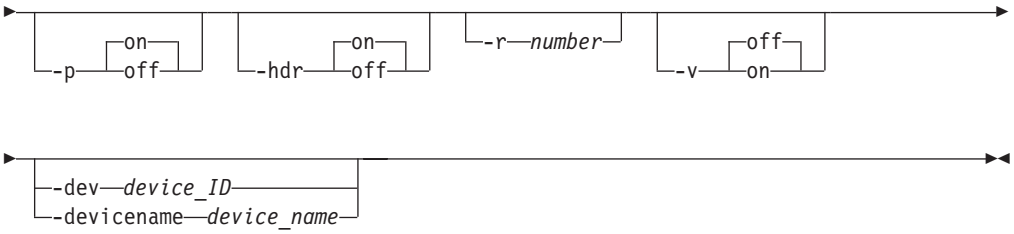
   ```
   Source                          Target                        Type
   ==============================================================================
   DS8000:2107.04131:LSS:15.0x0110 ESS:2105.FCA57:LSS:15.0x000C Fibre Channel

   Status      Auto-Generated
   ==========================
   Established Yes
   ```

lspool

Use the **lspool** to list pools that are on XIV systems.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s | -l
Displays the following information:

Column Label	Details
Device Name	The name of the XIV system that contains the pools.
Device ID	The ID of the XIV system that contains the pools.
Pool Name	The name of the pool.
Pool ID	The ID for the pool.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-dev *device_ID* **and -devicename** *device_name*
Both of these parameters specify that only pools on a specific storage system are displayed. The **-dev** parameter specifies that the storage system is determined by the ID for the system. The **-devicename** parameter specifies that the storage system is determined by the name of the storage system.

The **-dev** and **-devicename** parameters are mutually exclusive.

If the **-dev** or **-devicename** parameter is not provided, the output shows the pools for all XIV systems.

Examples

Listing pools on all XIV systems

The following command lists the pools that are on all XIV systems.

```
csmcli> lspool -l
```

The following output is returned:

```
Device Name         Device ID             Pool Name       Pool ID
================================================================================
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool1     XIV:POOL:1300202:100929
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool2     XIV:POOL:1300202:100930
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool3     XIV:POOL:1300202:100931
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool4     XIV:POOL:1300202:112412
XIV_B               XIV:BOX:1566078       healthcare      XIV:POOL:1566078:436473
XIV_B               XIV:BOX:1566078       mysnappool1     XIV:POOL:1566078:436474
XIV_B               XIV:BOX:1566078       yogapool        XIV:POOL:1566078:436475
```

Listing pools on a specific XIV system by storage system ID

The following command lists the pools that are on the XIV system with the ID XIV:BOX:1300202.

```
csmcli> lspool -dev XIV:BOX:1300202 -l
```

The following output is returned:

```
Device Name         Device ID             Pool Name       Pool ID
================================================================================
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool1     XIV:POOL:1300202:100929
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool2     XIV:POOL:1300202:100930
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool3     XIV:POOL:1300202:100931
XIV 1300202 Troy    XIV:BOX:1300202       mysnappool4     XIV:POOL:1300202:112412
```

Listing pools on a specific XIV system by storage system name

The following command lists the pools that are on the XIV system that is named XIV:BOX:1300202 Troy.

```
csmcli> lspool -devicename 'XIV:BOX:1300202 Troy'
```

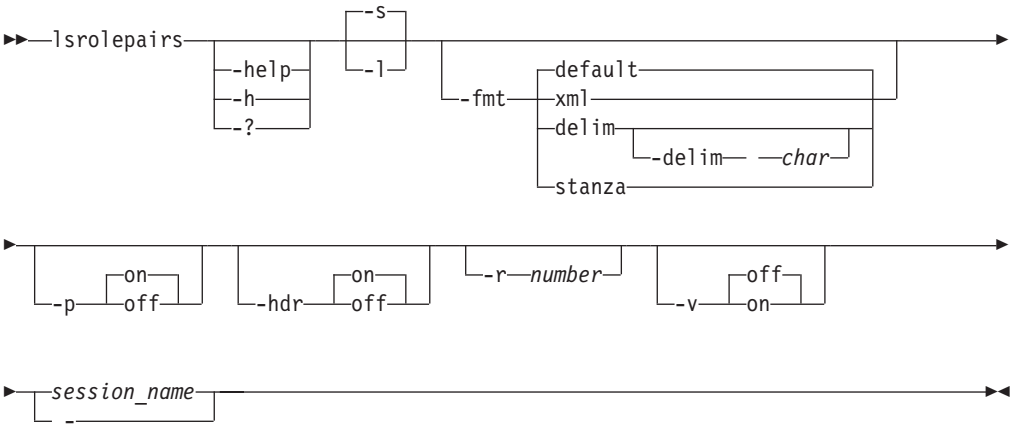
The following output is returned:

```
Device Name         Device ID            Pool Name       Pool ID
================================================================================
XIV 1300202 Troy    XIV:BOX:1300202      mysnappool1     XIV:POOL:1300202:100929
XIV 1300202 Troy    XIV:BOX:1300202      mysnappool2     XIV:POOL:1300202:100930
XIV 1300202 Troy    XIV:BOX:1300202      mysnappool3     XIV:POOL:1300202:100931
XIV 1300202 Troy    XIV:BOX:1300202      mysnappool4     XIV:POOL:1300202:112412
```

lsrolepairs

Use the **lsrolepairs** command to display role pairs in a session.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information for each role pair, including the role name, session (copy) type, and whether the role pair is recovery, has errors, and is in processes of copying data.

-l Displays detailed information for each role pair, including:

Column label	Details
Name	System-generated text string used to identify a role pair. The value listed here is what is to be entered on the **lspair** command.
Recoverable	An indicator of whether the role pair is recoverable. Value values are Yes or No.
Error	An indicator of whether the role pair has errors. Value values are Yes or No.

Column label	Details
Copying	An indicator of the role pair is in process of copying data. Value values are `Yes` or `No`.
Progress	The overall copy progress associated with the role pair.
Copy Type	The current session (copy) type of the role pair.
Error Volumes	Total number of volumes in an exception state.
Recoverable pairs	Number of recoverable pairs
Copying Pairs	Number of copying pairs
Total Pairs	Total number of pairs
Recovery Time	An indicator of the time to which the session is recoverable. Includes both date and time. For point-in-time copy, this is the time that the copy was taken. For continuous synchronous remote copy, this is the time at which the **Freeze** and **Run** commands were issued. This field is blank if Recoverable is set to `No`.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

session_name **|** **-**
Specifies the session name for which you display the role pairs.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Description

To see volumes in a copy set, use the **showcpset** command.

To see status of volumes in a copy set, use the **lsvol** command.

Example

1. **Listing role pairs in a session**

   The following command lists information about the role pairs in the session session1.

   ```
   csmcli> lsrolepairs session1
   ```

   The following output is returned:

   ```
   Name  Recoverable Error Copying Copy Type
   ========================================
   H1-H2 No          Yes   Yes     MM
   H2-J3 No          No    No      GM
   H1-I3 No          No    No      GC
   I3-J3 No          No    No      FC
   H1-J3 No          No    No      GM
   H3-I3 No          No    No      FC
   H2-I3 No          No    Yes     GC
   H1-H3 No          No    No      GC
   ```

   Listing detailed information for the role pairs in a session

   The following command lists detailed information about the role pairs in the session session1.

   ```
   csmcli> lsrolepairs -fmt stanza -l session1
   ```

   The following output is returned:

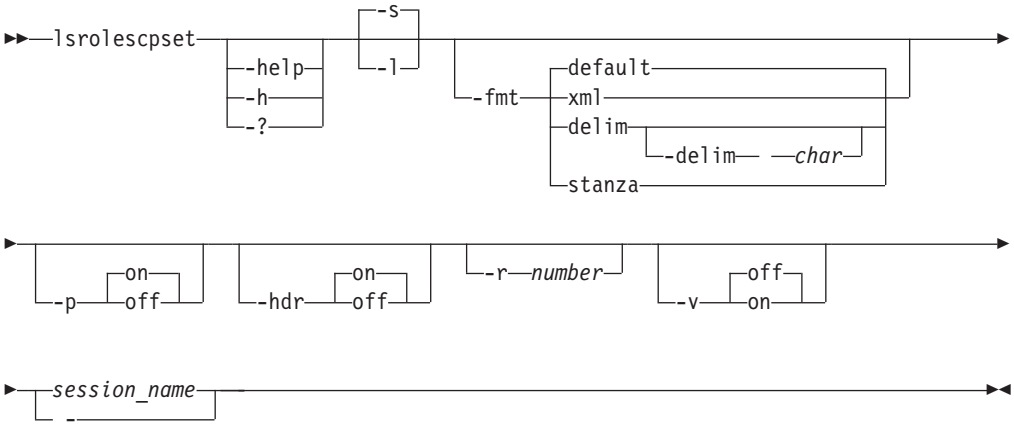
   ```
   Name              H1-H2
   Recoverable       No
   Error             Yes
   Copying           Yes
   Copy Type         MM
   Progress          66
   Error volumes     5
   Recoverable pairs 5
   Copying pairs     5
   Total pairs       10
   Recovery time     n/a

   Name              H2-J3
   Recoverable       No
   ```

```
Error             No
Copying           No
Copy Type         GM
Progress          -
Error volumes     0
Recoverable pairs 0
Copying pairs     0
Total pairs       10
Recovery time     n/a

Name              H1-I3
Recoverable       No
Error             No
Copying           No
Copy Type         GC
Progress          -
Error volumes     0
Recoverable pairs 0
Copying pairs     0
Total pairs       10
Recovery time     n/a

...
```

lsrolescpset

Use the **lsrolescpset** command to list the volume roles in the specified session.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-l | -s
Displays detailed information for each session, including:

Column Label	Details
Name	Short name for the role.
Description	Description of the role.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

session_name **|** **-**
Specifies the session name for which you are going to list the roles of the copy set.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Listing copy set roles

The following command lists the volume roles in session `session1`.

```
csmcli> lsrolescpset session1
```

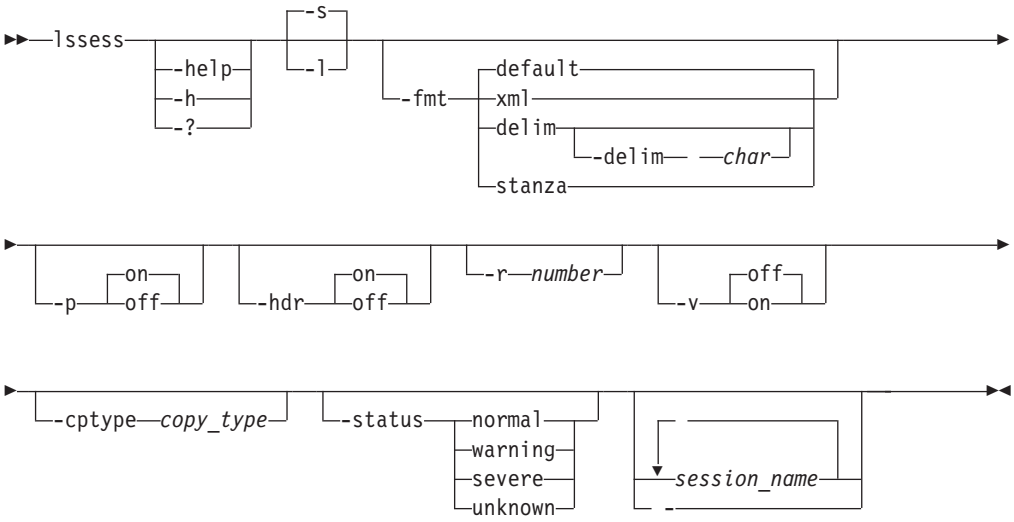
The following output is returned:

```
Name Description
=========================
H1   Host on Site1
H2   Host on Site2
H3   Host on Site3
I3   Intermediate on Site3
J3   Journal on Site3
```

lssess

Use the **lssess** command to display sessions and their status.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information for each session, including the session name, status, state, and session (copy) type.

-l
Displays detailed information for each session, including:

Column Label	Details
Name	User-defined name of the session.
Status	Status levels. The status level values are `Normal`, `Warning`, `Severe`, or `Unknown`.

Column Label	Details
State	Session state. The session state values are `Defined`, `Preparing`, `Prepared`, `Suspended`, `TargetAvailable`, or `SuspendedInconsistent`.
Copy Type	Session (copy) type. See the **-cptype** parameter for a list of values.
Recoverable	Specifies whether a session is recoverable. Valid values are `yes` or `no`.
Copying	Specifies whether a copying operation is taking place. Valid values are `yes` or `no`.
Copy Sets	Number of copy sets in the session.
Error	Specifies whether a session has errors. Valid values are `yes` or `no`.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-cptype *copy_type*
Specifies the copy session type. You can specify one of these types:

- **fc**: FlashCopy for IBM TotalStorage Enterprise Storage Server Model 800, IBM System Storage DS8000, System Storage DS6000, IBM System Storage SAN Volume Controller, or IBM Storwize V7000.
- **mmsd**: Metro Mirror Single Direction for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, System Storage DS6000, System Storage SAN Volume Controller, or Storwize V7000.
- **mmfofb**: Metro Mirror Failover/Failback for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, System Storage DS6000, System Storage SAN Volume Controller, or Storwize V7000.
- **pmm**: Practice Session for Metro Mirror Failover/Failback for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, or System Storage DS6000.
- **pmmsvc**: Metro Mirror Failover/Failback with Practice for System Storage SAN Volume Controller or Storwize V7000.
- **gmsd**: Global Mirror Single Direction for TotalStorage Enterprise Storage Server Model 800,System Storage DS8000, or System Storage DS6000.
- **gmsdsvc**: Global Mirror Single Direction for System Storage SAN Volume Controller or Storwize V7000.
- **gmfofb**: Global Mirror Failover/Failback for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, or System Storage DS6000.
- **gmfofbsvc**: Global Mirror Failover/Failback for System Storage SAN Volume Controller or Storwize V7000.
- **hs**: Basic HyperSwap for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, or System Storage DS6000.
- **pgm**: Global Mirror Failover/Failback with Practice for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, or System Storage DS6000.
- **pgmsvc**: Global Mirror Failover/Failback with Practice for System Storage SAN Volume Controller or Storwize V7000.
- **pgm2s**: Global Mirror Either Direction with Two Site Practice for TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, or System Storage DS6000.
- **mgm**: Metro Global Mirror for TotalStorage Enterprise Storage Server Model 800 or System Storage DS8000.
- **pmgm**: Metro Global Mirror with Practice for TotalStorage Enterprise Storage Server Model 800 or System Storage DS8000.
- **snap**: XIV snapshot sessions for IBM XIV Storage System.

-status normal | warning | severe | unknown
Specifies that only sessions with the specified status of normal, warning, severe, or unknown are displayed.

session_name... **|** **-**
Specifies that only sessions with a specified session name are displayed. Separate multiple session names with a space between each name. All sessions are displayed by default.

Alternatively, use a dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

1. **Listing all sessions**

   The following command lists information about all defined sessions.

   ```
   csmcli> lssess
   ```

   The following output is returned:

   ```
   Name       Status  State              Copy Type
   ================================================================
   session1   Normal  Target Available   Metro Global Mirror w/ Practice
   ```

2. **Listing sessions with errors**

   The following command lists detailed information about a session named session1.

   ```
   csmcli> lssess -status severe
   ```

   The following output is returned:

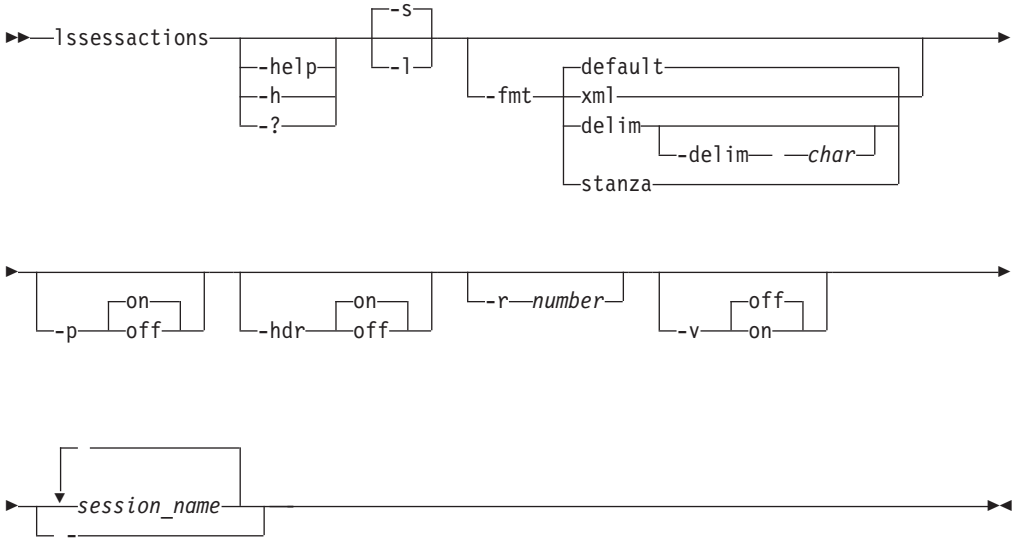
   ```
   Name      Status  State      Copy Type
   ==========================================================
   session1  Severe  Preparing  Metro Global Mirror w/ Practice
   ```

lssessactions

Use the **lssessactions** command to list all the session actions (commands) that can be run for a session.

Tip: To run an action for a session, use the **cmdsess** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s | -l
Specifies that the following information is displayed for each session:

Column Label	Details
Action	Name of the session action (command) that can be run on the session.
Description	The description of the command.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

session_name... **|** **-**

Specifies that only valid actions for the specified session name or names are displayed. Separate multiple session names with a space between each name. If you provide more than one session name, all commands that are valid for the combined sessions are listed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Listing available actions for a session

The following command lists all actions that can be run for the session named `session1`:

```
csmcli> lssessactions session1
```

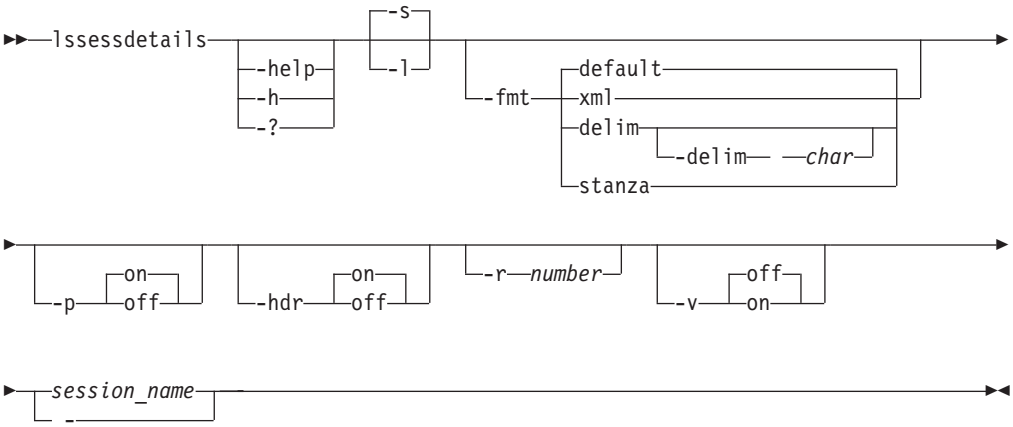
The following output is returned:

```
Action         Description
================================================
start_h1:h3    Start host1 to host3 copying
suspend        Suspend session
start_h1:h2:h3 Start host1 to host2 to host3 copying
terminate      Terminate session
```

lssessdetails

Use the **lssessdetails** command to display the details of a session.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Displays default information for each session, including option names and values.

-l
Displays detailed information for each session, including:

Column label	Details
Option Name	Name of the option that is set for this session.
Value	Value of the detail that is set for this session.
Description	Description of the session option.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

session_name **|** **-**
Lists the details that are relevant to the specified session.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Listing detailed information about a session

The following command lists detailed information about a Metro Global Mirror with Practice session named `session1`.

```
csmcli> lssessdetails -l session1
```

The following output is returned:

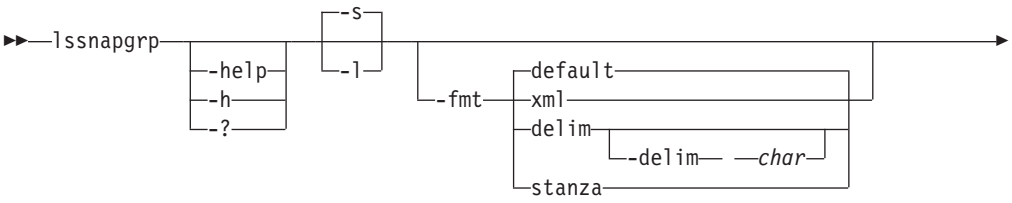
```
Option name             Value          Description
================================================================================
aftersuspend            Release     Policy for I/O after suspend
maxdrain_h1j3           30          Maximum consistency group drain time for the H1-J3
                                      role pair
dsRPOwarning_h1j3       1           Warning level threshold in seconds for the  H1-J3
                                      role pair
maxdrain_h2j3           30          Maximum consistency group drain time for the H2-J3
                                      role pair
dsRPOwarning_h2j3       1           Warning level threshold in seconds for the H2-J3
                                      role pair
rpo_h2j3                0           Recovery point objective in seconds for the H2-J3
                                      role pair
rpo_h1j3                0           Recovery point objective in seconds for the H1-J3
                                      role pair
dsnocpy                 No          No copying of the volume
enableHardenedFreeze    No          Policy for whether to use z/OS hardened freeze
dsRPOsevere_h1j3        2           Severe level threshold in seconds for the H1-J3
                                      role pair
dsRPOsevere_h2j3        2           Severe level threshold in seconds for the H2-J3
                                      role pair
rmreserves              No          Remove secondary reserves
coordint_h1j3           50          Extended distance copy coordination interval for
                                      the H1-J3 role pair
coordint_h2j3           50          Extended distance copy coordination interval for
                                      the H2-J3 role pair
failIfTgtOnline         No          Fail MM/GC if the target is online (CKD only)
```

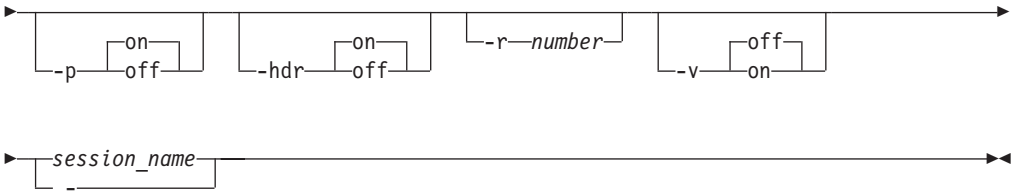
lssnapgrp

Use the **lssnapgrp** command to view snapshot groups that are in an IBM XIV Storage System Snapshot session.

A snapshot group is a grouping of snapshots of individual volumes in a consistency group at a specific point in time.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Specifies that default information for each snapshot group is displayed. The default information is the name of the snapshot group and the date and time that the group was created.

-l
Specifies that detailed information for each snapshot group is displayed, including:

Column Label	Details
Name	The name of the snapshot group.
Timestamp	The date and time that the snapshot group was created.
Deletion Priority	The priority in which the snapshot group will be deleted from the session. The value is the number 1 - 4. A value of 1 specifies that the snapshot group is deleted last. A value of 4 specifies that the snapshot group is deleted first. Multiple snapshot groups might exist until XIV system identifies that there is not enough space in the storage pool to keep all of the snapshots.
Restore Master	Specifies whether the snapshot group listed can be used to restore the master volumes of the session. Values for this are `Yes` and `No`.
Locked	Specifies whether the snapshot group is currently locked. If the snapshot group is locked, write operations to the snapshots within the snapshot group are prevented.
Modified	Specifies whether the snapshot group has been modified. A snapshot group is marked as modified when it is unlocked for the first time.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

session_name **|** **-**
Specifies the name of the Snapshot session.

Alternatively, use a dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Listing all snapshot groups that are in a session

The following command lists all snapshot groups that are in the session snap6:

```
csmcli> lssnapgrp snap6
```

The following output is returned:

```
Name                    Timestamp
================================================
snap6.snap_group_00001 2011-04-01 00:04:49.000-0500
```

Listing detailed information about the snapshot groups that are in a session

The following command lists detailed information about the snapshot groups that are in the session snap6:

```
csmcli> lssnapgrp -l snap6
```

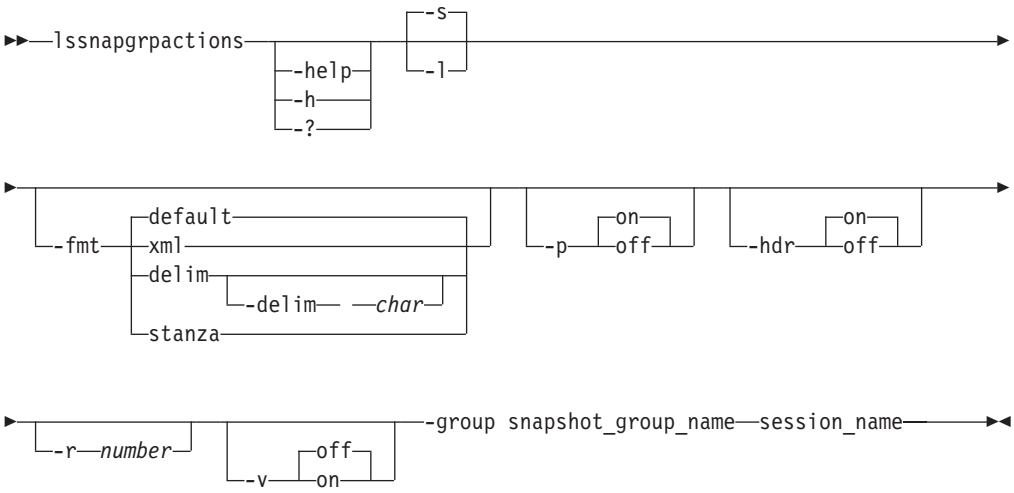
The following output is returned:

```
Name                    Timestamp                    Deletion Priority Restore Master
================================================================================================
snap6.snap_group_00001 2011-07-18 15:22:14.000-0700                 1 No
snap6.snap_group_00002 2011-07-18 15:22:41.000-0700                 1 Yes

Locked Modified
===============
Yes    No
Yes    No
```

lssnapgrpactions

Use the **lssnapgrpactions** command to specify the session and snapshot group name that you want to view available actions for.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s | -l

-s Specifies the default output which is action name and description.

-l Specifies the detailed output. In this case, specifies the same output as the **-s** parameter.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-group snapshot_group_name
Specifies the name of the snapshot group to list snapshot group actions for.

session_name | -
Specifies the session for which the properties are to be displayed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Specifying the session and snapshot group name

The following command specifies the session and snapshot group name that you want to view available actions for.

```
csmcli> lssnapgrpactions -group MySnapSession.snap_group_0001  MySnapSession
```

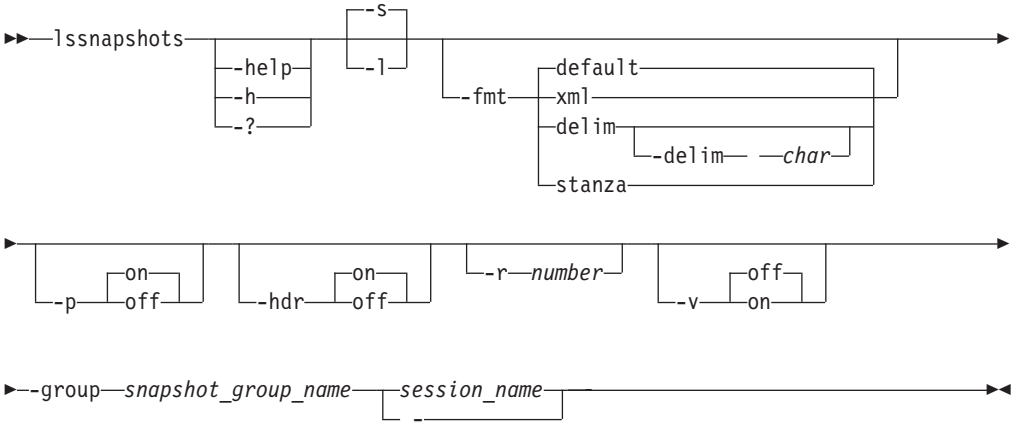
The following output is returned:

```
Action              Description
============================================================
delete              Deletes a snapshot group
disband             Disbands a snapshot group
duplicate           Duplicates a snapshot group
lock                Locks a snapshot group
restore             Restores a snapshot group from another snapshot group
set_priority        Sets the deletion priority for a snapshot group
```

lssnapshots

Use the **lssnapshots** command to view snapshots that are in a snapshot group in a IBM XIV Storage System Snapshot session.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s
Specifies that default information for each snapshot in the snapshot group is displayed. The default information is the name of the snapshot.

-l
Specifies that detailed information for each snapshot in the snapshot group is displayed, including:

Column Label	Details
Name	The name of the snapshot.
H1 Volume ID	The ID of the H1 volume that is associated with the snapshot.

Column Label	Details
Size	The size of the H1 volume at the time that the snapshot was created.
Size Unit	The unit of measure for the size of the H1 volume at the time that the snapshot was created.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of `1 - 100`. The default value is `22`.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-group *snapshot_group_name*
Specifies the name of the snapshot group that contains the snapshots.

session_name | **-**
Specifies the name of the Snapshot session that contains the snapshot group.

Alternatively, use a dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Listing all snapshots that are in a snapshot group in a session

The following command lists all snapshots that are in the snapshot group `snap6.snap_group_00001` for session `snap6`:

```
csmcli> lssnapshots -group snap6.snap_group_00001 snap6
```

The following output is returned:

```
Name
================================================
snap6.snap_group_00001_vol1
snap6.snap_group_00001_vol2
```

Listing detailed information about the snapshots that are in a snapshot group in a session

The following command lists detailed information about the snapshots that are in snapshot group in the session `snap6`:

```
csmcli> lssnapshots -group snap6.snap_group_00001 -l snap6
```

The following output is returned:

```
Name                         H1 Volume ID             Size     Size Unit
=============================================================================
snap6.snap_group_00001_vol1 XIV:VOL:7803307:115017   16.0     GiB
snap6.snap_group_00001_vol2 XIV:VOL:7803307:115018   16.0     GiB
```

lssnmp

Use the **lssnmp** command to list the SNMP managers to which IBM Tivoli Storage Productivity Center for Replication is configured to send SNMP alerts.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

Description

The information displayed is either the domain name or the IP address of the server, depending on how you specified it.

SNMP traps are not specific to any particular session. All traps for any session are sent to each server.

For each SNMP manager, the following information is displayed:

Column label	Details
SNMP Manager	Domain name or IP address of the management server to which SNMP traps are sent
Port	The specific UDP port to which SNMP traps are sent

Example

Listing SNMP managers

The following command list the SNMP managers.

```
csmcli> lssnmp
```

The following output is returned:

```
SNMP Manager Port
=================
9.11.10.1     162
127.0.0.1     163
```

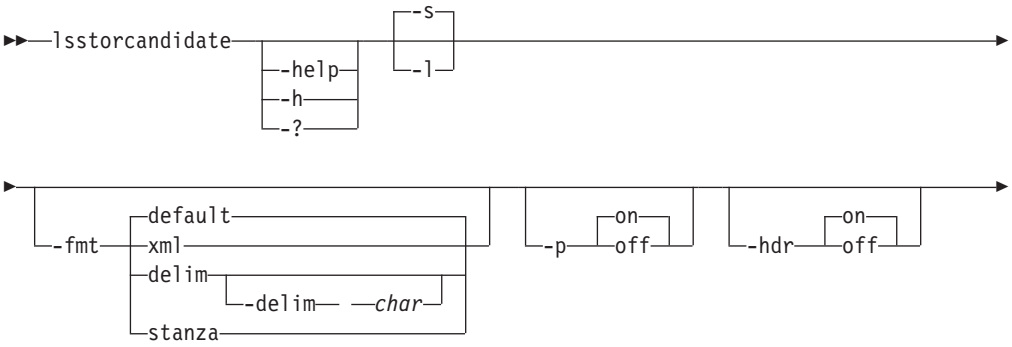
lsstorcandidate

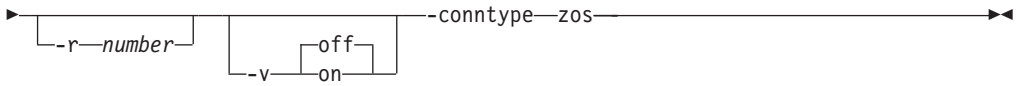
Use the **lsstorcandidate** command to list the storage systems that can be discovered through an IBM z/OS connection. This command does not list storage systems that are already added to the IBM Tivoli Storage Productivity Center for Replication configuration.

To list storage systems that are already in the Tivoli Storage Productivity Center for Replication configuration, use the **lsdevice** command.

You can run the **lsstorcandidate** command only from a Tivoli Storage Productivity Center for Replication server that is installed on a system that is running z/OS.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s | -l
Specifies that the following information is displayed for each storage system:

Column Label	Details
Device ID	The storage system ID.
Manufacturer	The manufacturer of the storage system.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-conntype zos
Specifies the type of connection that the storage systems use. Currently, you can specify only zos for a z/OS connection.

Example

Listing candidate storage systems

The following command lists candidate storage systems:

```
csmcli> lsstorcandidate -conntype zos
```

The following output is returned:

```
Device ID              Manufacturer
==================================
ESS:BOX:2105.12345     IBM
```

lsvol

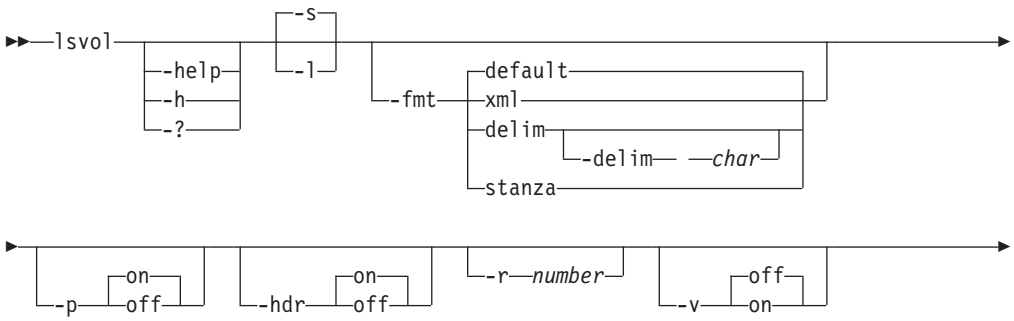
Use the **lsvol** command to display detailed information about volumes.

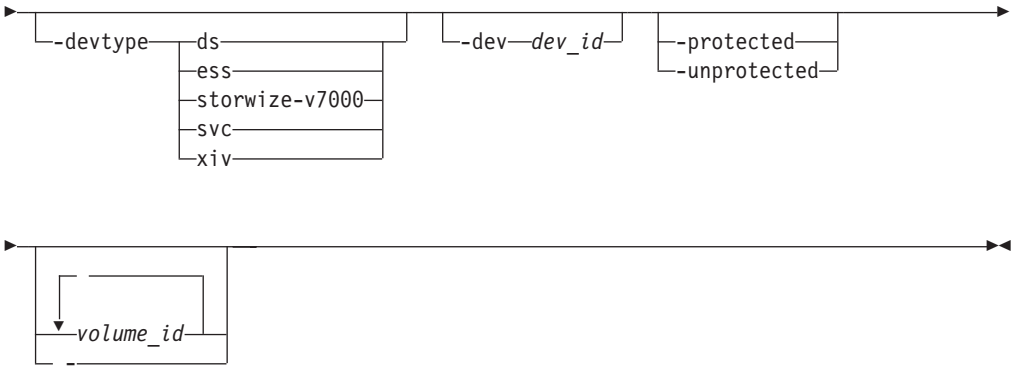
You can use the **lsvol** command to:

- Choose available volumes for copy sets
- View properties of volumes (such as capacity, type, and whether a volume is space efficient or protected)

Important: If you issue the **lsvol** command without adding parameters, a list of all the volumes for all storage systems is displayed. The processing of the command can take minutes or hours depending on the size of your environment. You press Enter to continue listing the output or press Ctrl+C to discontinue listing the output.

Syntax





Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information for each volume, including the name, ID, device, manufacturer, volume type, and whether the volume is protected and space efficient.

-l Displays detailed information for each volume, including:

Column Label	Details
Name	Volume name
ID	Volume ID
Device	The ID of the storage system
Manufacturer	The manufacturer of the storage system. Currently, only IBM storage systems are supported.
Type	The values CKD or FB. The value is always FB for the following storage systems: • IBM System Storage SAN Volume Controller • IBM Storwize V7000 • Storwize V7000 Unified • IBM XIV Storage System
Protected	`Yes` if the volume is protected; `No` if the volume is not protected.
Space Efficient	Yes, if the volume is a space efficient volume. No, if the volume is not a space efficient volume.
Format	Volume format

Column Label	Details
LSS/IO Group/Pool	For the following storage system volumes, this column displays the logical subsystem (LSS): • IBM TotalStorage Enterprise Storage Server Model 800 • IBM System Storage DS8000 • System Storage DS6000 For the following storage system volumes, this column displays the IO group: • SAN Volume Controller • Storwize V7000 • Storwize V7000 Unified For XIV system volumes, this column displays the pool.
Size	Volume size
Size Unit	The unit of measure that the capacity is given in, either gigabytes or cylinders.
Is Z Attached	Identifies whether the volumes are connected through an IBM z/OS connection.
Locked	Indicates whether the volume is locked. Applies only to XIV system.

-fmt { default | xml | delim | stanza }
Specifies the format of the output. You can specify one of these values:

default
Specifies that the output is displayed in tabular format using spaces as delimiters between columns. This is the default value.

xml Specifies that the output is displayed in XML format.

delim Specifies that output is displayed in a tabular format using commas as delimiters between columns.

To use a character other than a comma as the delimiter, specify `-fmt delim -delim` *char* , where *char* represents the character that you want to use as the delimiter. For example, if you want to use a colon (:) as the delimiter, use the following `-fmt` parameter:

```
-fmt delim -delim :
```

If you use a shell metacharacter as the delimiting character, enclose the character in quotation marks or single quotation marks. A blank space is not a valid character.

stanza Specifies that the output is displayed as one keyword-value pair per line.

-p { on | off }
Specifies whether to display one page of text at a time or all text at once.

on Displays one page of text at a time. Pressing any key displays the next page. This is the default value when the command is run in interactive mode.

off Displays all text at once. This is the default value when the command is run in single-shot mode.

-hdr { on | off }
Specifies whether to display the table header. You can specify one of these values:

on Displays the table header. This is the default value.

off Hides the table header.

-r *number*
Specifies the number of rows per page to display when the **-p** parameter is specified. You can specify a value of 1 - 100. The default value is 22.

-v { on | off }
Specifies whether to enable verbose mode. You can specify one of these values:

on Enable verbose mode.

off Disable verbose mode. This is the default value.

-devtype { ds | ess | storwize-v7000 | svc | xiv }
Specifies volumes by storage system type. Supported storage systems are:

- **ds**: DS series storage systems
- **ess**: TotalStorage Enterprise Storage Server
- **storwize-v7000**: Storwize V7000 and IBM Storwize V7000 Unified
- **svc**: SAN Volume Controller
- **xiv**: XIV system

-dev *dev_ id*
Specifies volumes by storage system ID.

-protected
Specifies that only protected volumes, or volumes that cannot be used in an add copy set action, are shown.

-unprotected
Specifies that only unprotected volumes, or volumes that can be used in an add copy set action, are shown.

volume_id... **|** **-**
Specifies the volume ID for a volume. Volume data is listed for this volume. The same volume can reside in multiple groups but not multiple pools.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

- **Listing volumes for a storage system**

  The following command lists information about all volumes in the storage system with ID DS8000:BOX:2107.02191.

  ```
  csmcli> lsvol -devtype ds -dev DS8000:BOX:2107.02191
  ```

  The following output is returned:

  ```
  Name    ID                          Device     Manufacturer Type     Protected Space Efficient
  ==========================================================================================
  8K410F  DS8000:2107.02191:VOL:010F 2107-02191 IBM          CKD      No        No
  8K410E  DS8000:2107.02191:VOL:010E 2107-02191 IBM          CKD      No        No
  8K410D  DS8000:2107.02191:VOL:010D 2107-02191 IBM          CKD      No        No
  ```

- **Listing protected volumes**

  The following command lists information about all protected volumes.

  ```
  csmcli> lsvol -protected
  ```

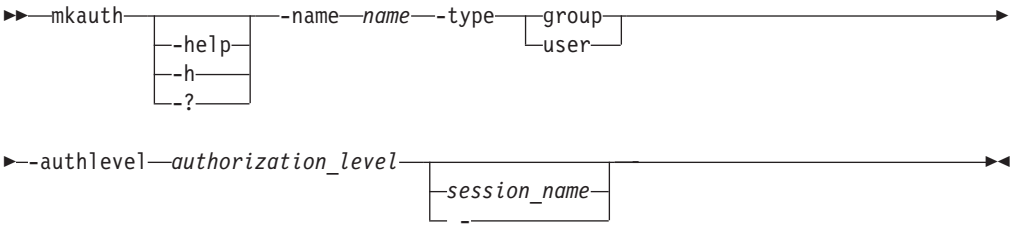
  The following output is returned:

```
Name    ID                          Device     Manufacturer Type     Protected Space Efficient
=============================================================================================
8K9005  DS8000:2107.LT742:VOL:0005 2107-LT742 IBM          CKD      Yes       No
8K9004  DS8000:2107.LT742:VOL:0004 2107-LT742 IBM          CKD      Yes       No
8K9003  DS8000:2107.LT742:VOL:0003 2107-LT742 IBM          CKD      Yes       No
```

mkauth

Use the **mkauth** command to grant monitor, administrator, or operator authorization to a user.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-name *name*
Specifies a user ID or group name to which you grant authorization.

-type group | user
Specifies whether the name is of a group or user.

-authlevel *authorization_level*
Specifies the authorization level: `admin`, `operator`, or `monitor`.

session_name **|** **-**
Use this optional parameter when you are assigning operator authorization to a user and want to specify one or more sessions to which the operator has access. This parameter does not apply to monitors or administrators.

If no session name is specified, all sessions are used by default, unless another filter is used. If you specify **-authlevel operator** but do not specify a session name, the user is not granted operator status to any of the existing sessions but is granted permission to create new sessions.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). You can specify multiple session names from **stdin** when the dash (-) is specified. The dash is supported only in single-shot mode.

Example

1. **Adding a group with monitor privileges**

   The following command grants administrator authorization to the user named `MDMSUID`.

   ```
   csmcli> mkauth -name Guests -type group -authlevel monitor
   ```

   The following output is returned:

   ```
   IWNR4018I  Successfully granted the monitor role to Guests.
   ```

2. **Adding a user with operator privileges**

   The following command grants administrator authorization to the user named MDMSUID.

   ```
   csmcli> mkauth -name csmuser -type user -authlevel operator session1
   ```

   The following output is returned:

   ```
   IWNR4016I  Successfully granted the session operator role to csmuser.
   ```

3. **Adding the Superuser group**

   The following command adds the IBM Tivoli Storage Productivity Center Superuser group to the Administrator role.

   ```
   csmcli> mkauth -name Superuser -type group -authlevel admin
   ```

   The following output is returned:

   ```
   IWNR4017I  Successfully granted the administrator role to Superuser.
   ```

mkbackup

Use the **mkbackup** command to create a backup of IBM Tivoli Storage Productivity Center for Replication configuration data (including storage systems, sessions, and copy sets) in the zero-administration embedded repository.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

Description

Prerequisites:

- You must have Administrator privileges to run this command.
- This procedure applies to only the zero-administration embedded repository. This procedure *is not* applicable when DB2® is being used as the persistent datastore for the IBM Tivoli Storage Productivity Center for Replication database. For information about restoring your DB2 environment, refer to your DB2 documentation.
- The user ID that was used to create the backup file must exist on the management server that is being restored.

By default, the backup file is stored in the *tpcr_production_root*/database/backup directory. You can change the default location by editing the **db.backup.location** property in the rmserver.properties file, which is located in the *WAS_HOME*/profiles/default/properties directory.

You can use the backup file to restore the zero-administration embedded repository on the same management server or on another management server running on the same operating system platform. You *cannot* use the backup file to restore the zero-administration embedded repository on a management server running a

different operating system platform or a management server that uses the DB2 database.

Example

Back up configuration data

The following command backs up the Tivoli Storage Productivity Center for Replication configuration data on the IBM z/OS operating system:

```
csmcli> mkbackup
```

The following output is returned:

```
IWNR1905I Backup of internal data store completed successfully. The
following file was created: /opt/Tivoli/RM/database/backup/
tpcrBackup_20120825_120138984.zip
```

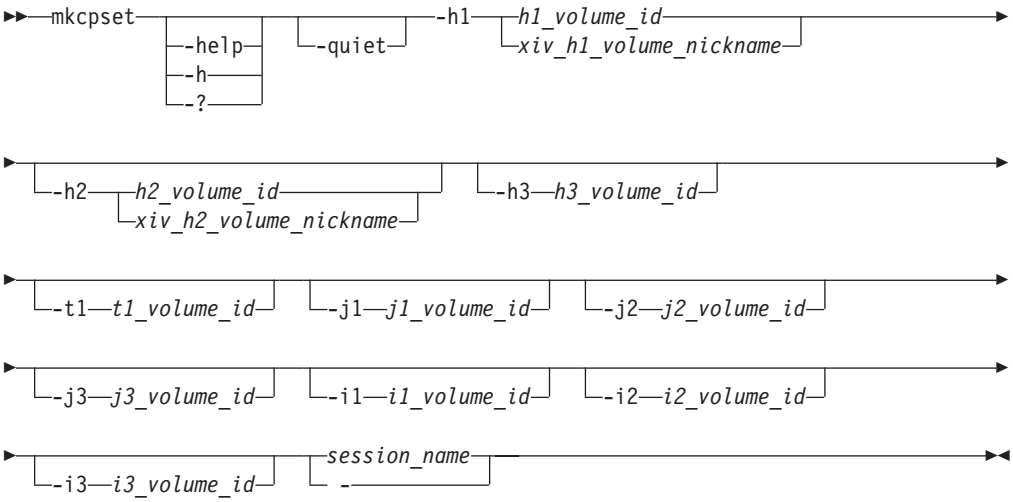
mkcpset

Use the **mkcpset** command to create copy sets.

When you run the **mkcpset** command for all sessions, except for IBM XIV Storage System Snapshot sessions, you can specify both the source volume and target volume for the copy sets. In XIV system Snapshot sessions, you must specify only the source volume for the copy sets.

Tip: To display the status of volumes in a copy set, use the **lsvol** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-h1 {*h1_volume_id* | *xiv_h1_volume_nickname***}**
For storage systems other than an XIV system, the volume ID is the only value that can be provided for this parameter. This value specifies the volume ID of the copy set at host site 1.

For XIV system sessions of any type, you can provide the user-defined nickname for the volume or the volume ID. The nickname for the volume is specified by using the XIV system user interface.

-h2 {*h2_volume_id* | *xiv_h2_volume_nickname***}**
Specifies the volume ID or nickname of the copy set at host site 2, if required.

-h3 *h3_volume_id*
Specifies the volume ID of the copy set at host site 3, if required.

-t1 *t1_volume_id*
Specifies the target volume of the copy set at site 1, if required.

-j1 *j1_volume_id*
Specifies the volume ID of the journal for site 1 if required by the session type.

-j2 *j2_volume_id*
Specifies the volume ID of the journal for site 2 if required by the session type.

-j3 *j3_volume_id*
Specifies the volume ID of the journal for site 3 if required by the session type.

-i1 *i1_volume_id*
Specifies the intermediate volume ID of the copy set at site 1.

-i2 *i2_volume_id*
Specifies the intermediate volume ID of the copy set at site 2.

-i3 *i3_volume_id*
Specifies the intermediate volume ID of the copy set at site 3.

session_name | **-**
Specifies the name of the session that contains the copy sets.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

When you run Metro Global Mirror on the OMVS command line, the parameters for the **mkcpset** command can exceed the character limit set by the OMVS prompt. To overcome this limitation, use a script to add the copy set. You create a script file called `mgm_mkcpset.txt` that contains the command that you want to run such as:

```
csmcli> mkcpset -h1 DS8000:2107.12345:VOL:0000 -h2 DS8000:2107.67890:VOL:0000
-h3 DS8000:2107.02468:VOL:0000 -J3 DS8000:2107.01934:VOL:0000 myMGMSess
```

To run the script, you must ensure that you are in the IBM Tivoli Storage Productivity Center for Replication `CLI` directory and have the appropriate paths exported. You then run the script from the command line using the following sample code:

```
csmcli.sh -script mgm_mkcpset.txt
```

Examples

Creating copy sets

The following command creates a copy set for a session named `session1`. The volume ID of the copy set at host site 1 is `DS8000:2107.04131:VOL:0A05` and the target volume ID is `DS8000:2107.04131:VOL:0A06`.

```
csmcli> mkcpset -h1 DS8000:2107.04131:VOL:0A05
-t1 DS8000:2107.04131:VOL:0A06 session1
```

The following output is returned:

```
IWNR1000I  Copy sets were successfully created for the session
named session1.

IWNR2001I  The pair, the ID of the source volume and the ID of the target volume,
was created in the session named session1 for the copy set with a
volume ID of DS8000:2107.04131:VOL:0A05, a source volume ID of
DS8000:2107.04131:VOL:0A05, and a target volume ID of DS8000:2107.04131:VOL:0A06.
```

Creating a copy set for an XIV system Snapshot session by using the volume ID

The following command creates a copy set for an XIV system Snapshot session named `snap2` by using volume `XIV:VOL:6000646:110789`, where `110789` is the volume ID.

```
csmcli> mkcpset -h1 XIV:VOL:6000646:110789 snap2
```

The following output is returned:

```
IWNR1000I Copy sets were created for the session named snap2.
```

Creating a copy set for an XIV system Snapshot session by using the volume nickname

The following command creates a copy set for an XIV system Snapshot session named `snap2` by using volume `XIV:VOL:6000646:myvolume`, where `myvolume` is the volume nickname.

```
csmcli> mkcpset -h1 XIV:VOL:6000646:myvolume snap2
```

The following output is returned:

```
IWNR1000I Copy sets were created for the session named snap2.
```

mklogpkg

Use the **mklogpkg** command to create a log package. The log package is written to the file that is specified in the properties file.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

Example

Creating a log package

The following command creates a log package on the IBM z/OS operating system.

```
csmcli> mklogpkg
```

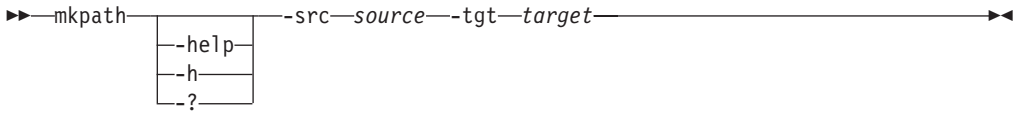
The following output is returned:

```
IWNR1198I  Log packages were successfully created and placed at
location /zWebSphereOEM/V7R0/config1/AppServer/profiles/default/diagnostics/
TPC_RM-tpcr-1234_2012-10-29_11-11-02.jar
```

mkpath

Use the **mkpath** command to create a Fibre Channel path or paths between a source logical subsystem (LSS) and a target LSS.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-src *source*
Specifies the source LSS and port (ESS and DS series storage servers). This must be specified in the format *type.serial.lss(hex).port(hex)* (for example, ESS:2105.FCA18:LSS:10.00FF).

-tgt *target*
Specifies the target LSS and port (ESS and DS series storage servers). This must be specified in the format *type.serial.lss(hex).port(hex)* (for example, ESS:2105.FCA18:LSS:10.00FF).

Description

The **mkpath** command uses the information from the **lslss** command to create a path or paths between the source LSS and the target LSS. You can specify a number of paths to create between 1 and 8.

Notes:

- This command creates new paths in addition to paths that already exist between the two specified LSSs.
- Only Fibre Channel paths are supported for ESS and DS series storage servers.
- You must verify the ports that are to be used in the path.
- For DS series storage servers, the plant of manufacturer must be added to the beginning of the serial number, making the serial number a seven-digit number.
- If you specify a number of paths greater than the number of available paths, existing paths are overwritten.

Example

Creating Fibre Channel paths

The following command creates a Fibre Channel path between the source LSS ESS:2105.20870:12.1 and target LSS ESS:2105.20870:14.2.

```
csmcli> mkpath –src ESS:2105.20870:12.1 –tgt ESS:2105.20870:14.2
```

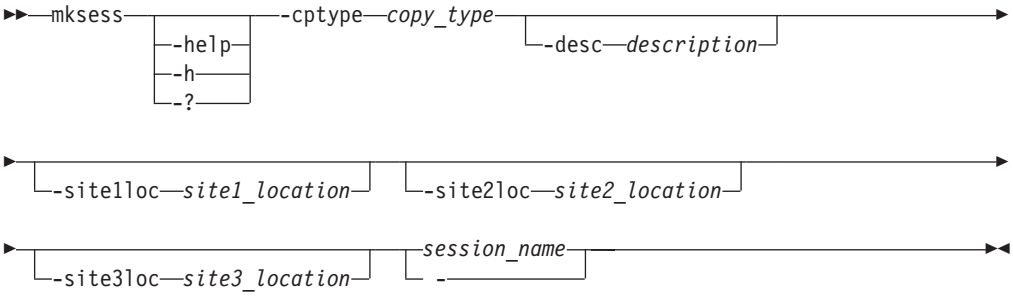
The following output is returned:

```
Path successfully created.
```

mksess

Use the **mksess** command to create a session.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-cptype *copy_type*
Specifies the copy session type. The following are the valid values for this parameter. The values are grouped by session type.

FlashCopy

fc: FlashCopy for:
- IBM TotalStorage Enterprise Storage Server Model 800
- IBM System Storage DS8000
- System Storage DS6000
- IBM System Storage SAN Volume Controller
- IBM Storwize V7000
- IBM Storwize V7000 Unified

Metro Mirror Single Direction

mmsd: Metro Mirror Single Direction for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000
- SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

Metro Mirror Failover/Failback

mmfofb: Metro Mirror Failover/Failback for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000
- SAN Volume Controller
- Storwize V7000

- Storwize V7000 Unified

mmfofbxiv: Metro Mirror Failover/Failback for:
- IBM XIV Storage System

Metro Mirror Failover/Failback with Practice

pmm: Practice Session for Metro Mirror Failover/Failback for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

pmmsvc: Metro Mirror Failover/Failback with Practice for:
- SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

Global Mirror Single Direction

gmsd: Global Mirror Single Direction for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

gmsdsvc: Global Mirror Single Direction for:
- SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

Global Mirror Failover/Failback

gmfofb: Global Mirror Failover/Failback for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

gmfofbsvc: Global Mirror Failover/Failback for:
- SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

gmfofbxiv: Global Mirror Failover/Failback for:
- XIV system

Global Mirror Failover/Failback with Practice

pgm: Global Mirror Failover/Failback with Practice for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

pgmsvc: Global Mirror Failover/Failback with Practice for:
- SAN Volume Controller
- Storwize V7000
- Storwize V7000 Unified

Global Mirror Either Direction with Two Site Practice

pgm2s: Global Mirror Either Direction with Two Site Practice for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

Metro Global Mirror

mgm: Metro Global Mirror for:
- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000

Metro Global Mirror with Practice

pmgm: Metro Global Mirror with Practice for:
- TotalStorage Enterprise Storage Server Model 800

- System Storage DS8000

Snapshot

snap: Snapshot for:

- XIV system

Basic HyperSwap

hs: Basic HyperSwap for:

- TotalStorage Enterprise Storage Server Model 800
- System Storage DS8000
- System Storage DS6000

-desc *description*

Specifies a description for the session. The description can have up to 250 alphanumeric characters.

-site1loc

Specifies a location to associate with the *site 1* volume role.

-site2loc

Specifies a location to associate with the *site 2* volume role.

-site3loc

Specifies a location to associate with the *site 3* volume role.

session_name | **-**

Specifies a name for the session. For sessions that contain an XIV system, the session name can have up to 58 alphanumeric characters. For sessions that contain other storage system types, the session name can have up to 250 alphanumeric characters. Session names must be unique.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Creating a FlashCopy session

The following command creates a FlashCopy session named `session1`. The location of the site 1 volume role is `Boulder`.

```
csmcli> mksess -cptype fc -site1loc Boulder session1
```

The following output is returned:

```
IWNR1021I  Session session1 was successfully created.
IWNR1096I  The locations for sessions session1 and Site 1 were set successfully.
```

Creating a Global Mirror with Practice session for System Storage DS8000

The following command creates a System Storage DS8000 Global Mirror with Practice session named `session1`.

```
csmcli> mksess -cptype pgm -desc "DS8000 Global Mirror with Practice" session1
```

The following output is returned:

```
IWNR1021I Session session1 was successfully created.
```

Creating a Global Mirror with Practice session for System Storage SAN Volume Controller

The following command creates a System Storage SAN Volume Controller Global Mirror with Practice session named `session1`.

```
csmcli> mksess -cptype pgmsvc -desc "SVC Global Mirror with Practice" session1
```

The following output is returned:

```
IWNR1021I Session session1 was successfully created.
```

Creating a Metro Global Mirror session

The following command creates a Metro Global Mirror session named `session1`.

```
csmcli> mksess -cptype mgm -desc "Metro Global Mirror" session1
```

The following output is returned:

```
IWNR1021I Session session1 was successfully created.
```

Creating a Metro Mirror Failover/Failback session

The following command creates a Metro Mirror Failover/Failback session named `session1`.

```
csmcli> mksess -cptype mmfofb -desc "Metro Mirror" session1
```

The following output is returned:

```
IWNR1021I Session session1 was successfully created.
```

Creating a Metro Mirror Failover/Failback session for an XIV system

The following command creates a Metro Mirror Failover/Failback session named `session1`. The location of the site 1 volume role is `Tucson` and the location of the site 2 volume role is `Chicago`.

```
 csmcli> mksess -cptype mmfofbxiv -desc "session1 on xiv" -site1loc Tucson
-site2loc Chicago session1
```

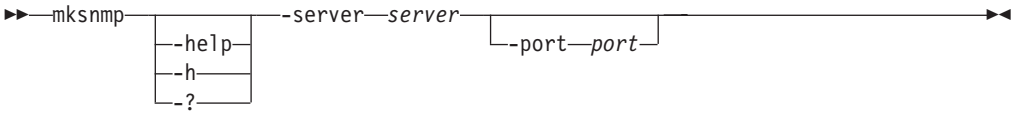
The following output is returned:

```
IWNR1021I  Session session1 was successfully created.
```

mksnmp

Use the **mksnmp** command to add a specified manager to the list of servers to which SNMP traps are sent. SNMP traps are not specific to any particular session. All traps for any session are sent to each server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-server *server*
Specifies the IP address or domain name of the management server that is to receive SNMP traps.

-port *port*
Specifies a port number to use for receiving SNMP traps. If not specified, the default port is 162.

Example

Sending SNMP traps to a specific management server

The following command sends SNMP traps to the management server with ID 9.11.207.17 and port 2626.

```
csmcli> mksnmp -server 9.11.207.17 -port 2626
```

The following output is returned:

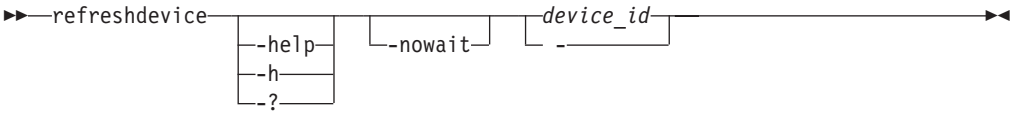
```
IWNR1701I  Host 9.11.207.17:2626 was added to the SNMP listeners list.
```

refreshdevice

Use the **refreshdevice** command refresh the volumes and configuration elements of a storage device.

You must have Administrator privileges to run this command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-nowait

Specifies that the command response is returned when the command has been submitted and accepted by the server. The command response does not require that the command is completed.

device_id **|** **-**

Specifies the ID of the storage system that you want to refresh.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Tip: To list the valid storage system IDs, use the **lsdevice** command.

Examples

Refreshing a System Storage DS8000 (includes the -nowait parameter)

The following command refreshes the storage system DS8000:BOX:2107.02341 before the command has completed.

```
csmcli> refreshdevice -nowait DS8000:BOX:2107.02341
```

The following output is returned when command has been submitted and accepted by the server:

```
IWNH1611I A refresh of the storage configuration has completed
for the storage device DS8000:BOX:2107.02341.
```

rmactive

Use the **rmactive** command to remove an active management server.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

Description

You can run the **rmactive** command only from the standby management server and only when the active and standby management servers are in a non-synchronized state (such as when they are first connecting).

When a standby and active management servers are synchronized, use the **hatakeover** command.

The **rmactive** command corresponds to the Remove Active action in the GUI. Unless the **-quiet** parameter is used, you are prompted to confirm this action.

Example

Removing the active management server

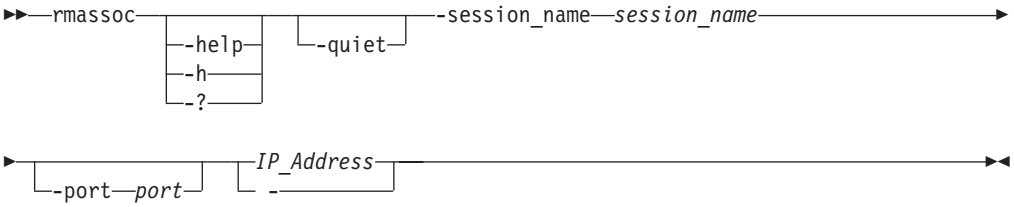
The following command removes the active management server with IP address `127.0.0.1`.

```
csmcli> rmactive -server 127.0.0.1
```

rmassoc

Use the **rmassoc** command to remove a session association from the host system. This command removes a session associated with a host system but does not remove the connection to the host system.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-session_name *session_name*
Specifies the name of the session to remove from the host system.

-port *port*
Specifies the port number for the host system if the system was added with a port other than the default port 9930.

IP_Address **|** **-**
Specifies the IP address or host name of the host system to remove the session from.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

- **Removing a session from a host system**

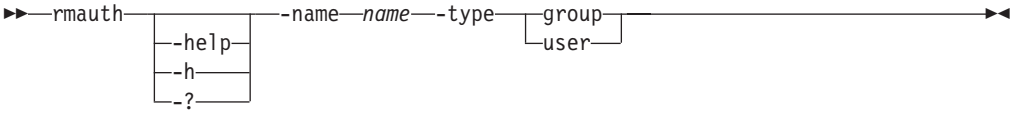
  The following command shows how to remove the session MyMMsession from the host system with IP address 9.11.223.43. In this example, you could omit the -port parameter because port 9930 is the default.

  ```
  csmcli> rmassoc -session_name MyMMsession –port 9930 9.11.223.43
  ```

rmauth

Use the **rmauth** command to remove monitor, administrator, or operator authorization from a user or user group.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-name *name*
Specifies a user ID or group name from which you remove authorization.

-type group | user
Specifies whether the name is of a user group or user.

Example

1. **Removing authorization for a group**

   The following command remove authorization from the user named MDMSUID.

   ```
   csmcli> rmauth -name Guests -type group
   ```

   The following output is returned:

   ```
   Are you sure you want to remove access for user Guests? [y/n]:y

   IWNR4013I  Successfully revoked access from Guests.
   ```

2. **Removing authorization for a user**

   The following command remove authorization from the user named MDMSUID.

   ```
   csmcli> rmauth -name csmuser -type user
   ```

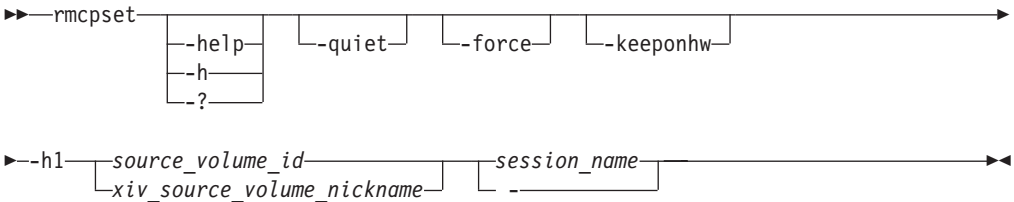
   The following output is returned:

   ```
   Are you sure you want to remove access for user Guest? [y/n]:y

   IWNR4013I  Successfully revoked access from Guest.
   ```

rmcpset

Use the **rmcpset** command to remove a copy set.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-force
Forces the removal of the copy set despite any errors that occur when removing the copy set relationships from the storage system. When a forced removal is complete, any relationships that remain on the storage system for that copy set must be removed manually using the storage system interface.

-keeponhw
Specifies that all of the base relationships (Metro Mirror, Global Copy, Snapshot, and FlashCopy) on the storage system are kept even though the

copy set is removed from the session. The relationships are removed from any consistency groups that are defined on the storage system.

-h1 {*source_volume_id* | *xiv_source_volume_nickname***}**
For storage systems other than an XIV system, the volume ID is the only value that can be provided for this parameter. This value specifies the source volume ID of the copy set to be removed.

For XIV system sessions of any type, you can provide the user-defined nickname for the volume or the volume ID. The nickname for the volume is specified by using the XIV system user interface.

session_name | **-**
Specifies the name of the session name from which the copy set is being removed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Removing a copy set

The following command removes the copy set with source volume DS8000:2107.04131:VOL:0A05 in session session1 without prompting for confirmation.

```
csmcli> rmcpset -quiet -h1 DS8000:2107.04131:VOL:0A05 session1
```

The following output is returned:

```
IWNR1058I  The copy sets for session session1 were deleted.

IWNR2002I  The pair was successfully deleted in session session1 for copy set
DS8000:2107.04131:VOL:0A05 with source DS8000:2107.04131:VOL:0A05 and target
DS8000:2107.04131:VOL:0A06.

IWNR1095I  Copy set DS8000:2107.04131:VOL:0A05 in session session1 was
successfully deleted.
```

Removing a copy set from an XIV system Snapshot session by using the volume nickname

The following command removes the copy set for an XIV system Snapshot session named snap2 by using volume XIV:VOL:6000646:myvolume, where myvolume is the volume nickname.

```
csmcli> rmcpset -h1 XIV:VOL:6000646:myvolume snap2
```

The following output is returned:

```
IWNR1058I The copy sets for session snap2 were deleted.

IWNR2005I The volume with a volume ID of XIV:VOL:6000646:110789 (snap2) was
successfully removed from the copy set with a source volume ID
of XIV:VOL:6000646:110789 from the session named snap2.

IWNR1095I Copy set XIV:VOL:6000646:myvolume in session snap2 was
successfully deleted.
```

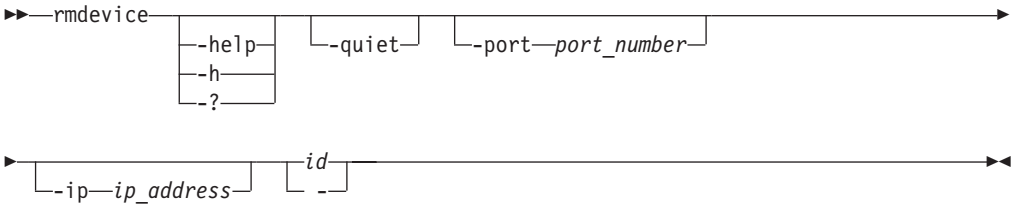
rmdevice

Use the **rmdevice** command to remove a direct connection to a storage system.

To remove a storage system that is attached through a Hardware Management Console (HMC) connection, use the **rmmc** command.

To remove a storage system that is attached through an IBM z/OS connection, use the **rmstorsys** command.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

-port *port_number*
Specifies the port number if a nondefault port number was entered when the storage system was added.

-ip *ip_address*
Specifies the IP address or host name of the node that is used by the following storage systems:

- IBM System Storage SAN Volume Controller
- IBM Storwize V7000
- IBM Storwize V7000 Unified

This parameter is ignored for all other storage systems.

id **|** **-**
Specifies the ID of the storage system to be removed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Examples

Removing an IBM TotalStorage Enterprise Storage Server Model 800

The following command removes the TotalStorage Enterprise Storage Server Model 800 with ID `ESS:BOX:2105.18596` without prompting for confirmation.

```
csmcli> rmdevice -quiet ESS:BOX:2105.18596
```

The following output is returned:

```
IWNH1614I The connection at sts596c0:sts596c1 was successfully removed.
```

Removing a SAN Volume Controller

The following command removes the SAN Volume Controller with ID SVC:CLUSTER:RMSVC02 and IP address 127.0.0.1 without prompting for confirmation.

```
csmcli> rmdevice -quiet -ip 127.0.0.1 SVC:CLUSTER:RMSVC02
```

The following output is returned:

```
IWNH1614I  The storage device at 127.0.0.1 was successfully removed.
```

Removing an IBM XIV Storage System

The following command removes the XIV system with ID XIV:BOX:6000646 without prompting for confirmation.

```
csmcli> rmdevice -quiet XIV:BOX:6000646
```

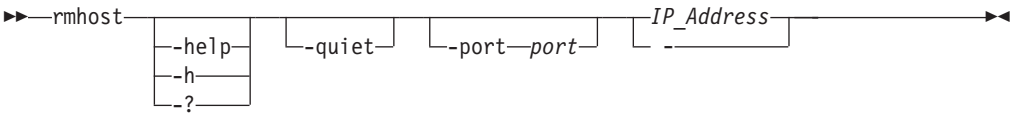
The following output is returned:

```
IWNH1624I  The storage system XIV:BOX:6000646 was successfully removed.
```

rmhost

Use the **rmhost** command to remove a connection to a host system from the IBM Tivoli Storage Productivity Center for Replication server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-port *port*
Specifies the port number for the host system to be removed if the system was added with a port other than the default port 9930.

IP_Address **|** **-**
Specifies the IP address or host name of the host system to be removed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

- **Removing host systems**

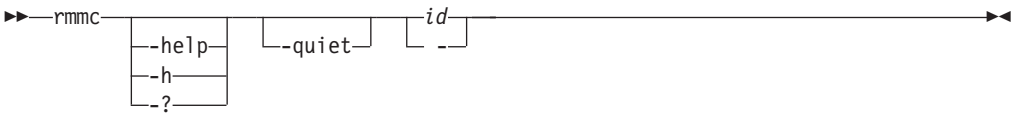
  The following command shows how to remove a host system with IP address 9.11.223.43. In this example, you could omit the -port parameter because port 9930 is the default.

  ```
  csmcli> rmhost -port 9930  9.11.223.43
  ```

rmmc

Use the **rmmc** command to remove a management console.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

id **|** **-**
Specifies the ID of the management console to be removed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Removing a management console

The following command removes a Hardware Management Console with ID `HMC:127.0.0.1` without prompting for confirmation.

```
csmcli> rmmc -quiet HMC:127.0.0.1
```

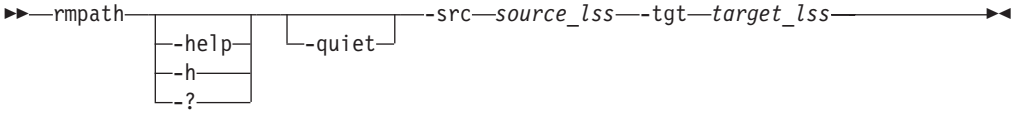
The following output is returned:

```
IWNH1614I  The storage device at HMC:127.0.0.1 was successfully removed.
```

rmpath

Use the **rmpath** command to remove a path or paths between a source logical subsystem (LSS) and a target LSS.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-src *source_lss*
Specifies the source LSS and port (ESS and DS series storage servers) for the path to be removed. Use the following format: DS/ESS: 2105.20870:12.1.

-tgt *target_lss*
Specifies the target LSS and port (ESS and DS series storage severs) for the path to be removed. Use the following format: DS/ESS: 2105.20870:12.1.

Description

Notes:

- Removing a path removes only the path and ports specified and will not remove any additional paths.
- Only Fibre Channel paths are supported for ESS800, DS6000, and DS8000.

Example

Removing paths:

The following command removes the paths between the source LSS ess:2015.23884:11.4 and a target LSS ess:2105.23005:11.3.

```
csmcli> rmpath -src ess:2015.23884:11.4 -tgt ess:2105.23005:11.3
```

The following output is returned:

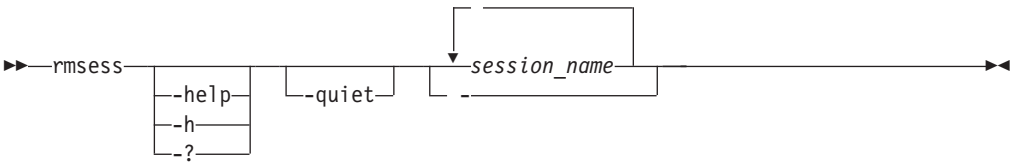
```
Path successfully removed.
```

rmsess

Use the **rmsess** command to remove a session.

Important: You can remove only those sessions that are in the Defined state.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

session_name... | **-**
Specifies the name of the session to be removed. Separate multiple session names using a blank space.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

Removing a session

The following command removes the session named `session1`.

```
csmcli> rmsess -quiet session1
```

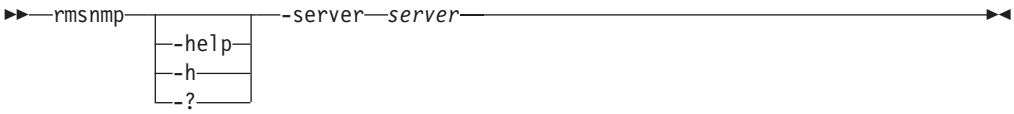
The following output is returned:

```
IWNR1022I  Session session1 was successfully deleted.
```

rmsnmp

You can use the **rmsnmp** command to remove the specified manager from the list of servers to which SNMP traps are sent.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-server *server*
Specifies the IP address or domain name of the server that will no longer receive SNMP traps.

Example

Removing a server from receiving SNMP traps

The following command removes the management server with IP address `127.0.0.1` from receiving SNMP traps.

```
csmcli> rmsnmp -server 127.0.0.1
```

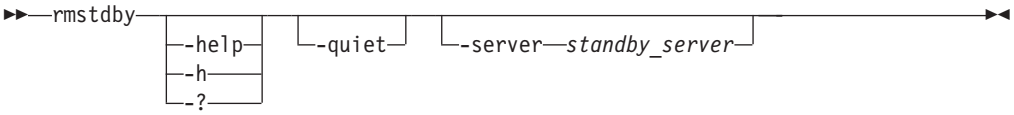
The following output is returned:

```
IWNR1702I  Host 127.0.0.1 was removed from the SNMP listeners list.
```

rmstdby

Use the **rmstdby** command to remove a standby management server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-server *standby_server*
The IP address of the standby management server that you are removing.

Example

Removing a standby management server

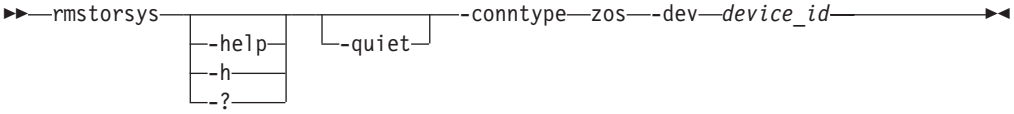
The following command removes the standby management server with IP address 127.0.0.1.

```
csmcli> rmstdby -server 127.0.0.1
```

rmstorsys

Use the **rmstorsys** command to remove a specific storage system and its volumes that are attached to the IBM Tivoli Storage Productivity Center for Replication server from the IBM Tivoli Storage Productivity Center for Replication configuration through a z/OS connection.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-conntype zos
Specifies the type of connection that the storage systems uses. Currently, you can specify only zos for a z/SO connection.

-dev *device_id*
Specifies the ID of the DS or ESS storage system that is to be removed from the IBM Tivoli Storage Productivity Center for Replication configuration.

Tip: Use the **lsdevice** command to display a list of valid storage system IDs.

Description

Important:

- You must have Administrator privileges to run this command.
- You can run this command only from the IBM Tivoli Storage Productivity Center for Replication server that is installed on a system running z/OS.
- This command removes only the z/OS connection to the specified storage system. To remove other connection types to the same storage system, use the **rmdevice** or **rmmc**command.

If Tivoli Storage Productivity Center for Replication has multiple connections to a specific storage system, the order in which you remove the connections produces different results:

- If you remove all direct and HMC connections first, the fixed block and non-attached ECKD™ volumes are removed from the Tivoli Storage Productivity Center for Replication configuration. The remaining ECKD volumes that are attached through the z/OS connection remain in the Tivoli Storage Productivity Center for Replication configuration until the z/OS connection is removed. Removing the TCP/IP connection also disables the Metro Mirror heartbeat.
- If you remove the z/OS connection first and if there is an HMC or direct connection to volumes, those volumes are not removed from the Tivoli Storage Productivity Center for Replication configuration.
- HyperSwap can run provided that volumes are attached and available to z/OS storage, even if you are using a TCP/IP connection to storage.

To remove a storage system that is attached through a direct connection, use the **rmdevice** command. To remove a storage system that is attached through an hardware-management-console (HMC) connection, use the **rmmc** command.

Example

Removing the z/OS connection

This example illustrates how to remove the z/OS connection to the storage system with ID `ESS:BOX:2105.12345`.

```
csmcli> rmstorsys -dev ESS:BOX:2105.12345 -conntype zos
```

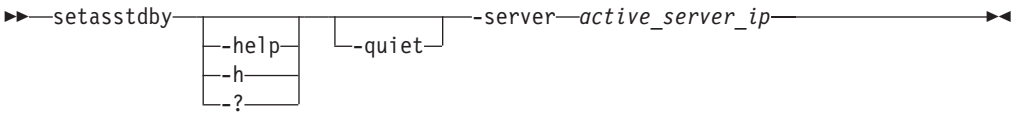
The following output is returned:

```
IWNH1614I  The storage device at ESS:BOX:2105.12345 was successfully removed.
```

setasstdby

Use the **setasstdby** command to set a management server to be the standby management server of another active management server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-server *active_server_ip*
Specifies the IP address of the active management server for which the local management server is to be the standby server.

Example

Creating a standby management server

The following command sets the local server as a standby management server for the active management server with IP address 127.0.0.1.

```
csmcli> setasstdby -server 127.0.0.1
```

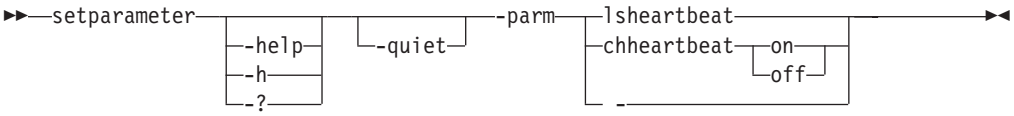
The following output is returned:

```
IWNR3020I  Connection to the active high-availability server at
tpc1.storage.tucson.example.com making the server
tpc2.storage.tucson.example.com a standby was successful.
```

setparameter

Use the **setparameter** command to set the system parameters.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers yes to all confirmation prompts.

-parm {lsheartbeat | - chheartbeat { on | off } | -}
Specifies one of these system parameters:

lsheartbeat
Displays whether the Metro Mirror heartbeat is enabled.

chheartbeat { on | off }
Specifies whether the Metro Mirror heartbeat is enabled (on) or not enabled (off).

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Example

1. **Listing the Metro Mirror heartbeat status**

   The following command displays whether the Metro Mirror heartbeat is enabled or disabled.

   ```
   csmcli> setparameter -parm lsheartbeat
   ```

   The following output is returned:

   ```
   The heartbeat function is set on.

   IWNR1208I  The heartbeat was retrieved successfully.
   ```

2. **Enabling the Metro Mirror heartbeat**

   The following command turns on the Metro Mirror heartbeat.

   ```
   csmcli> setparameter -parm chheartbeat on
   ```

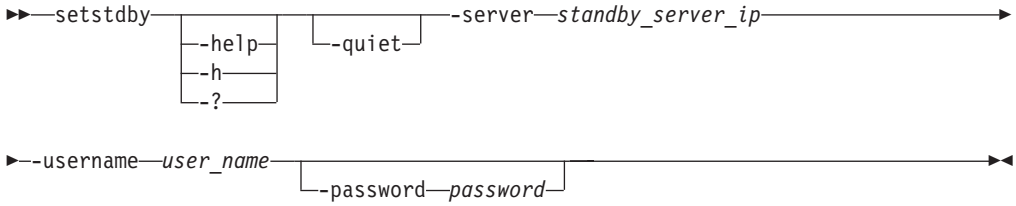
   The following output is returned:

   ```
   IWNR1204I  The heartbeat has been successfully turned on with the hardware.
   ```

setstdby

Use the **setstdby** command to set the standby management server for an active management server.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-quiet
Suppresses the confirmation prompt for this command. This flag answers `yes` to all confirmation prompts.

-username *user_name*
Specify the user name for the device.

-password *password*
Specifies this parameter to receive a password prompt. The password will not be visible.

-server *standby_server_ip*
Specify the IP address of the server to be the standby management server for the local management server.

Description

Notes:

- If a standby management server is already defined for the active management server, the previously defined standby management server is replaced by the server specified by this command.
- Only the **hatakeover** command can change a backup server to the active server. High availability (HA) must be active before setting an HA role.

Example

Setting the standby management server

The following command sets the server with IP address `127.0.0.1` as the standby management server for active management server on which this command run without prompting for confirmation.

```
csmcli> setstdby -quiet -server 127.0.0.1 -username csmuser
```

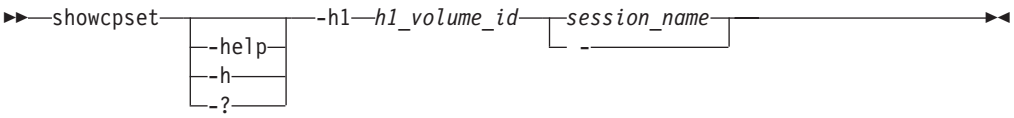
The following output is returned:

```
IWNR3020I  Connection to the active high-availability server at
tpc1.storage.tucson.example.com making the server
tpc2.storage.tucson.example.com a standby was successful.
```

showcpset

Use the **showcpset** command to display properties for a copy set.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-h1 *h1_volume_id*
Specifies the name of the source volume ID. The properties for this volume ID are displayed.

session_name **|** **-**
Specifies the session name to which the copy set belongs.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

The following information is listed for the copy set:

Column Label	Details
H1 Volume	The source volume name.
Session	The session name.
Volumes	The volumes that are associated with the copy set. Output is formatted to show the role and the volume ID for that role in the copy set.

Column Label	Details
Last Result	The last message that was issued.

Examples

Listing copy set properties

The following command lists the properties for the copy set with the source host ID DS8000:2107.NK791:VOL:1500 in the session session1.

```
csmcli> showcpset -h1 DS8000:2107.NK791:VOL:1500 session1
```

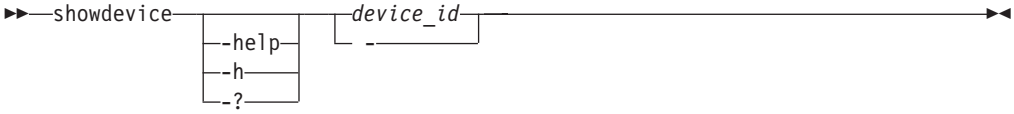
The following output is returned:

```
H1 Volume     DS8000:2107.NK791:VOL:1500
Session       session1
Volumes       H1-DS8000:2107.NK791:VOL:1500, H2-DS8000:2107.MW931:VOL:1500,
              H3-DS8000:2107.04131:VOL:1500, I3-DS8000:2107.04131:VOL:1505,
              J3-DS8000:2107.04131:VOL:150A
Last result   None

IWNR1500I  Session information about session session1 was successfully obtained.
```

showdevice

Use the **showdevice** command to display storage system properties.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

device_id **|** **-**
Displays a unique identifier for each storage system in IBM Tivoli Storage Productivity Center. The element ID format, for example ESS:BOX:2105.FCA57, is used to display storage system IDs.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

For each storage system, the following information is listed. The Direct Connect Information properties are listed for storage systems that have a direct connection. The Management Console properties are listed for storage systems that are connected through a Hardware Management Console (HMC).

General

Column Label	Details
Device ID	The storage system ID.
Device Name	The user-defined name of the storage system.

Column Label	Details
Device Type	The type of storage system: DS6000, DS8000, ESS, STORWIZE-V7000, SVC, or XIV.
Manufacturer	The manufacturer of the storage system.
Location	The user-defined location associated with the storage system or None.

Direct Connect Information

Column Label	Details
Device IP Address	The IP address or host name of the clusters or nodes that are used by the storage system. IBM TotalStorage Enterprise Storage Server Model 800, IBM System Storage DS8000, and System Storage DS6000 use two clusters. Each cluster address is separated by a semicolon. IBM XIV Storage System uses three nodes. Each node address is separated by a semicolon.
User name	The user name for the clusters or nodes that are used by the storage system. For TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, System Storage DS6000, and XIV system, user names are separated by a semicolon.
Port	The port number of the clusters or nodes that are used by the storage system. For TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, and System Storage DS6000, the port number of each cluster is separated by a semicolon. For XIV system, the port number of each node is separated by a semicolon. For example, node1_port;node2_port;node3_port.
Local Server Connection	The state of direct connections to a local management server. For TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, and System Storage DS6000, this value shows status of the connection to each cluster separated by a semicolon. For example, cluster0_status:cluster1_status. For XIV system, this value shows the status of each node separated by a semicolon. For example, node1_status;node2_status;node3_status.
Remote Server Connection	The state of direct connections to a remote management server. For TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, and System Storage DS6000, this value shows the connection status of each cluster separated by a semicolon. For example cluster0_status:cluster1_status. For XIV system, this value shows the connection status of each node separated by a semicolon. For example node1_status;node2_status;node3_status.

Management Console Information

Column Label	Details
Management Console Local Server Connection	The state of the HMC connections to the local management server.
Management Console Remote Server Connection	The state of the HMC connections to the remote management server.
Management Console IDs	The ID of the HMC. If there a dual HMCs, the ID for each HMC is separated by a semicolon.

z/OS Connection Information

Column Label	Details
z/OS Local Server Connection	The state of the z/OS connections to the local management server.
z/OS Remote Server Connection	The state of the z/OS connections to the remote management server.

Example

Listing device properties

The following command lists the properties of a System Storage DS8000 with ID `DS8000:BOX:2107.04131`. This device is connected directly and not through an HMC.

```
csmcli> showdevice DS8000:BOX:2107.04131
```

The following output is returned:

```
Device ID                                   DS8000:BOX:2107.04131
Device Name                                 -
Device Type                                 DS8000
Manufacturer                                IBM
Location                                    Boulder
Direct Connect Information                  --------------------------
Device IP Address                           stg8k05c0;stg8k05c1
User Name                                   root;root
Port                                        2433;2433
Local Server Connection                     Connected;Connected
Remote Server Connection                    -
Management Console Information              --------------------------
Management Console Local Server Connection  -
Management Console Remote Server Connection -
Management Console IDs                      -
z/OS Connection Information                 --------------------------
z/OS Local Server Connection                -
z/OS Remote Server Connection               -

IWNC4103I  The showdevice command completed successfully.
```

Listing device properties

The following command lists the properties of an XIV Storage System with ID `XIV:BOX:7803448` and a user-defined name `XIV_B`.

```
csmcli> showdevice XIV:BOX:7803448
```

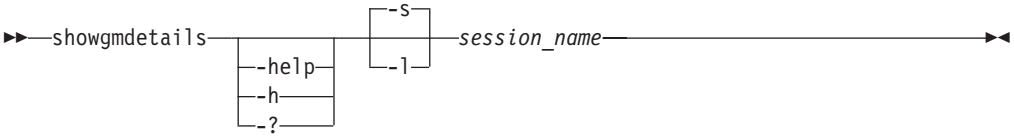
The following output is returned:

```
Device ID                                   XIV:BOX:7803448
Device Name                                 XIV_B
Device Type                                 XIV
Manufacturer                                IBM
Location                                    xiv_west
Direct Connect Information                  -------------------------
Device IP Address                           tpcr_xivb1.storage.tucson.ibm.com;
                                            tpcr_xivb2.storage.tucson.ibm.com;
                                            tpcr_xivb3.storage.tucson.ibm.com
User Name                                   admin
Port                                        7778;7778;7778
Local Server Connection                     Connected;Connected;Connected
Remote Server Connection                    -
Management Console Information              -------------------------
Management Console Local Server Connection  -
Management Console Remote Server Connection -
Management Console IDs                      -
z/OS Connection Information                 -------------------------
z/OS Local Server Connection                -
z/OS Remote Server Connection               -


 IWNC4103I  The showdevice command completed successfully.
```

showgmdetails

Use the **showgmdetails** command to display detailed status information for a Global Mirror session. Use this command for only TotalStorage Enterprise Storage Server Model 800, System Storage DS8000, and System Storage DS6000 storage systems only.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

-s Displays default information for the Global Mirror session.

-l Displays detailed information for the Global Mirror session, including:

Column label	Details
Session ID	The Global Mirror session ID.
Master LSS	The name of the storage system acting as the Global Mirror master. Includes storage system ID and subsystem ID.
Copy State	Options are: • Running • Paused • Fatal • Pause in Progress

Column label	Details
Fatal Reason	Fatal reason code of the Global Mirror session.
CG Time	The time of the last consistency group formation according to the Master Storage system. The format is MM/DD/YYYY HH:MM:SS in 24 hour time. The time is based on a 24-hour clock.
Query Time	The time of the query according to the Master Storage system. The format is MM/DD/YYYY HH:MM:SS in 24 hour time. The time is based on a 24-hour clock.
Data Exposure	The average exposure to data loss, in seconds, over the query interval.
Total Failed CGs	The total number of failed consistency group formation attempts since the Global Mirror session has been in Running state.
Total Successful CGs	The total number of successful consistency group formations since the Global Mirror session has been in Running state.
Failed CG Attempts since last success	The number of failed consistency group formation attempts since the last successful consistency group was formed.
Successful CG Percentage	The total percentage since the Global Mirror session has been in Running state.
CG Interval Time	The interval time between attempts to form a consistency group.
Max Coordination Interval	Extended distance consistency maximum coordination interval.
Max CG Drain Time	The maximum time the consistent set of data is allowed to drain at the remote site before failing consistency group formation.
Last Failure LSS	Name of the storage system for the most recent failure of the consistency group formation. Includes storage system ID and subsystem ID.
Last Failure Reason	The reason code for the most recent failure of the consistency group formation.
Last Failure Master State	The master state for the most recent failure of the consistency group formation.
Previous Failure LSS	Name of the storage system for the previous failure of the consistency group formation. Includes storage system ID and subsystem ID.
Previous Failure Reason	Reason code for the previous failure of the consistency group formation.
Previous Failure Master State	Master state for the second most recent consistency group formation failure.
Subordinate Count	The number of subordinates for this Global Mirror session.
Subordinate Associations	The subordinate boxes for the master Global Mirror box.

session_name
Specifies the Global Mirror session for which the properties are to be displayed.

Example

Displaying management console properties

The following command displays detailed information for the Global Mirror session gmme.

```
csmcli> showgmdetails -l gmme
```

The following output is returned:

```
Session ID                              0x2

Master LSS                              DS8000:2107.FX102:LSS:71

Copy State                              Running

Fatal Reason                            0x00 Global Mirror Not Fatal

CG Time                                 2010/04/16 23:32:58 EDT

Query Time                              2010/04/16 23:32:58 EDT

Data Exposure                           1.00 s

Total Failed CGs                        1

Total Successful CGs                    725

Failed CG Attempts since last success 0

Successful CG Percentage                99

CG Interval Time                        0 s

Max Coordination Interval               50 ms

Max CG Drain Time                       30 s

Last Failure LSS                        DS8000:2107.FX102:LSS:71

Last Failure Reason                     0x0FCC XDC starting increment with wrong state
Last Failure Master State               0x4 Global Mirror Start Increment In Progress
Previous Failure LSS                    -

Previous Failure Reason                 -

Previous Failure Master State           -

Subordinate Count                       0

Subordinate Associations                -
```

showha

Use the **showha** command to display the high-availability status.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

Description

This command displays the following information:

Column label	Details
Status	High availability status.
Error	Error message, if applicable

Example

Listing high-availability status

The following command lists the high-availability status.

```
csmcli> showha
```

The following output is returned:

```
Status Synchronized
Error  None

 IWNR3048I  The high availability status from server tpc1.storage.tucson.ibm.com
was successfully queried.
```

showmc

Use the **showmc** command to display the properties of a management console.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

id **|** **-**
Specifies the management console ID in the element ID format (for example, `HMC:127.0.0.1`).

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Description

The following information is listed for the management console:

Column label	Details
Management console ID	The management console ID in the element ID format.
MC IP address	The IP address or domain name of the management console. For dual management console configurations the IP addresses or domain names are separated by semicolon; for example `192.0.2.0;192.0.2.1`.
Device Type	Device Type (HMC)
Location	User-defined location associated with the management console, or `None`.
User name	The user name for the management console.
Local Connection Status	The state of the connection to the local management server.
Remote Connection Status	The state of the connection to the remote management server.
Attached Devices	The devices that are attached to this management console.

Example

Displaying management console properties

The following command displays the properties of the management console with ID `HMC:127.0.0.1`.

```
csmcli> showmc HMC:127.0.0.1
```

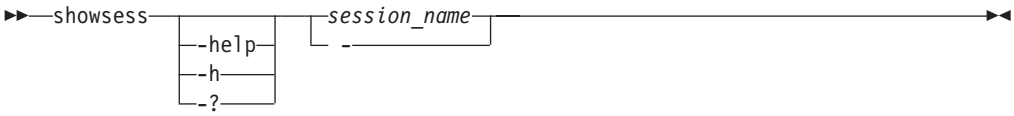
The following output is returned:

```
Management Console ID     HMC:127.0.0.1
MC ID address             127.0.0.1
Device Type               HMC
Location                  tucson
User name                 admin
Local Connection Status   Connected
Remote Connection Status  -
Attached Devices          DS8000:BOX:2107.BRXXX,DS8000:BOX:2107.BRXXX,
                          DS8000:BOX:2107.FNXXX
```

showsess

Use the **showsess** command to display properties for a selected session, including name, description, group managed, and copy type.

Syntax



Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

session_name **|** **-**
Specifies the session for which the properties are to be displayed.

Alternatively, use the dash (-) to specify that input for this parameter comes from an input stream (stdin). The dash is supported only in single-shot mode.

Description

For each session, the following information is listed:

Column Label	Details
Name	Session name.

Type	Session type. Values include:
	`FlashCopy`
	`Global Mirror Either Direction with Two Site Practice`
	`Global Mirror Failover/Failback`
	`Global Mirror Practice`
	`Global Mirror Single Direction`
	`Basic HyperSwap`
	`Metro Global Mirror`
	`Metro Global Mirror with Practice`
	`Metro Mirror Failover/Failback`
	`Metro Mirror Practice`
	`Metro Mirror Single Direction`
	`Snapshot`

State	Session state. Values include:
	`Defined`
	`Flashing`
	`Preparing`
	`Prepared`
	`Recovering`
	`Suspended`
	`SuspendedH2H3`
	`SuspendedH1H3`
	`Suspending`
	`TargetAvailable`
	`Terminating`

Status	Session status. Values include:
	`Unknown`
	`Normal`
	`Warning`
	`Error`
	`Inactive`

Column Label	Details
Locations	A list of the locations associated with the session.
Copy sets	The number of copy sets that the session is managing.
Copying	An indicator of whether a copying operation is occurring. Values are `Yes` or `No`.
Recoverable	An indicator of whether the session is recoverable. Values are `Yes` or `No`.
Active host	Name of the active host.
Error Count	Number of errors for all roles.
Description	Session description that you define.

Example

Listing session properties

The following command lists properties for the session named `session1`.

```
csmcli> showsess session1
```

The following output is returned:

```
Name            session1
Type            Metro Global Mirror w/ Practice
State           Defined
Status          Inactive
Locations       Site1, Site2, Site3
Copy sets       10
Copying         No
Recoverable     No
Active Host     H1
Error count     0
Description     -
Transitioning   No
Detailed Status -

IWNR1500I  Session information about session session1 was successfully obtained.
```

Listing session properties for an XIV system Snapshot session

The following command lists properties for the session named `session1`.

```
csmcli> showsess session1
```

The following output is returned:

```
Name                session1
Type                Snapshot
State               Target Available
Status              Active
Locations           Site1
Copy sets           10
Copying             No
Recoverable         Yes
Active Host         H1
Error count         0
Description         -
Transitioning       No
H1 Pool             XIV:POOL:12345:67890
H1 Consistency Group session1
```

```
Detailed Status      -

IWNR1500I Session information about session session1 was successfully obtained.
```

Listing session properties for an XIV system Metro Mirror session

The following command lists properties for the session named session1.

```
csmcli> showsess session1
```

The following output is returned:

```
Name                 session1
Type                 Metro Mirror Failover/Failback
State                Prepared
Status               Active
Locations            Site1, Site2
Copy sets            10
Copying              Yes
Recoverable          Yes
Active Host          H1
Error count          0
Description          -
Transitioning        No
H1 Pool              XIV:POOL:12345:67890
H2 Pool              XIV:POOL:12345:67890
H1 Consistency Group session1
H2 Consistency Group session1
Detailed Status      -

IWNR1500I Session information about session session1 was successfully obtained.
```

Listing session properties for an XIV system Global Mirror session

The following command lists properties for the session named session1.

```
csmcli> showsess session1
```

The following output is returned:

```
Name                 session1
Type                 Global Mirror Failover/Failback
State                Prepared
Status               Active
Locations            Site1, Site2
Copy sets            10
Copying              Yes
Recoverable          Yes
Active Host          H1
Error count          0
Description          -
Transitioning        No
H1 Pool              XIV:POOL:12345:67890
H2 Pool              XIV:POOL:12345:67890
H1 Consistency Group session1
H2 Consistency Group session1
Detailed Status      -
WNR2750E Recovery Point Objective for session session1 has passed the threshold
of 30 seconds.
IWNR1500I Session information about session session1 was successfully obtained.
```

ver

Use the **ver** command to display the current version of IBM Tivoli Storage Productivity Center for Replication.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

Example

Displaying the current version:

The following command displays the current version of IBM Tivoli Storage Productivity Center for Replication that is running on the local system.

```
csmcli> ver
```

The following output is returned:

```
Tivoli Storage Productivity Center for Replication Command Line Interface (CLI)
Copyright 2009 IBM Corporation
Version: 4.1.1
Build: g100-090804
```

whoami

Use the **whoami** command to display the name of the user that is currently logged in.

Syntax

Parameters

-help | -h | -?
Lists help for the command. If you specify additional parameters and arguments, those parameters and arguments are ignored.

Example

Displaying the current user name

The following command displays the name of the current user.

```
csmcli> whoami
```

The following output is returned:

```
Currently logged in as administrator
Server: server1
Port: 5110
Authentication file: null
```

Accessibility features for Tivoli Storage Productivity Center for Replication

Accessibility features help users who have a disability, such as restricted mobility or limited vision, to use information technology products successfully.

The following list includes the major accessibility features in Tivoli Storage Productivity Center for Replication:
- Keyboard-only operation
- Interfaces that are commonly used by screen readers
- Keys that are discernible by touch but do not activate just by touching them
- Industry-standard devices for ports and connectors
- The attachment of alternative input and output devices

See the IBM Human Ability and Accessibility Center website at www.ibm.com/able for more information about the commitment that IBM has for accessibility.

Accessibility and keyboard shortcuts in the information center

Accessibility features help users with physical disabilities, such as restricted mobility or limited vision, to use software products successfully. Using the major accessibility features in this product, users can perform these tasks:
- Use assistive technologies, such as screen-reader software and digital speech synthesizer, to hear what is displayed on the screen. Consult the product documentation of the assistive technology for details on using those technologies with this product.
- Operate specific or equivalent features by using only the keyboard.
- Magnify what is displayed on the screen.

In addition, the documentation was modified to include the following features to aid accessibility:
- All documentation is available in HTML formats to give the maximum opportunity for users to apply screen-reader software technology.
- All images in the documentation are provided with alternative text so that users with vision impairments can understand the contents of the images.

Use the following key combinations to navigate the interface by keyboard:
- To go directly to the Topic pane, press Alt+K, and then press Tab.
- In the Topic pane, to go to the next link, press Tab.
- To go directly to the Search Results view, press Alt+R, and then press the Enter or Up-Arrow key to enter the view.
- To go directly to the Navigation (Table of Contents) view, press Alt+C, and then press the Enter or Up-Arrow key to enter the view.
- To expand and collapse a node in the navigation tree, press the Right and Left-Arrow keys.
- To move to the next topic node, press the Down-Arrow or Tab key.
- To move to the previous topic node, press the Up-Arrow key or Shift+Tab.

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- To go to the next link, button, or topic node from inside on of the views, press Tab.
- To scroll all the way up or down in a pane, press Home or End.
- To go back, press Alt+Left Arrow; to go forward, press Alt+Right Arrow.
- To go to the next pane, press F6.
- To move to the previous pane, press Shift+F6.
- To print the active pane, press Ctrl+P.

Related accessibility information for sight-impaired users

The following list contains hints and tips that can help you more fully use the graphical user interface:

Drop-down lists are positioned directly over or before the radio button that activates it.

If you use a screen reader, you should be aware that there are radio buttons to activate drop-down lists for several GUI pages. The way to activate the drop-down list is by selecting the associated radio button. The drop-down list is positioned directly over or before the radio button that activates it. When you use a screen reader that processes the fields and controls of a page sequentially, you might select the radio button, but not know that the associated drop-down list has been activated. The screen reader processes inactive drop-down lists first, and then processes the next radio button. The drop-down list is activated if you select the radio button.

On the following pages, keep in mind that radio buttons activate a drop-down list:
- Administration
- ESS/DS Paths
- Sessions
- Session Details
- Storage Systems

Tables are best understood by reviewing the surrounding text and the table row and column number of the table.

On some graphical user pages, tables use the header or row ID attributes when reading a single cell. The screen reader reads the table row and column number, along with cell data. Therefore, you can infer the column header and row ID.

Experiment with and fine-tune the way your screen reader pronounces some of the product abbreviations.

Your screen reader might pronounce abbreviations as if they were words. For example, the common abbreviation for Enterprise Storage Server is ESS. Your screen reader might read ESS as the word "ess". With some screen readers you can hear alternate pronunciations. If you frequently use the software you might prefer to fine-tune such associations in your settings. When an association is created, the screen reader can recognize the abbreviation as a word. If you can add dictionary words with your screen reader, replace the capitalized character sequence with the sequence E space S space S.

Typically, this abbreviation is used in the combination form of ESS/DS. This term refers to the Enterprise Storage Server 800, the DS6000, or the DS8000.

Some decorative artifacts might persist if the cascading style sheet is disabled.

Enable cascading style sheets when possible; otherwise, some decorative elements might persist in the web browser GUI. These artifacts do not affect performance. If they become too distracting, consider using the command-line interface instead.

For efficiency, confirmation dialogs place initial focus on the Yes button.

When a confirmation dialog box is displayed, focus is given to the **Yes** button. Therefore, the screen reader reads "Yes" but does not read the confirmation text. The software processes the information in this way when you do the following types of tasks:

- Perform an action on a session
- Remove a connection to a storage system
- Click the **About link**
- Create a high-availability connection

To read the confirmation text before clicking the **Yes**, **No**, or **OK** button, view the previous heading before the button.

Dojo components are not read by all screen readers.

The Job Access for Windows and Speech (JAWS) screen reader does not read some Dojo components on Internet Explorer 7. Use the command-line interface instead of the GUI with JAWS on Internet Explorer 7.

Firefox is the preferred browser for use with a screen reader.

Use Firefox as the screen reader because other browsers might not fully expose assistive technology content to the screen reader.

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