



EMC<sup>®</sup>

# RecoverPoint for VMs

Version 4.3.1

## CLI Reference Guide

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# CHAPTER 1

## Introduction

This chapter includes the following topics:

- [Changes to commands](#)..... 10
- [Functions available only in the CLI](#)..... 10
- [Managing the EMC RecoverPoint system](#)..... 11
- [Getting Started with the RecoverPoint CLI](#)..... 11
- [Connecting to the EMC RecoverPoint CLI](#)..... 12
- [Working with the EMC RecoverPoint CLI in CLI mode](#)..... 13

## Changes to commands

A list of changes since the last revision of this document helps users understand important updates to the CLI.

**Table 1** Commands changed since last revision

Commands	What changed
<a href="#">edit_event_filter on page 104</a>	Command was added to the guide.
<a href="#">config_copy_policy on page 50</a>	Removed <code>journal_size_limit</code> parameter.
<a href="#">hijack_cluster on page 37</a>	Command was added to the guide.

## Functions available only in the CLI

The functions available through the CLI commands are usually also available in the GUI. However, some functions are available only in the CLI.

**Table 2** Functions available only in the CLI

CLI command or parameter	Notes
<code>acquire_management_ip</code>	
<code>add_ssh_key</code>	
<code>bandwidth_limit</code> parameter within: <ul style="list-style-type: none"> <li><code>config_link_policy</code></li> </ul>	This capability does not exist in the GUI.
<code>bookmark_image</code>	Bookmarks cannot be created in the GUI, but they can be created using the CLI bookmark commands and parameters.
<code>clear_markers</code>	
<code>clear_security_settings</code>	
<code>config_cluster_ids</code>	
<code>config_io_throttling</code>	
<code>config_long_term_statistics</code>	
<code>detect_bottlenecks</code> <code>export_consolidated_statistics</code>	The long-term effects of deduplication on your bandwidth can only be monitored through the RecoverPoint CLI.
<code>finish_maintenance_mode</code>	
<code>get_internal_cluster_uids</code>	
<code>get_internal_cluster_name</code>	
<code>get_ssh_keys</code>	
<code>hijack_cluster</code>	

**Table 2** Functions available only in the CLI (continued)

CLI command or parameter	Notes
regenerate_encryption_keys	
remove_ssh_key	
resume_writes_after_srm	
set_advanced_action_regulation	
set_backup_copy_retention_policy	
set_markers	
set_stream_quota	
show_integrity_check_status	
start_integrity_check	
start_maintenance_mode	
stop_integrity_check	
stop_snapshot_consolidation	
unlock_user	
unregulate_all_copies	

## Managing the EMC RecoverPoint system

The Command Line Interface (CLI) is an EMC RecoverPoint interface through which all functions of the EMC RecoverPoint system can be managed.

### EMC RecoverPoint Command Line Interface

The EMC RecoverPoint Command Line Interface is used to communicate with all RPAs in the RecoverPoint environment.

Use the EMC RecoverPoint Command Line Interface to:

- Display all of the commands in RecoverPoint, and the help for each command in [Help mode on page 17](#).
- Run CLI commands in [Expert mode on page 19](#).
- Run CLI commands interactively in [Interactive mode on page 18](#).

### Unisphere for RecoverPoint

Management activities are also carried out, and most CLI functions are also accessible through Unisphere for RecoverPoint. See the *EMC RecoverPoint Administrator's Guide* for more information.

## Getting Started with the RecoverPoint CLI

This sections describes how to communicate with the EMC RecoverPoint Command Line Interface. In order to communicate with the EMC RecoverPoint CLI, you will first need to establish a secure connection to the CLI using an RS232 port or an SSH connection.

Get started by verifying that you have the tools necessary to connect to a CLI session in both CLI work modes.

These are the main modes of work in a CLI session:

- CLI mode — for getting help and generally interacting with the system using CLI commands. CLI mode includes:
  - help mode — used to retrieve information regarding each CLI command, its parameters and usage.
  - interactive mode — used to guide the user when running single commands, allowing them to view each command parameter and its possible values while running the command.
  - expert mode — used to input multiple parameters and their values for a single command.

#### What you need for Linux or Solaris OS

Make sure you have the following tools, if you're working in Linux or Solaris:

- To communicate with the CLI in CLI mode, download, install and use the free SSH connection utility PuTTY for Linux or Unix, to connect from the PuTTY interface.

#### What you need in Windows operating systems

Make sure you have the following tools, if you're working in Microsoft Windows:

- To communicate with the CLI in CLI mode, download, install and use the free SSH connection utility PuTTY for Windows, to connect from the Microsoft Windows GUI.

## Connecting to the EMC RecoverPoint CLI

This sections describes how to connect to the RecoverPoint CLI through a secure RS232 port or SSH connection.

If this is your first time connecting, you will be logging in with:

- User admin with password admin. User admin is permitted to run all of the commands, including those that modify the system settings.

---

#### Note

The *<cluster management IP>* is a floating IP address assigned to the RPA that is currently active at the specified RPA cluster. In the event of a failure by this RPA, this floating IP address dynamically switches to the RPA that assumes operation at the specified cluster, which will either be RPA1 or RPA2.

See [After logging in for the first time on page 13](#).

#### Logging into the CLI in CLI mode

To run RecoverPoint commands in CLI mode from Microsoft Windows, Solaris or Linux, use PuTTY (see [Getting Started with the RecoverPoint CLI on page 11](#)).

---

#### Note

Scripts cannot be run in this manner.

In the PuTTY Configuration dialog box, fill in the following details:

- Host name: *<cluster management IP>*
- Connection type: SSH
- Port: 22

A login screen is displayed.

In the Login screen, fill in the following details:

- User: admin
- Password: admin

A connection is established with the primary RPA and the CLI prompt is displayed as `RPA cluster>`.

Every time you log into the RecoverPoint CLI, any monitored system limitations that have reached major or critical severity will be displayed at the CLI prompt.

#### From Linux or Solaris

From a Linux or Solaris (Unix) command prompt, open a CLI session with an RPA using the following SSH login:

```
$ ssh <cluster management IP> -l user
```

For example:

```
$ ssh 10.10.10.70 -l admin
```

A connection is established with the primary RPA and the CLI prompt is displayed as `RPA cluster>`.

#### From MS Windows command prompt

From a Microsoft Windows command prompt, open a CLI session with an RPA using the following SSH login:

```
c:\> plink -ssh <cluster management IP> -l user -pw user
```

For example:

```
c:\> plink -ssh 10.10.10.70 -l admin -pw admin
```

A connection is established with the primary RPA and the CLI prompt is displayed as `RPA cluster>`.

#### After logging in for the first time

Once connected as user admin, it is recommended to change the admin password to improve the security of the EMC RecoverPoint management interface.

To change the password, run [set\\_password on page 122](#).

Additionally, it is recommended to run [add\\_ssh\\_key on page 115](#) to add a public SSH key to your profile. The public key, used in conjunction with the private key (held by the machine on which the user is working), enables you to carry out a secure dialog using SSH with the RecoverPoint system.

After adding the public key, you only need to enter a username to open an SSH session with the CLI; a password is not required.

Before running [add\\_ssh\\_key on page 115](#), use an SSH-keygen to generate a key pair (private and public). The SSH-keygen facility writes the public key to a file. When you run [add\\_ssh\\_key on page 115](#), enter the public key at the key prompt.

## Working with the EMC RecoverPoint CLI in CLI mode

This section describes how to work in CLI mode of the EMC RecoverPoint Command Line Interface. The features, input and output of CLI mode are discussed in detail.

### Introduction

CLI mode is used to display system help information, and enter commands into the EMC RecoverPoint Command Line Interface interactively as well as non-interactively.

### Command prompts

Throughout this *EMC RecoverPoint CLI Reference Guide*, the command prompts of the different operating environments, are represented as:

*RPA cluster*> – a CLI session prompt (CLI mode)

### CLI mode input

The following input options are available in CLI mode.

### Autocomplete

RecoverPoint CLI provides an autocomplete feature—activated with the **Tab** key—that effectively speeds up interaction with the RPA.

Press **Tab** after typing the first letters of a command or parameter. If there are a number of possible commands or parameters, autocomplete displays all possible completions to what has previously been typed.

Additionally, when typing commands with only one parameter, after having typed the command, press the **Tab** key to bring up the possible parameter values.

In the following example, the user entries are in bold type:

1. *RPA cluster*>

2. *RPA cluster*> **remove\_g** and press **Tab**.

```
remove_group  remove_group_set
RPA cluster> remove_group
```

3. *RPA cluster*> **remove\_group** and press **ENTER**.

```
Enter consistency group name
z
```

4. Press **Tab**.

```
cg_1  cg_2  groupx
z
```

5. **c** and press **Tab**.

```
cg_1  cg_2
cg_
```

6. **cg\_1** and press **ENTER**.

The auto-completion feature can also be used with single-parameter commands, as shown in the following example:

1. *RPA cluster*> **get\_group\_se** and press **Tab**.

```
get_group_sets  get_group_settings
RPA cluster> get_group_settings
```

2. *RPA cluster*>**get\_group\_settings** and press **Tab**.

```
cg_1  cg_2  groupx
RPA cluster> get_group_settings
```

3. *RPA cluster*> **get\_group\_settings g** and press **Tab**.

```
RPA cluster> get_group_settings groupx
```

4. *RPA cluster*> **get\_group\_settings groupx** and press **ENTER**.

### Case sensitivity

The CLI is case-sensitive in that:

- CLI command and parameter names must be typed exactly as they appear in the CLI command and parameter list of help mode.
- User specified command and parameter names—such as those of consistency groups, volumes, splitters, and RPA clusters—must subsequently be typed accurately with regard to uppercase and lowercase letters.
- Parameter values are not case sensitive, unless the value has been defined by a user. For example, the system makes no distinction between a parameter value of "lag", "LAG", "Lag", or "IAG".

### Keyboard keys

The following keyboard keys perform special functions in CLI mode.

**Table 3** Function of keyboard keys in CLI mode

Keyboard key	Function
Enter	<ul style="list-style-type: none"> <li>• submits commands</li> <li>• scrolls down one line</li> </ul>
Spacebar	scrolls down one page
Up and Down arrows	<ul style="list-style-type: none"> <li>• When used at the prompt, scroll through previously entered commands.</li> <li>• Within a command, scroll through previously entered parameter values.</li> </ul>
Tab	Activates the Autocomplete feature; see <a href="#">Autocomplete on page 14</a> . <ul style="list-style-type: none"> <li>• When entering a command.</li> <li>• When entering a parameter value for which there is a limited set of possible values, and where the options are not presented in a sequentially numbered list.</li> </ul>
CTRL-C	Aborts the current command.
CTRL-A	Moves to the first character in the line.
CTRL-E	Moves to the end of the line.
CTRL-U	Deletes the current line.
CTRL-D	Deletes the character following the cursor's current position.
CTRL-K	Deletes text from the cursor's position to the end of the line.
CTRL-W	Deletes text from the cursor's position to the beginning of the line.

### Special characters

The following characters perform special functions for commands issued at the CLI prompt.

**Table 4** Function of special characters in CLI mode

Character	Function
" or '	Use quotation marks (single or double) to separate multi-word parameter values; see <a href="#">Expert mode on page 19</a> .

**Table 4** Function of special characters in CLI mode (continued)

Character	Function
,	Use a comma to separate multiple values of a parameter.
;	Use a semicolon to separate commands when there are multiple commands in a single command line; see <a href="#">Expert mode on page 19</a> .
?	When a command followed by a question mark (?) is typed, and <b>Enter</b> is pressed, the system returns a description of the command and the syntax required for its usage; see <a href="#">Help mode on page 17</a> . The same information is returned when <b>help</b> is typed before a command; for example, <code>help create_replica_copy</code> ; see <a href="#">Help mode on page 17</a> .

**Parameter values containing spaces**

If a value is entered for a parameter that includes spaces—such as a bookmark name, or a timeout value and unit—the entire expression must be surrounded with quotation marks. Alternatively, you can eliminate the space.

For example:

A bookmark name for [bookmark\\_image on page 48](#) could be either:

```
bookmark=121216production
```

or

```
timeout="121216 production"
```

It is good practice to use quotation marks for all values, even with those that do not contain a space. As such, quotation marks are not valid characters in parameter values.

**Units of measurement**

The CLI is flexible in its recognition of units of measurement that are entered along with parameter values.

There is no case-sensitivity for measurement units— the units can be entered in uppercase, lowercase, or any mix of the two.

If there is a space between the value and its unit, you must surround the value and unit with quotation marks, as described in [Parameter values containing spaces on page 16](#).

**Note**

In all cases, 1 KB is equal to 1024 bytes.

The following table shows the acceptable forms for entering various units of measurement in the CLI.

**Table 5** Accepted forms for units of measurement

Unit	Accepted forms
Gigabyte	gb, gbyte, gbytes, gigabyte, gigabytes
Megabyte	mb, mbyte, mbytes, megabyte, megabytes
Kilobyte	kb, kbyte, kbytes, kilobyte, kilobytes



**Table 5** Accepted forms for units of measurement (continued)

Unit	Accepted forms
Byte	b, byte, bytes
Week	wk, wks, week, weeks
Day	d, day, days
Hour	h, hr, hrs, hour, hours
Minute	min, mins, minute, minutes
Second	s, sec, secs, second, seconds

## CLI modes

The following are the main modes of work in CLI mode:

- Help mode — used to display the full list of CLI commands in the RecoverPoint system, and the system help information for each CLI command.
- Interactive mode — used to guide the user when running single commands, allowing him to view each command parameter and its possible values, while running the command.
- Expert mode — used to input multiple parameters and values for a single command.

### Help mode

Help mode is a CLI mode accessed from the CLI session prompt `RPA cluster>`.

In help mode, users can display the full list of CLI commands in the RecoverPoint system, and the system help information for each CLI command.

In help mode:

- Display a listing of all CLI commands by pressing:  
**<Tab>**
- Display a list of all of the RecoverPoint CLI commands, together with a brief description of each command by typing:  
`help <Enter>`
- Display the required syntax and usage for a particular command by typing:  
`help <command> <Enter>`  
or  
`<command> ? <Enter>`

### Help mode output

EMC uses the following conventions in the CLI help output:

**Table 6** Help output conventions

Output	Example	Indicate
parameter= <i>&lt;value&gt;</i>	copy= <i>&lt;copy name&gt;</i>	Mandatory parameter and value. Parameters that are NOT enclosed in square brackets are mandatory. If a value is not specified for a mandatory parameter, the system issues an error message.
[...]	[product= <i>&lt;...&gt;</i> ]	Optional parameter and value.

**Table 6** Help output conventions (continued)

Output	Example	Indicate
<code>&lt;&gt;</code> <code>&lt;num&gt;</code> <code>&lt;...&gt;</code>	<code>copy=&lt;copy name&gt;</code> <code>port=&lt;integer&gt;</code> <code>rpa=RPA&lt;n&gt;</code>  <code>splitter=&lt;...&gt;</code> <code>bookmark=&lt;...&gt;</code>	Parameter values. The contents of the angle brackets indicate the type to which the parameter value should conform. For example: <ul style="list-style-type: none"> <li>• <code>&lt;copy name&gt;</code> must be the name of an existing copy</li> <li>• <code>&lt;integer&gt;</code> must be an integral value</li> <li>• <code>&lt;...&gt;</code> indicates that any string or free text will be accepted</li> </ul>
	<code>type=replication   journal</code> <code>priority=high   normal   low</code>	Parameter value separator - alternate options.

**Interactive mode**

Interactive mode is a CLI mode accessed from the CLI session prompt `RPA cluster>`.

Interactive mode is used to guide the user when running single commands.

In interactive mode, users are presented with each command's parameters, syntax and possible values, as they are requested by the system.

In interactive mode:

- Type the command, and press **<Enter>**. The system prompts you for the first parameter value, if any.
- For mandatory parameters: If you press **<Enter>** without entering a value, the system will display an error message, and prompt you again to enter a value. If you fail to enter a value a second time, the system exits the command.
- For optional parameters: If you press **<Enter>** without entering a value, the system will accept the default value for the parameter.
- CLI flags can be included in the command line; see [Useful flags on page 18](#).

To display the system help information for a particular command, see [Help mode on page 17](#).

**Useful flags**

The following flags are useful for inclusion in the command line in interactive mode.

**Table 7** Useful command line flags in Interactive mode

Flag	Example	Description
Interactive flag	<code>-n</code>	Instructs system to use the default value for every parameter. If the command includes mandatory parameters that are not specified, an error is displayed.
XML flag	<code>-xml</code>	Instructs system to formulate output in XML and issue a return codes.

The following is an example of a command run in *interactive mode*:

```
RPA cluster> pause_transfer <Enter>
Enter consistency group name
group_1 <Enter>
```

```
Enter copy name, or press 'ENTER' for all copies of group
copy_1 <Enter>
Request to pause group data transfer registered successfully.
```

The following is an example of the same command with two mandatory parameters and a force flag run in expert mode; see [“Expert mode” on page 19](#):

```
RPA cluster> pause_transfer group=group_1 copy=copy_1 -f
Request to pause group data transfer registered successfully.
```

### Expert mode

CLI expert mode is a CLI mode accessed from the CLI session command prompt RPA cluster>.

Expert mode is used to quickly input multiple parameters and their values for a single command, simultaneously. Commands with more than one parameter can be run in expert mode to speed up input efficiency, as you become more familiar with the RecoverPoint CLI.

Expert mode is also used to quickly input CLI commands with only one mandatory parameter.

In expert mode:

- Enter all mandatory and optional command parameters in a single statement following the CLI prompt.
- The command must start with the command name, and can then be followed by relevant parameters. Each parameter must have the format *<parameter name>=value*.

For example:

```
apply_parallel_bookmark groups=group1 bookmark=blue
```

- For commands with only one parameter, it is not necessary to include the parameter name. You can just enter the parameter value after the command name.

For example:

```
config_io_throttling unlimited
```

- All mandatory parameters must be specified or the command will not run.
- There is no required order in which the parameters must appear in the command line, and it is permissible to mix between the locations of mandatory and optional parameters.
- When running a command that includes multiple-word parameter values, it is mandatory to surround the command and the multiple-word value with double and single quotes, respectively.

For example:

```
" get_rpa_states RPA cluster='New York'"
```

- CLI flags can be included in the command line; see [Useful flags on page 20](#).
- To display the system help information for a particular command, see [Help mode on page 17](#).

### Relevant commands

It is common to run the following commands in expert mode, after becoming more familiar with their syntax.

## Commands with multiple mandatory parameters

CLI commands with multiple mandatory parameters are good candidates for running in expert mode.

## Commands with one mandatory parameter

It is also common to run commands with only one parameter in expert mode. This is because for commands with only one parameter, it is not necessary to include the parameter name. You can just enter the parameter value after the command name.

For example:

```
start_transfer group1
```

---

### Note

All CLI commands that can be run in expert mode can also be run in interactive mode. However, CLI commands with no parameters can only be run in interactive mode; see [Interactive mode on page 18](#).

---

### Useful flags

The following CLI flags are useful for inclusion in the command line in expert mode:

**Table 8** Useful command line flags in expert mode

Flag	Example	Description
Force flag	<code>-f</code>	Instructs system to suppress user confirmation prompts and any other warnings or interactive queries related to the command.
XML flag	<code>-xml</code>	Instructs system to formulate output in XML and issue a return code.

The following is an example of a command run in expert mode with two mandatory parameters and a force flag:

```
RPA cluster> pause_transfer group=group_1 copy=copy_1 -f
Request to pause group data transfer registered successfully.
```

# CHAPTER 2

## List of Commands

This chapter includes the following topics:

- [Commands](#).....22

# Commands

**Table 9** List of CLI Commands

Command name	Description
<a href="#">add_email_users on page 98</a>	Assign filters to emails group.
<a href="#">add_role on page 114</a>	Defines a new management role in the system, and sets the permissions for that role.
<a href="#">add_ssh_key on page 115</a>	Adds a public key to the current management user's profile, allowing him to open secure SSH sessions with the CLI, without specifying a password.
<a href="#">add_user on page 115</a>	Defines a new management user in the system, and sets the permissions and password for that user.
<a href="#">balance_load on page 48</a>	Assigns preferred RPAs to the specified consistency groups, to enable a balanced distribution of writes across all RPAs.
<a href="#">bookmark_image on page 48</a>	Creates a bookmark for the snapshot at the current point-in-time, and sets its consolidation policy.
<a href="#">clear_events_log on page 99</a>	Clears the events log.
<a href="#">clear_ldap_configuration on page 116</a>	Removes all LDAP configurations
<a href="#">clear_markers on page 61</a>	Clears markers from the journal volume, for a specified copy of a specified group.
<a href="#">clear_security_settings on page 78</a>	Removes all users, roles from the system. Clears LDAP settings and security level.
<a href="#">config_automatic_snapshot_consolidation on page 78</a>	Configures automatic snapshot consolidation for the specified group, at the specified copy.
<a href="#">config_cluster_ids on page 32</a>	Defines the software serial ID and location ID of a specified cluster for the system reports mechanism (SyR).
<a href="#">config_copy_policy on page 50</a>	Configures the replication policy for the specified copy of the specified consistency group.
<a href="#">config_email on page 98</a>	Configures the system alert mechanism settings.
<a href="#">config_group_policy on page 53</a>	Configures the replication policy for the specified consistency group.
<a href="#">config_io_throttling on page 79</a>	Sets the maximum storage read-rate and storage-awareness, per cluster in a RecoverPoint configuration.
<a href="#">config_ldap on page 117</a>	Defines the LDAP configurations.
<a href="#">config_link_policy on page 54</a>	Configures the protection policy for the specified link of the specified consistency group.
<a href="#">config_long_term_statistics on page 80</a>	Sets whether or not to collect long term statistics.
<a href="#">config_preferred_rpas on page 60</a>	Designates which RPA(s) to use when transferring the writes of the specified group. Also used to define the group as a distributed consistency group.
<a href="#">config_snmp_global on page 99</a>	Configures the SNMP event trap global mechanism.

**Table 9** List of CLI Commands (continued)

<a href="#">config_snmp_trap_dest on page 100</a>	Configures the SNMP trap destination for the specified cluster.
<a href="#">config_syslogs_global on page 100</a>	Configures the global syslog settings.
<a href="#">config_syslogs_target_host on page 101</a>	Configures the syslog settings.
<a href="#">config_system_reports on page 81</a>	Defines the configuration of system notifications sent to the system report mechanism (SyR).
<a href="#">config_user_account on page 118</a>	Defines the specified company name and contact email in the user account settings.
<a href="#">create_event_filter on page 101</a>	Creates new event filter for use with <code>email/snmp/syslog</code> .
<a href="#">detect_bottlenecks on page 82</a>	Detects bottlenecks in the system.
<a href="#">disable_email on page 102</a>	Disables the sending of system alerts through email, according to the specified alert rules.
<a href="#">disable_image_access on page 61</a>	Disables access to the replica image for which access is currently enabled in the specified copy.
<a href="#">disable_snmp on page 103</a>	Disables the SNMP agent.
<a href="#">disable_syslogs on page 103</a>	Disables the syslog mechanism.
<a href="#">edit_event_filter on page 104</a>	Edits the specified event filter.
<a href="#">enable_email on page 105</a>	Enables the sending of system alerts by email.
<a href="#">enable_snmp on page 105</a>	Enables the SNMP agent.
<a href="#">enable_syslogs on page 105</a>	Enables the syslog mechanism.
<a href="#">export_consolidated_statistics on page 83</a>	Exports system statistics and information on detected bottlenecks to a file, for specified granularities and time frames.
<a href="#">export_statistics on page 84</a>	Exports raw system statistics to the specified file.
<a href="#">finish_maintenance_mode on page 94</a>	Finish the current mode of upgrade.
<a href="#">get_account_settings on page 119</a>	Displays the user's account settings, for use in technical support situations.
<a href="#">get_clusters_topology on page 33</a>	Displays the connectivity topology between the environment's clusters.
<a href="#">get_current_time on page 128</a>	Displays the current system date and time stamp, as used by the RPAs.
<a href="#">get_events_log on page 106</a>	Displays the event logs.
<a href="#">get_group_settings on page 62</a>	Displays the current settings of the specified group.
<a href="#">get_group_state on page 64</a>	Displays the current state of the specified group, its copies, and its links, in the RecoverPoint system.
<a href="#">get_group_statistics on page 66</a>	Displays the current performance statistics of the specified group, its copies and its links.
<a href="#">get_groups on page 85</a>	Displays a list of all of the groups in the system, and the copies of each group.
<a href="#">get_images on page 67</a>	Displays information about the snapshots of the specified copy.
<a href="#">get_internal_cluster_name on page 33</a>	Get the internal name of the specified cluster.

**Table 9** List of CLI Commands (continued)

<a href="#">get_internal_cluster_uids on page 33</a>	Displays the unique identifier(s) of the specified RPA cluster(s).
<a href="#">get_ldap_configuration on page 119</a>	Displays the LDAP configurations.
<a href="#">get_monitored_parameters on page 108</a>	Display monitored parameters whose value exceeds the specified minimum severity.
<a href="#">get_raw_statistics on page 86</a>	Displays unprocessed system statistics, for use in support situations.
<a href="#">get_rpa_settings on page 34</a>	Displays the settings for the specified RPA(s) at the specified cluster(s).
<a href="#">get_rpa_states on page 34</a>	Displays the state of communication between the RPAs at a specified cluster, and other components of the system.
<a href="#">get_rpa_statistics on page 35</a>	Displays the performance statistics of the RPAs at the specified RPA cluster.
<a href="#">get_security_settings on page 86</a>	Displays the current RPA communication security level.
<a href="#">get_splitter_states on page 28</a>	Displays the current state of splitters in the system.
<a href="#">get_storage on page 40</a>	Displays all of the arrays and vCenter servers that have been registered at the specified RPA cluster.
<a href="#">get_system_report on page 87</a>	Displays the current system report and sends it to the specified email address.
<a href="#">get_system_report_settings on page 87</a>	Displays the current system notification settings.
<a href="#">get_system_settings on page 88</a>	Displays the settings of all of the clusters in the RecoverPoint system.
<a href="#">get_system_status on page 89</a>	Displays the current problems in the system, by category, for the specified RPA cluster.
<a href="#">get_versions on page 90</a>	Displays the versions of RecoverPoint running on each cluster of the environment.
<a href="#">get_volume_states on page 44</a>	Displays the current state of RPA access to all replication volumes in the specified group.
<a href="#">hijack_cluster on page 37</a>	Hijacks a specified cluster by a given internal cluster name. Removes all splitter volumes from a specified cluster. In virtual environments, supports a user-activated, automated hijack procedure.
<a href="#">modify_role on page 120</a>	Modifies an existing management role in the system. Can modify role name and/or permissions.
<a href="#">pause_transfer on page 68</a>	Pauses data transfer to the specified copy of the specified group.
<a href="#">regenerate_encryption_keys on page 121</a>	Regenerate the keys used to encrypt and decrypt confidential data.
<a href="#">register_storage on page 40</a>	Registers the specified arrays or vCenter servers on the specified RPA cluster.
<a href="#">remove_email_users on page 109</a>	Removes specified email users.
<a href="#">remove_event_filter on page 109</a>	Remove selected event filter.
<a href="#">remove_role on page 121</a>	Removes a management role from the system.
<a href="#">remove_ssh_key on page 122</a>	Removes a public key from user's authorized keys.
<a href="#">remove_user on page 122</a>	Removes a management user from the system.



**Table 9** List of CLI Commands (continued)

<a href="#">rescan_san on page 28</a>	Refreshes the info in the SAN discovery cache.
<a href="#">set_advanced_action_regulation on page 90</a>	Overrides the copy regulation setting defined for the system.
<a href="#">set_markers on page 70</a>	Creates markers in the journal volume, for the specified replication set in the specified copy and group.
<a href="#">set_password on page 122</a>	Resets the password of the currently logged-in user.
<a href="#">set_security_level on page 123</a>	Defines the security level for the currently logged-in management user.
<a href="#">set_smtp_server on page 91</a>	Defines the server through which system email notifications, such as system alerts and system reports, are sent.
<a href="#">set_snapshot_consolidation_policy on page 71</a>	Sets the consolidation policy for the specified snapshot.
<a href="#">set_snmp_community on page 109</a>	Defines the SNMPv1 community string.
<a href="#">set_user on page 123</a>	Resets the password and/or permissions of an existing management user.
<a href="#">show_integrity_check_status on page 72</a>	Shows the progress of any integrity check running on the specified copy of the specified group.
<a href="#">start_integrity_check on page 73</a>	Starts checking the replication consistency between the source volumes of the specified group and the volumes of the specified copy.
<a href="#">start_maintenance_mode on page 94</a>	Switch to upgrade mode.
<a href="#">start_transfer on page 73</a>	Starts data transfer to the specified copy of an enabled group.
<a href="#">stop_integrity_check on page 74</a>	Stops checking the replication consistency between the source volumes of the specified group and the volumes of the specified copy.
<a href="#">test_email on page 110</a>	Sends a test mail item to the specified email address.
<a href="#">test_ldap_connection on page 124</a>	Tests the LDAP configurations.
<a href="#">test_snmp on page 110</a>	Tests whether SNMP traps can be sent.
<a href="#">test_syr_connectivity on page 110</a>	Tests the connectivity of the system report mechanism (SyR) and opens a Service Request with EMC Support.
<a href="#">test_syslogs on page 111</a>	Tests the syslog mechanism.
<a href="#">undo_writes on page 74</a>	Undoes all production writes saved in the image access log of the specified copy journal since image access was enabled, without disabling image access.
<a href="#">unlock_user on page 125</a>	Unlocks system users that have been locked out of the system after three failed attempts to log in.
<a href="#">unregulate_all_copies on page 91</a>	Releases all copies from regulation.
<a href="#">update_vcenter_server_registration on page 96</a>	Update the registration details for the specified vCenter Server at the specified RPA cluster.



# CHAPTER 3

## Splitters

This chapter includes the following topics:

- [get\\_splitter\\_states](#)..... 28
- [rescan\\_san](#)..... 28

## get\_splitter\_states

Displays the current state of splitters in the system.

### Permission

Read Only

### Parameters

```
[cluster=<cluster name>]
[splitter=<splitter name>]
```

### Descriptions

#### cluster (optional)

Name of the RPA cluster at which the splitter is located.  
Default is all RPA clusters.

#### splitter (optional)

Name of a specific splitter for which to obtain state information.  
Default is all splitters.

### Notes

If no cluster is specified, the states of all splitters at all clusters are displayed. If no splitter is specified, the states of all splitters at the specified cluster are displayed.

When using a VPLEX splitter, the splitter status of each VPLEX director is also displayed.

A VNX/CLARiiON splitter can be shared by multiple RPA clusters. The `Number of attached RPA clusters` field indicates how many RPA clusters are sharing a splitter.

If a volume is masked to more than one RPA cluster sharing the same VNX/CLARiiON splitter, it can be attached to more than one RPA cluster. The volume, however, can only be used by the first RPA cluster to which it is attached. It is in an error state for all other RPA clusters, indicated by the `Attached to other RPA cluster(s)` state in the `Volume Access` field. Use the `detach_splitter` command to detach the faulted volume from the RPA cluster.

---

### Note

To avoid this problem, a volume should be masked to a single RPA cluster. A volume that is masked for one RPA cluster should not be masked for another RPA cluster.

---

## rescan\_san

Refreshes the info in the SAN discovery cache.

### Permission

Read Only

### Parameters

```
[cluster=<cluster names>]
[volumes=full | basic | none] (Default: basic)
```

```
[splitters=yes | no] (Default: yes)
[splitter_volumes=<...> | all | none] (Default: all)
```

## Descriptions

### cluster (optional)

Name of the RPA cluster to be rescanned.  
Default value is all RPA clusters.

### volumes (optional)

Whether to scan the SAN at the specified RPA clusters for LUNs.

Possible values are full, basic, and none.

Default is basic.

### splitters (optional)

Whether to scan the SAN at the specified RPA clusters for splitters - machines on which the splitter has been installed.

Default is yes.

### splitter\_volumes (optional)

Splitter for which information on available paths to RecoverPoint volumes is to be rescanned.

A splitter can be specified; other possible values are all and none.

Default is all.

## Notes

The SANs in all clusters will be rescanned if no cluster is specified.

The `volumes` and `splitters` parameters specify whether or not to rescan the volumes and/or splitters in the SAN respectively.

The basic volumes rescan detects new volumes, but not changes to existing volumes.

The full volumes rescan includes changes to existing volumes, and so can take several minutes.

If splitters are being rescanned, the `splitter_volumes` parameter can be used to rescan splitter-volume connections as well.

Either a particular splitter name can be specified or all or none.

If any error is encountered, the command will exit with return code 2 (Operation failed).



# CHAPTER 4

## RPAs

This chapter includes the following topics:

- [config\\_cluster\\_ids](#)..... 32
- [get\\_clusters\\_topology](#)..... 33
- [get\\_internal\\_cluster\\_name](#)..... 33
- [get\\_internal\\_cluster\\_uids](#)..... 33
- [get\\_rpa\\_settings](#)..... 34
- [get\\_rpa\\_states](#)..... 34
- [get\\_rpa\\_statistics](#)..... 35
- [sleep](#)..... 36
- [hijack\\_cluster](#)..... 37

## config\_cluster\_ids

Defines the software serial ID and location ID of a specified cluster for the system reports mechanism (SyR).

### Permission

System Configuration

### Parameters

```
cluster=<cluster name>
[software_serial_id=<...>]
[location_id=<...>]
```

### Descriptions

#### cluster

Name of the RPA cluster in the RecoverPoint system whose software serial ID or location ID you want to set.

#### software\_serial\_id (optional)

The Software Serial ID (SSID) is the unique identifier of an RPA cluster in the RecoverPoint system. The SSID is the identification used by the install base to support EMC equipment installed at customer sites, through the system reporting and ESRS mechanisms. The SSID is in the format *<SN>EID<RPA cluster ID>*.

The format and function of the SSID has changed from previous RecoverPoint versions.

The SSID:

- Is generated for each RPA cluster when the first license related to the RPA cluster is added to the system. When additional licenses are added to the system, the SSID of the RPA cluster does not change. If no license was added for an RPA cluster, the SSID of that RPA cluster will be empty.
- Can be displayed by running the `get_system_settings` CLI command, and can only be modified by EMC Customer Support.
- Does not change with upgrades. When upgrading to RecoverPoint 4.0 from previous RecoverPoint versions, the SSID value is taken from the value of the SSIDs in the previous RecoverPoint version.
- Does not change even if the SN from which it was generated no longer exists in any of the installed licenses.

#### location\_id (optional)

Name of the geographical location at which the RecoverPoint system is installed. Usually, this is the address of the company, as designated in the EMC sales order. The `location_id` is the Site ID used in various EMC global processes. The location ID:

- Is obtained from the value of the `Site_Info` parameter in the license file. Its value is set by the first installed license for an RPA cluster. If no license was installed for an RPA cluster, the Location ID of that RPA cluster will be empty.
- Can be displayed by running the `get_system_settings` CLI command, and can only be modified by EMC Customer Support.



- Does not change even if the `Site_Info` from which it was generated no longer exists in any of the installed licenses.

**Notes**

DO NOT MODIFY THIS SETTING. This setting is for use only by EMC Customer Service.

## get\_clusters\_topology

Displays the connectivity topology between the environment's clusters.

**Permission**

Read Only

**Parameters**

None

**Notes**

None

**Example**

To display the connectivity topology between RPA clusters:

```
RPA cluster> get_clusters_topology
Clusters topology:
New York -- London: IP
```

## get\_internal\_cluster\_name

Get the internal name of the specified cluster.

**Permission**

Upgrade

**Parameters**

[cluster=<cluster names>]

**Descriptions****cluster (optional)**

Name of an existing RPA cluster.

Default is all RPA clusters.

**Notes**

None

## get\_internal\_cluster\_uids

Displays the unique identifier(s) of the specified RPA cluster(s).

**Permission**

Read Only

**Parameters**

```
[cluster=<cluster names>]
```

**Descriptions****cluster (optional)**

Name of an existing RPA cluster.

Default is all RPA clusters.

**Notes**

Multiple RPA cluster names can be entered. Separate multiple cluster names with a comma.

## get\_rpa\_settings

Displays the settings for the specified RPA(s) at the specified cluster(s).

**Permission**

Read Only

**Parameters**

```
[cluster=<cluster name>]
[rpa=RPA<n>]
```

**Descriptions****cluster (optional)**

Name of an existing RPA cluster.

Default is all RPA clusters.

**rpa (optional)**

Number of an existing RPA at the specified RPA cluster.

Default is all RPAs.

**Notes**

If a cluster is specified and no RPAs are specified, all RPAs at the cluster will be presented.

If no cluster is specified, RPAs cannot be specified. In such case, all RPAs at all clusters will be presented.

## get\_rpa\_states

Displays the state of communication between the RPAs at a specified cluster, and other components of the system.

**Permission**

Read Only

**Parameters**

```
[cluster=<cluster name>]
```

**Descriptions****cluster (optional)**

Name of an existing RPA cluster.

Default is all RPA clusters.

**Notes**

Displays the state of communication between the RPAs at the specified cluster, and:

- the repository volume
- other RPAs
- the replication and journal volumes

If no cluster is specified, the state of the RPAs at all clusters is displayed.

## get\_rpa\_statistics

Displays the performance statistics of the RPAs at the specified RPA cluster.

**Permission**

Read Only

**Parameters**

```
[cluster=<cluster names>]
[rpa=RPA<n>]
```

**Descriptions****cluster (optional)**

Name of an existing RPA cluster.

Default is all RPA clusters.

**rpa (optional)**

Number of an existing RPA in the specified RPA cluster.

Default is all RPAs.

**Notes**

If an RPA cluster is specified but no RPAs are specified, the statistics of all RPAs at the cluster are displayed. If no RPA cluster is specified, RPAs cannot be specified. In such a case, the statistics of all RPAs at all clusters are displayed.

For each RPA, the following information is displayed:

- SAN traffic handled by the cluster or RPA
- WAN/FC traffic generated by the cluster or RPA
- Compression ratio between the input and output for the cluster or RPA
- RPA CPU usage
- WAN latency to the peer RPA
- Packet loss experienced over the WAN to the peer RPA

**Note**

The WAN field in the output shows all outgoing connections (either WAN or Fibre Channel).

**Example**

```
RPA cluster> get_rpa_statistics
Enter cluster name, or press 'ENTER' for all clusters:
All RPAs:
  London:
    Cluster's RPAs:
      RPA 1:
        Traffic:
          Application throughput:
            SAN: 0 bps
            WAN: None
          Application incoming writes: 0
          Compression ratio: None
          Compression CPU usage: 20.00%
          Computed connection:
            New York:
              Latency (ms): 0
              Packet loss: 9.28%
      RPA 2:
        Traffic:
          Application throughput:
            SAN: 0 bps
            WAN: None
          Application incoming writes: 0
          Compression ratio: None
          Compression CPU usage: 19.10%
          Computed connection:
            New York:
              Latency (ms): 0
              Packet loss: 9.28%
      RPA 3:
        Traffic:
          Application throughput:
            SAN: 0 bps
            WAN: None
          Application incoming writes: 0
          Compression ratio: None
          Compression CPU usage: 20.26%
          Computed connection:
            New York:
              Latency (ms): 0
```

Packet loss: 9.90%

## sleep

Sets the number of seconds for the CLI session to sleep.

**Permission**

Read Only

**Parameters**

```
seconds<=integer> (Default: 3)
```

**Descriptions****seconds**

Enter the number of seconds during which the CLI session will be in sleep mode.

**Notes**

This command can be run only non-interactively.

## hijack\_cluster

Hijacks a specified cluster by a given internal cluster name. Removes all splitter volumes from a specified cluster. In virtual environments, this command supports an automated hijack procedure that is user-activated.

**Permission**

Admin

**Parameters**

```
cluster=<cluster name>
internal_cluster_name=<...>
```

**Descriptions****cluster**

Name of the vRPA cluster in the system.

**internal\_cluster\_name**

Internal name of the vRPA cluster.

**Notes**

This command is used when the internal cluster name was changed and the attached splitters still have attached volumes to the old cluster, thus preventing the new cluster from attaching volumes.

In virtual environments, this command supports an automated hijack procedure that is user-activated. In this use case, the hijack includes:

- Removing license VM count
- Removing the cluster single sign-on token from the VC fields
- Cleaning the VMs
- Deleting the JUKE hierarchy tree for the specified cluster from every accessible datastore

This is useful for cases in which a user incorrectly deletes a cluster.



# CHAPTER 5

## Storage

This chapter includes the following topics:

- [get\\_storage](#)..... 40
- [register\\_storage](#)..... 40

## get\_storage

Displays all of the arrays and vCenter servers that have been registered at the specified RPA cluster.

### Permission

Storage Management

### Parameters

```
cluster=<cluster name>
```

### Descriptions

#### cluster

The name of an existing RPA cluster in RecoverPoint.

### Notes

None

## register\_storage

Registers the specified arrays or vCenter servers on the specified RPA cluster.

### Permission

Storage Management

### Parameters

```
cluster=<cluster name>
name=<...>
type=<storage type>
[storage_unit=<...>]
[serial_number=<...>]
[ip_list=<...>]
primary_ip=<...>
[secondary_ip=<...>]
[use_fc=yes | no] (Default: no)
[port=<...>]
[authentication_scope=Local | Global | LDAP]
username=<...>
password=<...>
[array_mgmt_provider=<array provider name>]
[certificate=<...>]
```

### Descriptions

#### cluster

The name of the RPA cluster where the array or vCenter Server is located

#### name

The name that you want to give the array or vCenter Server in RecoverPoint.

#### type

The type of the storage. Valid storage types are VNX, CLARiiON, ScaleIO, VPLEX, XtremIO, vCenter Server, and DataDomain. In RecoverPoint/SE, only XtremIO, VNX, CLARiiON and vCenter Server are valid types.



**storage unit (optional)**

Name of the DataDomain storage unit.

**serial number (optional)**

Serial number of the array or vCenter Server.

**ip list (optional)**

For ScaleIO environments only. This is a comma-separated list of one to eight IP addresses of ScaleIO storage.

**primary\_IP**

In VNX/CLARiiON environments, this is the IP address of SP A. For all other arrays, this is the IP address of the array. For vCenter Servers, this is the IP address of the vCenter Server.

**secondary\_IP (optional)**

VNX/CLARiiON storage only. In VNX/CLARiiON environments, this is the IP address of SP-A. This parameter is not relevant for all other arrays and vCenter Servers.

**use\_fc=yes | no (optional)**

Specify whether or not to use Fibre Channel for DataDomain arrays. Default is yes.

**port (optional)**

When registering a vCenter Server, this is the TCP port number of the vCenter Server.

**authentication\_scope (optional)**

VNX/CLARiiON storage only. Possible values are Global, Local and LDAP.

**username**

Login name of the user to the array or vCenter Server. In VNX/CLARiiON environments, this is the Unisphere/Navisphere username. In VPLEX, this is the platform username.

**password**

Password of the user to the array or vCenter Server. In VNX/CLARiiON environments, this is the Unisphere/Navisphere password. In VPLEX, this is the platform password.

**array\_mgmt\_provider (optional)**

Name of the storage array provider.

**certificate (optional)**

For VPLEX arrays only. Path to the Active Directory certificate to use for secure communication with the LDAP server. RecoverPoint accepts LDAP certificates only in PEM format.

**Notes**

The `certificate` parameter is only relevant for VPLEX arrays.

The parameters `secondary_ip` and `authentication_scope` are only relevant for VNX/CLARiiON storage.

The `port` parameter is only relevant for vCenter Servers.



# CHAPTER 6

## Volumes

This chapter includes the following topics:

- [get\\_volume\\_states](#).....44

## get\_volume\_states

Displays the current state of RPA access to all replication volumes in the specified group.

### Permission

Read Only

### Parameters

```
[group=<group name>]
```

### Descriptions

#### group (optional)

Name of an existing consistency group.

Default is all.

### Notes

If no group is specified, the volume states of all volumes of all groups are displayed.

### Example

```
RPA cluster> get_volume_states
Enter the group name, or press 'ENTER' for all groups:
Group:
  cg1:
    Copy:
      copy1:
        Volume:
          Vplex lun # 0012:
            RPA access: OK
          Vplex lun # 0017:
            Replication set: RSet0
            RPA access: OK
      copy2:
        Volume:
          Vplex lun # 0010:
            Replication set: RSet0
            RPA access: OK
          Vplex lun # 0018:
            RPA access: OK
    prod:
      Volume:
        Vplex lun # 0001:
          Replication set: RSet0
          RPA access: OK
        Vplex lun # 0025:
          RPA access: OK
  cg2:
    Copy:
      copy1:
        Volume:
          Vplex lun # 0010:
            Replication set: RSet0
            RPA access: OK
          Vplex lun # 0028:
            RPA access: OK
    prod:
      Volume:
        Vplex lun # 0008:
          Replication set: RSet0
          RPA access: OK
```

```
Vplex lun # 0011:  
RPA access: OK
```



# CHAPTER 7

## Consistency Groups

This chapter includes the following topics:

• <a href="#">balance_load</a> .....	48
• <a href="#">bookmark_image</a> .....	48
• <a href="#">config_copy_policy</a> .....	50
• <a href="#">config_group_policy</a> .....	53
• <a href="#">config_link_policy</a> .....	54
• <a href="#">config_preferred_rpas</a> .....	60
• <a href="#">clear_markers</a> .....	61
• <a href="#">disable_image_access</a> .....	61
• <a href="#">get_group_settings</a> .....	62
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## balance\_load

Assigns preferred RPAs to the specified consistency groups, to enable a balanced distribution of writes across all RPAs.

### Permission

Group Configuration

### Parameters

```
[exclude_groups=<group names>]
[apply_recommendation=yes | no] (Default: no)
```

### Descriptions

#### exclude\_groups (optional)

The consistency groups to exclude from the recommendation.

#### apply\_recommendation (optional)

Whether (yes) or not (no) to apply the load balancing suggestion.

Default is no.

### Notes

This process can take several minutes.

When `exclude_groups` is specified, although groups are excluded from the recommendation, they are included in the analysis.

Enter multiple group names in the form of a comma-separated list (For example: GroupA, GroupB, GroupC).

When `apply_recommendation` is set to yes, every group whose preferred RPA is modified as a result of the process will be initialized.

## bookmark\_image

Creates a bookmark for the snapshot at the current point-in-time, and sets its consolidation policy.

### Permission

Group Configuration

### Parameters

```
[protection_entity=group | group_set] (Default: group)
groups=<group names>
[group_set=<group set name>]
bookmark=<...>
[consolidation_policy=never | survive_daily | survive_weekly |
survive_monthly | always] (Default: always)
[retention_time=<num>months | <num>weeks | <num>days] (Default:
forever)
[kvm=<...>]
[consistency_type=application_consistent | crash_consistent]
(Default: crash_consistent)
```



**Descriptions****protection\_entity**

The RecoverPoint-protected entity that you wish to bookmark. Valid values are `group` or `group_set`.

Default is `group`.

**groups**

The name of one or more existing group(s) in RecoverPoint.

**group\_set (optional)**

The name of an existing group set in RecoverPoint.

**bookmark**

Bookmark name string.

**Note**

The word 'latest' cannot be used as a bookmark name.

**consolidation\_policy (optional)**

Consolidation policy to apply. Valid values are:

- `never` — Snapshot is never consolidated.
- `survive_daily` — Snapshot remains after daily consolidations, but is consolidated in weekly, monthly, and manual consolidations.
- `survive_weekly` — Snapshot remains after daily and weekly consolidations, but is consolidated in monthly and manual consolidations.
- `survive_monthly` — Snapshot remains after daily, weekly, and monthly consolidations, but is consolidated in manual consolidations.
- `always` — Snapshot is consolidated in every consolidation process, whether manual or automatic.

The default policy is `always`. If the `consolidation_policy` parameter is not specified, the snapshot is consolidated in both automatic and manual consolidation processes.

**retention\_time (optional)**

Only for DataDomain groups. Retention time to apply to this snapshot. Valid values are:

- `<num>months` — Number of months to retain the snapshot.
- `<num>weeks` — Number of weeks to retain the snapshot.
- `<num>days` — Number of days to retain the snapshot.

Default is `forever`.

**kvm (optional)**

Key-Value Metadata. Only for DataDomain groups. Enter key value pairs using the `key:value` format. Separate multiple key-value pairs with commas. For example: `key1:value1,key2:value2`.

**consistency\_type (optional)**

A tag used to identify RecoverPoint snapshots as either crash-consistent or application-consistent. Valid values are:

- `application_consistent` — Snapshot has been marked as application-consistent by the user or by KVSS. Note that marking a snapshot as application-consistent does not create an application-consistent snapshot.
- `crash_consistent` — Snapshot is known to be crash-consistent. All RecoverPoint snapshots are crash-consistent.
- Default is `crash_consistent`.

**Notes**

This command enables the same point-in-time to be identified at the other cluster.

This command is available whenever data transfer for the specified group is active.

'latest' is a reserved word and cannot be used as a bookmark name. The `consolidation_policy` parameter sets the snapshot consolidation policy.

Valid values are:

- `never` - The snapshot will never be consolidated. Any consolidation process that includes a snapshot with a consolidation policy of 'never' will fail.
- `survive_daily` - The snapshot will remain after automatic daily consolidations, but can be consolidated during automatic weekly and monthly consolidations, or manual consolidations.
- `survive_weekly` - The snapshot will remain after daily or weekly automatic consolidation, but can be consolidated during automatic monthly consolidations, or manual consolidations.
- `survive_monthly` - The snapshot will remain after daily, weekly or monthly consolidation, but can be consolidated in any manual consolidation.
- `always` - The snapshot will be consolidated in every consolidation process, whether manual or automatic.

The default snapshot consolidation policy is always.

This command allows you to bookmark an image for single group, multiple groups, or a group-set.

The parameters `groups` and `group_set` cannot be set together.

The parameters `retention_time` and `kvm` are relevant only for DataDomain groups; in this case `consolidation_policy` is not relevant.

## config\_copy\_policy

Configures the replication policy for the specified copy of the specified consistency group.

**Permission**

Group Configuration

**Parameters**

```
group=<group name>
copy=<copy name>
[protection_window=<num>months | <num>weeks | <num>days | <num>hrs |
```

```

none]
[max_journal_lag=<num>bytes | <num>KB | <num>MB | <num>GB | <num>TB |
unlimited]
[journal_size_limit=<integer>]
[journal_compression=high | medium | none]
[image_access_log_size=<number>]
[allow_long_resync=yes | no]
[allow_replication_with_self_mirroring=yes | no]
[hosts_os=AIX | HP-UX | Linux 2.4 | Linux 2.6 | Solaris | VMware ESX |
VMware ESX Windows | Windows | Other/Mixed] (Default: Other/Mixed)
[max_number_of_snapshots=<number>]
[enable_cleanup=yes | no]

```

## Descriptions

### group

Name of an existing consistency group.

### copy (optional)

Name of an existing copy.

### protection\_window (optional)

The consistency group protection window policy setting indicates the required protection window, or in other words, how far in time the copy image can be rolled back. This setting is used by RecoverPoint to trigger event alerts if the requirement can not be obtained. The events table in the *EMC RecoverPoint Administrator's Guide* lists the events that will be triggered. Possible values are *<num>*months, *<num>*weeks, *<num>*days, *<num>*hrs, or none.

Default is none.

The protection window setting must be greater than 24 hours for the predicted protection window feature to function and generate events.

### max\_journal\_lag (optional)

The maximum lag allowed in distributing replication data received by the journal. When this limit is reached, the system accelerates distribution of data to copy storage. Any snapshots, however, that are distributed in this accelerated mode (or that were distributed before entering this accelerated mode) are not available for rollback.

To prevent the system from entering the accelerated distribution mode, set this parameter to unlimited. Otherwise, enter one of the following values, including a number and a unit: bytes, kb, mb, or gb (with minimum granularity of 512 bytes—a SCSI block).

Initial default is unlimited.

### journal\_size\_limit (optional)

The maximum size in GB for the journal on each side of a consistency group.

### journal\_compression (optional)

The level of compression applied to the journal at the copy.

Possible values are high, medium, or none.

To change the value, one of the following states should exist for the group: the group is disabled, both the production and the copy RPA clusters are active, or there is no access to the copy image (while distributing).

Initial default is none.

**image\_access\_log\_size (optional)**

Percentage of the available journal capacity at the copy that is allocated for use by the target-side log.

Possible values are between 20 and 80.

To change the value, one of the following states should exist for the group: the group is disabled, both sides are active, or there is no access to the copy image (while distributing).

Initial default is 20.

**allow\_long\_resync (optional)**

Instructs the system how to proceed in the case that a snapshot is too large to be completely contained in the journal. Possible values are yes and no.

When yes, the system starts writing the data of the snapshot to the copy storage while the additional data of the same snapshot is still being received by the copy journal. In this case, if a disaster were to strike at the production site before the complete image was transferred to the copy storage, it would not be possible to fail over to the copy.

When no, the system automatically pauses transfer when the last complete image is about to be removed from the copy, providing the opportunity to; increase the journal's capacity, and then re-enable transfer, or prepare a backup and then re-enable this policy.

Initial default is yes.

**allow\_replication\_with\_self\_mirroring (optional)**

Only relevant with Symmetrix splitter.

If yes, and only one RPA is available, if that RPA fails, the system will initiate a full sweep. If no, and only one RPA is available, the splitter will go into marking mode. Replication will resume as soon as a second RPA in the cluster is available.

Do not change the default value unless instructed to do so by Customer Service.

**hosts\_os (optional)**

Defines the Operating System (OS) of the host system from which the data is saved and copied. Possible values are AIX, HP-UX, Linux 2.4, Linux 2.6, Solaris, VMware ESX, Windows, or Other/Mixed.

**max\_number\_of\_snapshots**

Only relevant for non-production copies in XtremIO.

Specify the maximum number of XtremIO snapshots to preserve at the copy (2–500).

**enable\_cleanup**

Specifies whether or not to enable cleanup. Possible values are yes and no.

**Notes**

None

## config\_group\_policy

Configures the replication policy for the specified consistency group.

### Permission

Group Configuration

### Parameters

```
group=<group name>
[priority=critical | high | normal | low | idle]
[transfer_by_non_preferred=yes | no]
[allow_read_only=yes | no]
[metropoint_preferred_cluster=<...>]
```

### Descriptions

#### group

Name of an existing consistency group.

#### priority (optional)

The priority assigned to the specified consistency group, in relation to other consistency groups, with regard to allocation of available bandwidth resources for a designated RPA. The parameter values are translated into a percentage of the resources. Only relevant for remote replication over the WAN or Fibre Channel, when two or more consistency groups are using the same Primary RPA. Possible values are critical, high, normal, low, and idle.

Default is normal.

#### transfer\_by\_non\_preferred (optional)

Determines whether data will transfer (yes) or not (no) when replication is switched to another RPA, that is, when the preferred RPA is not handling replication for the group.

Default is yes.

#### allow\_read\_only (optional)

Allows the user to change the accessibility mode of XtremIO and VNX volumes.

Set `allow_read_only = yes` to set volume accessibility to Read-Only for the XtremIO and VNX volumes in the consistency group.

Set `allow_read_only = no` to set volume accessibility to No Access for the XtremIO and VNX volumes in the consistency group.

#### metropoint\_preferred\_cluster (optional)

In a VPLEX MetroPoint group, sets the preferred cluster to either the active production or standby production. Set to none to inform the system that it should follow the VPLEX detach rules for the consistency group. To do a production switchover, this parameter needs to be changed to the standby production.

### Notes

The value of `priority` is in relation to other consistency groups. Groups with a priority of critical are provided ten times the priority of normal groups. Groups with a priority of high are provided three times the priority of normal groups. Groups with a priority of low are provided 50% of the priority of normal groups. Groups with a priority of idle are provided 1% of the priority of normal groups.

The priority influences the allocation of available bandwidth only in asynchronous replication.

In a VPLEX MetroPoint group, the `metropoint_preferred_cluster` parameter sets the preferred cluster to either the active production or standby production. The parameter can also be set to `none`, informing the system that it should follow the VPLEX detach rules for the consistency group. To do a production switchover, this parameter needs to be changed to the standby copy.

## config\_link\_policy

Configures the protection policy for the specified link of the specified consistency group.

### Permission

Group Configuration

### Parameters

```
group=<group name>
copy_1=<copy name>
copy_2=<copy name>
[mode=sync | async]
[snap_based_replication=on_highload | continuous | periodic | manual | disabled]
[periodic_snap_based_replication_interval=<number>]
[dynamic_by_latency=yes | no]
[start_async_above_latency=<integer>]
[resume_sync_below_latency=<integer>]
[dynamic_by_throughput=yes | no]
[start_async_above_throughput=<integer>]
[resume_sync_below_throughput=<integer>]
[rpo=<num>hrs | <num>mins | <num>secs | <num>bytes | <num>KB | <num>MB | <num>GB | <num>TB | <num>writes | ]
[regulate_application=yes | no]
[minimize=lag | bandwidth]
[measure_lag_to_rpa=yes | no]
[snapshot_granularity=dynamic | fixed_per_second | fixed_per_write]
[fast_first_init=yes | no]
[compression=none | low | medium | high]
[deduplication=yes | no]
[bandwidth_limit=<number> | unlimited]
```

### Descriptions

#### group

Name of an existing consistency group.

#### copy\_1

Name of the first copy that serves as the endpoint of the link.

#### copy\_2

Name of the second copy that serves as the endpoint of the link.

#### mode

Mode in which to replicate consistency group data between `copy_1` and `copy_2` of the link. Possible values are `sync` or `async`. Default is `async`.

#### snap\_based\_replication (optional)

Mode in which to replicate array snaps between `copy_1` and `copy_1`. Possible values are `disabled`, `on_highload`, `periodic`, `continuous`, or `manual`.

Default is disabled.

**periodic\_snap\_based\_replication\_interval (optional)**

When `snap_based_replication` is set to `periodic`, this parameter sets the interval between snaps.

Default is 30 min.

**dynamic\_by\_latency (optional)**

Whether (yes) or not (no) to alternate between synchronous and asynchronous replication modes, as necessary, according to latency conditions (the number of milliseconds between the time the production data is written to the source RPA cluster and the time that it is written to the RPA or journal at the target RPA cluster). When enabled, RecoverPoint adheres to the limits specified for `start_async_above_latency` and `resume_sync_below_latency`.

Default is no.

**start\_async\_above\_latency (optional)**

Only relevant when `dynamic_by_latency=yes`.

The threshold (in milliseconds) at which to allow asynchronous replication. When the specified limit is reached, the system automatically starts replicating in asynchronous replication mode until the limit defined in `resume_sync_below_latency` is reached.

**resume\_sync\_below\_latency (optional)**

Only relevant when `dynamic_by_latency=yes`.

The threshold (in milliseconds) at which to allow synchronous replication. When the specified limit is reached, the system automatically goes back to replicating in synchronous replication mode.

**dynamic\_by\_throughput (optional)**

Whether (yes) or not (no) to alternate between synchronous and asynchronous replication modes, as necessary, according to throughput conditions. When enabled, RecoverPoint adheres to the limits specified for `start_async_above_throughput` and `resume_sync_below_throughput`.

Default is no.

**start\_async\_above\_throughput (optional)**

Only relevant when `dynamic_by_throughput=yes`.

The threshold at which to allow asynchronous replication. When the specified limit is reached, the system automatically starts replicating in asynchronous replication mode until the limit defined in `resume_sync_below_throughput` is reached.

**resume\_sync\_below\_throughput (optional)**

Only relevant when `dynamic_by_throughput=yes`.

The threshold at which to allow synchronous replication. When the specified limit is reached, the system automatically goes back to replicating in synchronous replication mode.

**rpo (optional)**

The link recovery point objective (RPO) defines the lag of the consistency group link, expressed in terms of time, quantity of data, or number of writes. In RecoverPoint, lag starts being measured when a write made by the production host reaches the local RPA, and stops being measured when the write reaches either the target RPA or the target journal. Possible values are: hrs, mins, secs, bytes, KB, MB, GB, TB, and writes. If any other solution is needed, contact EMC Customer Support. Default is 25sec.

**regulate\_application (optional)**

When set to yes, the system slows or halts operation of the host applications upon approaching a policy bound.

Initial default is no.

**minimize (optional)**

Possible values are lag or bandwidth.

When set to lag, the system uses as much bandwidth as it can to keep the lag to a minimum. When set to bandwidth, the system expends additional bandwidth only as necessary to keep the lag under its maximum allowable value.

Initial default is lag.

---

**Note**

This parameter is not applicable for local replication.

**measure\_lag\_to\_rpa (optional)**

Only relevant for remote replication over the WAN or Fibre Channel. Possible values are yes and no.

Whether to measure lag and generate ACKs when writes reach the remote RPA (yes) or when they reach the remote journal (no).

When enabled, this policy provides faster performance in both synchronous and asynchronous replication modes, by reducing both latency and lag. When `regulate_application` is set to yes, and lag is reduced, so is the potential requirement to regulate the host applications. In synchronous replication mode, write performance is substantially higher with this policy enabled. However, when this policy is enabled, RecoverPoint does provide a slightly lower level of data security in the rare case of a simultaneous local and remote RPA disaster.

Initial default is yes. It is recommended to leave this setting as is.

This parameter is not relevant for local replication.

**snapshot\_granularity (optional)**

When set to dynamic, the system determines the snapshot granularity of the specified link according to available resources. When set to `fixed_per_second`, one snapshot is created per second for the specified link. When set to `fixed_per_write`, a snapshot is created for every write operation for the specified link. Possible values are dynamic, `fixed_per_second`, and `fixed_per_write`.

Default is `fixed_per_second`.



**fast\_first\_init (optional)**

Only relevant for initializations that occur for the first time, for the specified link. Possible values are yes and no.

When set to yes, RecoverPoint transfers data directly to the copy storage. The data is not stored in the journal first, and consequently, the initialization process is substantially shorter. In this case, the non-production copy is not consistent with production until the transfer of the whole image to the copy storage is complete. Therefore, if a disaster were to strike at the production cluster before the transfer of the image was complete, it would not be possible to fail over to the non-production copy.

When set to no, RecoverPoint transfers data to the copy journal, and only then from the copy journal to the copy storage. Disabling this policy is useful, for example, when disabling and then enabling an existing consistency group, causing the group to be initialized. In this case, RecoverPoint may be able to use the existing data at the non-production cluster (journal and storage) to construct a complete image, which is required for failover purposes.

To enable failover during initialization, it is recommended to disable both this policy and the `allow_long_resync` policy parameter in the `config_copy_policy` command. Possible values are yes and no.

Default is yes.

**compression (optional)**

The level of compression applied to replication data of the specified link prior to the transfer of the data to a remote cluster. Can reduce transfer time significantly. Both the enabling and disabling of compression causes a short pause in transfer and a short initialization. Compression decreases transfer time, but increases the source RPA's CPU utilization. Possible values are none, low, medium, and high. When set to no, compression is disabled.

Default is low if the license supports compression, or none if the license does not support compression.

This parameter is only applicable for remote replication, in asynchronous replication mode.

**deduplication (optional)**

Whether repetitive data of the specified link should be eliminated prior to the transfer of the data to a remote cluster. Can reduce transfer time significantly. Compression must be enabled before deduplication can be enabled. Both the enabling and disabling of deduplication causes a short pause in transfer and a short initialization. Deduplication decreases transfer time, but increases the source RPA's CPU utilization.

Possible values are: yes (enabled) or no (disabled). Default is yes if the license supports compression, or no if the license does not support compression.

This parameter is only applicable for remote replication, in asynchronous replication mode.

**bandwidth\_limit (optional)**

The maximum bandwidth available in Mbps for use by the specified link. Possible values are a *number* or unlimited. If there is no effective limit in available bandwidth, enter `unlimited`. Otherwise, enter a number value. Default is unlimited. Read [Bandwidth limit on page 58](#) to understand important limitations of this parameter.

## Notes

### Asynchronous and dynamic synchronous modes

The following parameters are relevant only for asynchronous and dynamic synchronous mode:

- `rpo`
- `regulate_application`
- `minimize`

Any change to the values of these parameters will cause transfer for the group to be briefly paused.

### Remote links

The following parameters are relevant only for remote links:

- `minimize`
- `compression`
- `deduplication`
- `bandwidth_limit`

### Measure lag to RPA

For any link, it is highly recommended that `measure_lag_to_rpa` be set to `yes` in both replication modes. Specifically, in synchronous replication, setting `measure_lag_to_rpa` to `no` will cause substantially higher latency for the writes of the production application.

### Snap-based replication

Before setting the `snap_based_replication` parameter to anything other than `disabled`, ensure you have registered the vCenter server of the specified group by running the `register_vcenter_server` command.

The parameter `periodic_snap_based_replication_interval` is only relevant when setting `snap_replication` to `periodic`. The interval value must be between 1 and 1440 minutes (1 day). When setting an interval, the RPO setting must be specified in time, and the specified interval value must be less than half of the specified RPO value.

Snap-based replication cannot be enabled if:

- One or more of the RPA clusters in the specified group are running a RecoverPoint version that does not support snap-based replication.
- The replication mode is set to `synchronous`.
- Storage awareness is not supported by the array or vCenter Server on which this group's production volumes are located.
- The array or vCenter server on which the production copy resides does not support snaps. In this case, RecoverPoint asynchronous replication mode will be used instead.

---

### Note

The application regulation will be disabled when the link is configured with snap-based replication.

---

In XtremIO environments, the `snap_based_replication` parameter cannot be set to `on_highload`.

### Bandwidth limit

The bandwidth limitation applies to a specific RPA on a specific global link (a global link is defined as all of the group links between two clusters). The actual limitation is the sum

of the group-link limitations of all enabled groups that run on this RPA for the given global link. The group-link limitation defines the contribution of the specified group to the overall limitation of the RPA(s) that replicates this group.

The specified limit is enforced only if each of the CG links on the RPA is set to a specific value (other than default).

For example, an RPA has 3 CG links running on it, and you set a bandwidth limit on each of the CG links as follows:

- CG1 link > `bandwidth_limit = 30 Mbps`
- CG2 link > `bandwidth_limit = 50 Mbps`
- CG3 link > `bandwidth_limit = 20 Mbps`

In this case, the overall bandwidth limit on the RPA is 100 Mbps. Note that CG1 may consume more than 30 Mbps if CG2 and CG3 are consuming less than their allocated amounts.

The next example shows CG1 and CG2 links set to specific bandwidth limits, but the CG3 link is not specified by the user and defaults to unlimited:

- CG1 link > `bandwidth_limit = 30 Mbps`
- CG2 link > `bandwidth_limit = 50 Mbps`
- CG3 link > `bandwidth_limit = unlimited`

In this case, even though CG links 1 and 2 are set to specific values, those values are not enforced, and there is no bandwidth limitation on those links or on the RPA.

### Latency and throughput

When both `dynamic_by_latency` and `dynamic_by_throughput` are enabled, the system will start replicating asynchronously if EITHER of the values specified for `start_async_above_latency` or `start_async_above_throughput` are true. However, after the group starts replicating asynchronously, BOTH `resume_sync_below_latency` and `resume_sync_below_throughput` must be true before the group automatically reverts to synchronous replication mode.

The parameters `start_async_above_throughput` and `resume_sync_below_throughput` are only relevant when `dynamic_by_throughput` is set to YES. The parameters `start_async_above_latency` and `resume_sync_below_latency` are only relevant when `dynamic_by_latency` is set to YES.

The system will issue an error in the following cases:

- If the value of `resume_sync_below_latency` is not lower than the value of `start_async_above_latency`.
- If the value of `resume_sync_below_throughput` is not lower than the value of `start_async_above_throughput`.
- If the value of `resume_sync_below_throughput` or `resume_sync_below_latency` equals zero.

## config\_preferred\_rpas

Designates which RPA(s) to use when transferring the writes of the specified group. Also used to define the group as a distributed consistency group.

### Permission

Group Configuration

### Parameters

```
group=<group name>
[primary_rpa=RPA<n>]
[distributed_group=yes | no]
[secondary_rpas=RPA<n>]
```

### Descriptions

#### group

Name of an existing consistency group.

#### primary\_rpa (optional)

Specifies the RPA to handle replication for the consistency group, at an RPA cluster. The `<n>` symbol represents the number of the RPA at the RPA cluster. Specification of a different RPA while replication is in progress causes immediate switchover.

#### distributed\_group (optional)

Whether (yes) or not (no) to define this group as a distributed consistency group, enabling the specification of preferred secondary RPAs, and distributing group traffic among multiple RPAs. Both enabling and disabling this setting causes the journal of all copies in the consistency group to be lost.

#### secondary\_rpas (optional)

Specifies the secondary RPAs to handle replication for the consistency group, at an RPA cluster. The `<n>` symbol represents the number of the RPA at the RPA cluster. Specification of a different RPA while replication is in progress causes immediate switchover.

One to three secondary RPAs can be defined. For best performance, it is not recommended to specify two secondary RPAs. Best practice is to specify an even number of preferred RPAs including the primary RPA (that is, either one or three secondary RPAs.)

### Notes

When the value of `distributed_group` is yes, enter at least one, but no more than three values for the `secondary_rpas` parameter. Enter multiple values in the form of a comma-separated list.

#### WARNING

**Whenever the value of `distributed_group` is modified from yes to no or vice-versa, data transfer is briefly paused and a full sweep begins.**

---

## clear\_markers

Clears markers from the journal volume, for a specified copy of a specified group.

### Permission

Data Transfer

### Parameters

```
group=<group name>
[copy=<copy name>]
```

### Descriptions

#### group

Name of an existing consistency group.

#### copy (optional)

Name of an existing copy.

### Notes

Before using this command, ensure that transfer is paused and the consistency group is enabled.

If no copy is specified, the markers for all copies are cleared.

Use this command only when you are certain that the source and target replication volumes are identical (for example, when initializing from tape). If the volumes are not identical, they will become and will remain inconsistent when transfer resumes. All cleared markers are unrecoverable.

## disable\_image\_access

Disables access to the currently accessed image of the specified copy and resumes distribution.

### Permissions

Target Image

### Parameters

```
[protection_entity=group | group_set] (Default: group)
[group=<group name>]
[group_set=<group set name>]
[cluster=<cluster name>]
[copy=<target copy name>]
[start_transfer=yes | no] (Default: yes)
```

### Descriptions

#### protection\_entity

The RecoverPoint-protected entity that you wish to disable image access for. Valid values are group or group\_set.

Default is group.

#### group

Name of an existing consistency group.

**group\_set (optional)**

Name of an existing group set.

**cluster (optional)**

When selecting a group set, this parameter defines the RPA cluster at which you want to disable image access. Image access will be disabled for all accessed copies at this RPA cluster in the specified group set.

**copy (optional)**

When selecting a group, this parameter defines the copy for which you want to disable image access.

**start\_transfer (optional)**

Whether (yes) or not (no) to start replication for the specified groups or group set after image access is disabled.

Default is yes.

**Notes**

If the host is directly accessing the storage, run this command and set `start_transfer` to yes to disable direct access and resume replication.

The following parameters are relevant only for group:

- `group`
- `copy`

The following parameters are relevant only for group-set:

- `group_set`
- `cluster`

## get\_group\_settings

Displays the current settings of the specified group.

**Permission**

Read Only

**Parameters**

```
[output_entity=group | copy | link | replication_set] (Default: group)
[group=<group name>]
[copy=<copy name>]
[copy_2=<copy name>]
[replication_set=<replication set name>]
```

**Descriptions****output\_entity (optional)**

Name of the entity (of the specified group) whose settings you want to display. Possible values are `group`, `copy`, `link` and `replication_set`. If the value of `output_entity` is `group`, you must also define a value for `group`. If the value of `output_entity` is `copy`, you must also define the values of `group` and `copy`. If the value of `output_entity` is `link`, you must also define the values of `group`, `copy`, and `copy_2`. If the value of `output_entity` is `replication_set`, you must also define the values of `group` and `replication_set`.

Default is `group`.

**group (optional)**

Name of an existing consistency group. When the group is specified is a MetroPoint group, the settings for both the active and standby productions will be displayed, as well as the preferred MetroPoint cluster.

Default is all existing consistency groups.

**copy (optional)**

Name of an existing copy in the specified consistency group. This parameter is only valid when the value of `output_entity` is `copy`.

Default is all existing copies in the specified consistency group.

**copy\_2 (optional)**

Name of an existing copy in the specified consistency group. This parameter is only valid when the value of `output_entity` is `link`.

Default is all existing links in the specified consistency group.

**replication\_set (optional)**

Name of an existing replication set in the specified consistency group. This parameter is only valid when the value of `output_entity` is `replication_set`.

Default is all existing replication sets in the specified consistency group.

**Notes**

If no group is specified, the current settings of all groups are displayed.

**Example**

```
RPA cluster> get_group_settings
Enter the output entity:
1) group
2) copy
3) link
4) replication_set
Select, or press 'ENTER'
Enter a consistency group name, or press 'ENTER' for all groups:
Groups:
cg:
  Enable: YES
  Production Copy: P1
  Preferred primary RPA: RPA 2
  Distributed group: NO
  Reservation support: YES
  Fail all production: NO
  Policy:
    Priority: NORMAL
    Advanced Policies:
      Non-preferred RPA transfer: YES
      Allow read only: NO
  External mgmt:N/A
  Copies:
    L1:
      Cluster: London
      Role: REMOTE COPY
      Enable: YES
      Hosts OS: Other/Mixed
      Data transfer: YES
      Image Access:
        Enable access: NO
      Policy:
        Journal compression: NONE
```

```

Automatic snapshot consolidation:
  Enabled: NO
  Unconsolidated duration: 2 days
  Daily consolidations: 5
  Weekly consolidations: 4
  Monthly consolidations: ALL
Required protection window:N/A
Advanced policies:
  Max Journal lag: UNLIMITED
  Allow long resync: YES
  Logged writes proportion: 20.00%
  Reservations policy: Auto
P1:
Cluster: Paris
Role: PRODUCTION
Enable: YES
Hosts OS: Other/Mixed
Policy:
  Journal compression: NONE
  Automatic snapshot consolidation:
    Enabled: NO
    Unconsolidated duration: 2 days
    Daily consolidations: 5
    Weekly consolidations: 4
    Monthly consolidations: ALL
  Required protection window:N/A
  Advanced policies:
    Max Journal lag: UNLIMITED
    Allow long resync: YES
    Logged writes proportion: 20.00%
    Reservations policy: Auto
Replication sets:
RSet0:
  Size: 6.00 GB
RSet1:
  Size: 5.00 GB
Links:
P1->L1:
Copy 1: P1
Copy 2: L1
Protection settings:
  Active: YES
  Mode: ASYNC
  Regulate application: NO
  Minimize: LAG
  RPO: 25 sec
Snapshot granularity: DYNAMIC
Fast first-time init: YES
Measure lag to RPA: YES
Compression: low
Deduplication: NO
Bandwidth limit: UNLIMITED
Snap-based replication:N/A
Integrity validation policy: DISABLE

```

## get\_group\_state

Displays the current state of the specified group, its copies, and its links, in the RecoverPoint system.

### Permission

Read Only



## Parameters

```
[output_entity=group | copy | link] (Default: group)
[group=<group name>]
[copy=<copy name>]
[copy_2=<copy name>]
```

## Descriptions

### output\_entity (optional)

Name of the entity (of the specified group).

### group (optional)

Name of an existing consistency group.

Default is all existing consistency groups.

### copy (optional)

Name of an existing copy in the specified consistency group. This parameter is only valid when the value of `output_entity` is `copy`.

### copy\_2 (optional)

Name of an existing copy in the specified consistency group. This parameter is only valid when the value of `output_entity` is `link`.

## Notes

If no group is specified, the state of all consistency groups is displayed.

## Example

```
RPA Cluster> get_group_state
Enter the consistency group name, or press 'ENTER' for all groups:
Group:
cg1:
  Enabled: YES
  Transfer source: prod
  Copy:
    copy1:
      Enabled: YES
      Active primary RPA: RPA 3
      Journal: DISTRIBUTING IMAGES TO STORAGE
      Storage access: NO ACCESS
    copy2:
      Enabled: YES
      Active primary RPA: RPA 3
      Journal: DISTRIBUTING IMAGES TO STORAGE
      Storage access: NO ACCESS
  prod:
    Enabled: YES
    Active primary RPA: RPA 3
    Storage access: DIRECT ACCESS (marking data)
Link:
  prod->copy1:
    Data Transfer: ACTIVE
    Sync mode: NO
  prod->copy2:
    Data Transfer: ACTIVE
    Sync mode: NO
```

## get\_group\_statistics

Displays the current performance statistics of the specified group, its copies and its links.

### Permission

Read Only

### Parameters

```
[group=<group name>]
```

### Descriptions

#### group (optional)

Name of an existing consistency group.

Default is all.

### Notes

If no group is specified, the performance statistics of all groups are displayed.

### Example

```
RPA cluster> get_group_statistics
Enter the group name, or press 'ENTER' to display the statistics of
all consistency groups:
Group:
  cg1:
    Copy stats:
      copy1:
        Journal:
          Usage: 154.07GB
          Total: 204.10GB
          Latest image: Thu Aug  1 07:33:40.732718 2013
          Journal lag: 1.81GB
          Protection window:
            Current:
              Value: 5 min 43 sec
              Status:N/A
            Predicted:
              Value:N/A
              Status:N/A
          Average journal compression ratio:N/A
          Mode: Normal
      copy2:
        Journal:
          Usage: 225.40GB
          Total: 298.30GB
          Latest image: Thu Aug  1 07:33:40.730288 2013
          Journal lag: 1.91GB
          Protection window:
            Current:
              Value: 5 min 43 sec
              Status:N/A
            Predicted:
              Value:N/A
              Status:N/A
          Average journal compression ratio:N/A
          Mode: Normal
    prod:
      SAN traffic:
        Current throughput: 72 Mbps
        Average throughput: 72 Mbps
```

```

Current write IOPS: 2050
Average write IOPS: 0
Link stats:
  prod->copy1:
    Replication:
      Lag:N/A
      WAN traffic:N/A
      Current bandwidth reduction ratio:N/A
      Average bandwidth reduction ratio:N/A
      Current deduplication ratio:N/A
      Average deduplication ratio:N/A
  prod->copy2:
    Replication:
      Lag:
        Time: 5 sec
        Data: 49.70MB
        Writes: 13170
      WAN traffic: 10 Mbps
      Current bandwidth reduction ratio: 7.24282
      Average bandwidth reduction ratio:N/A
      Current deduplication ratio:N/A
      Average deduplication ratio:N/A
cg2:
  Copy stats:
    copy1:
      Journal:
        Usage: 334.73GB
        Total: 455.30GB
        Latest image: Thu Aug 1 07:33:40.735128 2013
        Journal lag: 1.91GB
        Protection window:
          Current:
            Value: 30 sec
            Status:N/A
          Predicted:
            Value:N/A
            Status:N/A
        Average journal compression ratio:N/A
        Mode: Normal
    prod:
      SAN traffic:
        Current throughput: 71 Mbps
        Average throughput: 71 Mbps
        Current write IOPS: 2033
        Average write IOPS: 0
  Link stats:
    prod->copy1:
      Replication:
        Lag:
          Time: 6 sec
          Data: 54.53MB
          Writes: 14484
        WAN traffic: 9 Mbps
        Current bandwidth reduction ratio: 6.75498
        Average bandwidth reduction ratio:N/A
        Current deduplication ratio:N/A
        Average deduplication ratio:N/A

```

## get\_images

Displays information about the snapshots of the specified copy.

### Permission

Read Only

## Parameters

```
group=<group name>
[copy=<copy name>]
[from=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[to=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[bookmark=<...>]
```

## Descriptions

### group

Name of an existing consistency group.

### copy (optional)

Name of an existing copy.

### from (optional)

Start time.

Default date is no earliest bound. Default time is no earliest bound.

### to (optional)

End time.

Default date is today.

Default time is the present time.

### bookmark (optional)

Name of a specific snapshot bookmark.

Default is all.

## Notes

Up to 1000 snapshots are displayed. Use the optional parameters to filter the results.

If the `copy` parameter is not specified, the snapshot information of all copies in the `group` is displayed.

The `from` and `to` parameters can also take the format `wks|days|hrs|mins ago`. For example: `5 mins ago`. `MICROS` is a six-digit value for microseconds.

If the `bookmark` parameter is specified, only images matching the bookmark are displayed.

## pause\_transfer

Pauses data transfer to the specified copy of the specified group.

### Permission

Data Transfer

### Parameters

```
[protection_entity=group | group_set] (Default: group)
[group=<group name>]
[group_set=<group set name>]
[copy=<target copy name>]
```

**Descriptions****protection\_entity**

The RecoverPoint-protected entity that you wish to stop replicating to. Valid values are `group` or `group_set`.

Default is `group`.

**group**

Name of an existing consistency group.

**group\_set (optional)**

Name of an existing group set.

**copy (optional)**

Name of the existing copy to stop replicating to.

Default is `all`.

**Notes**

If no copy is specified, data transfer is paused to all copies in the group.

When data transfer is paused, the transfer of replication data stops. However, the host application continues to write data to storage, and the RPA continues to write markers regarding the data to the repository volume.

## set\_image\_access\_mode

Changes the access mode of the currently accessed image at the specified copy.

**Permission**

Target Image

**Parameters**

```
[protection_entity=group | group_set] (Default: group)
[group=<group name>]
[group_set=<group set name>]
[cluster=<cluster name>]
[copy=<target copy name>]
mode=virtual_with_roll | direct
```

**Descriptions****protection\_entity**

The protected entity that you wish to set the image access mode for. Valid values are `group` or `group_set`.

Default is `group`.

**group**

Name of an existing consistency group.

**group\_set (optional)**

Name of an existing group set.

**cluster (optional)**

When selecting a group set, this parameter defines the RPA cluster at which you want to set the image access mode. The image access mode will be set for all accessed copies at this RPA cluster in the specified group set.

**copy (optional)**

When selecting a group, this parameter defines the copy at which you want to set the image access mode.

**start\_transfer (optional)**

After setting the image access, whether to start replication (yes) or not (no) for the specified group or group set.

Default is yes.

**mode**

The way the copy accesses the image.

**Notes**

Before using this command, make sure image access is enabled or a request to enable image access is pending.

The following parameters are relevant only for group:

- `group`
- `copy`

The following parameters are relevant only for group-set:

- `group_set`
- `cluster`

## set\_markers

Creates markers in the journal volume, for the specified replication set in the specified copy and group.

**Permission**

Data Transfer

**Parameters**

```
group=<group name>
[copy=<copy name>]
[replication_sets=<replication set names>]
```

**Descriptions****group**

Name of an existing consistency group.

**copy (optional)**

Name of an existing copy.  
Default is all.

**replication\_sets (optional)**

Name of an existing replication set.  
Default is all.

**Notes**

Before using this command, ensure that transfer is paused and the consistency group is enabled.

If no copy is specified, markers are created for all copies of all replication sets in the specified group.

If no replication sets are specified, markers are created for all replication sets in the specified copy of the group.

Create markers for multiple replication sets by providing multiple values in the `replication_sets` parameter, separated by commas.

## set\_snapshot\_consolidation\_policy

Sets the consolidation policy for the specified snapshot.

**Permission**

Group Configuration

**Parameters**

```
group=<group name>
copy=<copy name>
[new_consolidation_policy=never | survive_daily | survive_weekly |
survive_monthly | always]
[retention_time=<num>months | <num>weeks | <num>days] (Default:
forever)
[kvm=<...>]
[consistency_type=application_consistent | crash_consistent]
```

**Descriptions****group**

Name of an existing consistency group.

**copy**

Name of an existing copy.

**new\_consolidation\_policy (optional)**

Consolidation policy to apply to this snapshot. Valid values are:

- `never` — Snapshot is never consolidated.
- `survive_daily` — Snapshot remains after daily consolidations, but is consolidated in weekly, monthly, and manual consolidations.
- `survive_weekly` — Snapshot remains after daily and weekly consolidations, but is consolidated in monthly and manual consolidations.
- `survive_monthly` — Snapshot remains after daily, weekly, and monthly consolidations, but is consolidated in manual consolidations.
- `always` — Snapshot is consolidated in every consolidation process, whether manual or automatic.

If the `new_consolidation_policy` parameter is not specified, the snapshot is consolidated in both automatic and manual consolidation processes.

**retention\_time (optional)**

Only for DataDomain. Retention time to apply to this snapshot. Valid values are:

- `<num>months`— Number of months to retain the snapshot.
- `<num>weeks`— Number of weeks to retain the snapshot.
- `<num>days`— Number of days to retain the snapshot.

Default is forever.

#### **kvm (optional)**

Only for DataDomain. Key-Value Metadata. Enter key value pairs using the *key:value* format. Separate multiple key-value pairs with commas. For example:  
*key1:value1,key2:value2.*

#### **consistency\_type (optional)**

Consistency type to apply to this snapshot. Valid values are:

- `application_consistent`— Application consistent snapshot.
- `crash_consistent`— Crash consistent snapshot.

#### **Notes**

This command can only be run interactively. When prompted, select a snapshot from the list and set a new consolidation policy for the selected snapshot.

The `new_consolidation_policy` parameter sets the snapshot consolidation policy.

Valid values are:

- `never` - The snapshot will never be consolidated. Any consolidation process that includes a snapshot with a consolidation policy of 'never' will fail.
- `survive_daily` - The snapshot will remain after automatic daily consolidations, but can be consolidated during automatic weekly and monthly consolidations, or manual consolidations.
- `survive_weekly` - The snapshot will remain after daily or weekly automatic consolidation, but can be consolidated during automatic monthly consolidations, or manual consolidations.
- `survive_monthly` - The snapshot will remain after daily, weekly or monthly consolidation, but can be consolidated in any manual consolidation.
- `always` - The snapshot will be consolidated in every consolidation process, whether manual or automatic.

## **show\_integrity\_check\_status**

Shows the progress of any integrity check running on the specified copy of the specified group.

#### **Permission**

Security

#### **Parameters**

```
group=<group name>
copy=<target copy name>
```

#### **Descriptions**

##### **group**

Name of an existing consistency group.



**copy**

Name of the copy at which an integrity check is in progress, whose progress status you want to check.

**Notes**

None

## start\_integrity\_check

Starts checking the replication consistency between the source volumes of the specified group and the volumes of the specified copy.

**Permission**

Security

**Parameters**

```
group=<group name>
copy=<target copy name>
```

**Descriptions****group**

Name of an existing consistency group.

**copy**

Name of the copy whose integrity you want to check.

**Notes**

Cannot perform replication integrity check on XtremIO arrays or during snap-based replication.

If a possible replication integrity issue is detected, use the `set_markers` command to trigger a full sweep. If problem persists, contact EMC Customer Support.

## start\_transfer

Starts data transfer to the specified copy of an enabled group.

**Permission**

Data Transfer

**Parameters**

```
[protection_entity=group | group_set] (Default: group)
[group=<group name>]
[group_set=<group set name>]
[copy=<target copy name>]
```

**Descriptions****protection\_entity**

The protected entity that you wish to start replication for. Valid values are `group` or `group_set`.

Default is `group`.

**group**

Name of an existing consistency group.

**group\_set (optional)**

Name of an existing group set.

**copy (optional)**

Defines the copy to which you want to start replicating.

**Notes**

If no copy is specified, data transfer is started to all copies in the group.

The following parameters are relevant only for group:

- `group`
- `copy`

The following parameters are relevant only for group set:

- `group_set`
- `cluster`

## stop\_integrity\_check

Stops checking the replication consistency between the source volumes of the specified group and the volumes of the specified copy.

**Permission**

Security

**Parameters**

```
group=<group name>
copy=<target copy name>
```

**Descriptions****group**

Name of an existing consistency group.

**copy**

Name of the copy with an integrity check in progress, that you want to stop.

**Notes**

None

## undo\_writes

Undoes all production writes saved in the image access log of the specified copy journal since image access was enabled, without disabling image access.

**Permission**

Target Image

**Parameters**

```
[protection_entity=group | group_set] (Default: group)
[group=<group name>]
```

```
[group_set=<group set name>]
[cluster=<cluster name>]
[copy=<target copy name>]
```

## Descriptions

### **protection\_entity**

The protected entity that you wish to undo writes for. Valid values are `group` or `group_set`.

Default is `group`.

### **group**

Name of an existing consistency group.

### **group\_set (optional)**

Name of an existing group set.

### **cluster (optional)**

When selecting a group set, this parameter defines the RPA cluster at which you want to undo writes. The writes will be undone for all accessed copies at this RPA cluster in the specified group set.

### **copy (optional)**

When selecting a group, this parameter defines the copy at which you want to undo writes.

## Notes

Before using this command, at the host, shut down all applications and unmount all volumes belonging to the specified consistency group.

The following parameters are relevant only for `group`:

- `group`
- `copy`

The following parameters are relevant only for `group set`:

- `group_set`
- `cluster`



# CHAPTER 8

## System

This chapter includes the following topics:

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## clear\_security\_settings

Removes all users, roles from the system. Clears LDAP settings and security level.

### Permission

Security

### Parameters

None

### Descriptions

None

### Notes



**This command removes all external users. You cannot run this command if you are not local user.**

### Example

To clear all users and roles currently defined in the system:

```
RPA cluster> clear_security_settings
Are you sure you want to clear all security settings(y/n)? Y
Security settings cleared successfully.
```

## config\_automatic\_snapshot\_consolidation

Configures automatic snapshot consolidation for the specified group, at the specified copy.

### Permission

Group Configuration

### Parameters

```
group=<group name>
copy=<copy name>
[enable=yes | no]
[unconsolidated_duration=<num>months | <num>weeks | <num>days |
<num>hrs]
[daily_consolidations=<integer> | ALL]
[weekly_consolidations=<integer> | ALL]
```

### Descriptions

#### group

Name of an existing consistency group.

#### copy

Name of an existing copy.

#### enable (optional)

Whether automatic snapshot consolidation for the specified group at the specified copy is to be enabled (yes) or disabled (no).

Default is initially no, and then current value.

---

**Note**

When automatic snapshot consolidation is enabled, the predicted protection window is not calculated.

---

**unconsolidated\_duration (optional)**

The period of time for which data should not be consolidated.

The period's start time is always today, and the period's end time is expressed in *n* hours/days/weeks, with a 12 hour minimum.

Default is 2 days, and then current value.

**daily\_consolidations (optional)**

The number of days in which to consolidate snapshots on a daily basis. Daily consolidations happen every 24 hours, give or take a couple of hours. Possible values are *n* days or all.

Default is 5, and then current value.

**weekly\_consolidations (optional)**

The number of weeks in which to consolidate images on a weekly basis. Weekly consolidations happen every 168 hours, give or take a couple of hours. Possible values are *n* weeks or all.

Default is 4, and then current value.

**Notes**

For automatic snapshot consolidation to occur, the specified group cannot be part of a group set.

For the `unconsolidated_duration` parameter, enter a value of 12 hours or more.

After the total period of time specified by the `unconsolidated_duration`, `daily_consolidations` and/or `weekly_consolidations` parameters has passed, all consolidations will be done on a monthly, unless:

- the value of the `daily_consolidations` parameter is set to ALL, in which case weekly consolidations are not allowed, and the remaining snapshots are consolidated daily.
- the value of the `weekly_consolidations` parameter is set to ALL, in which case the remaining snapshots are consolidated weekly.

## config\_io\_throttling

Sets the maximum storage read-rate, per array in the SANView.

**Permission**

Data Transfer

**Parameters**

```
cluster=<cluster name>
[array_serial_number=<...>]
[throttling=low | high | custom | none]
[custom_value=<integer>]
```

**Descriptions****cluster (optional)**

Name of the RPA cluster for which you want to configure throttling. If no value is entered, the specified throttling level is applied at all RPA clusters.

**array\_serial\_number (optional)**

The serial number of the array whose I/Os to throttle to the specified throttling level or custom value.

**throttling (optional)**

The maximum rate that the specified array or RPA cluster can read from a storage device during initialization.

Possible values are low, high, custom, and none:

- When set to high, the read-rate of the specified arrays or RPAs in your RecoverPoint cluster is limited to 50 MBps. In the case of an RPA cluster, this means that the read-rate of a single RPA is limited to 50 MBps divided by the number of RPAs in the RecoverPoint cluster, per array.
- When set to low, the read-rate of the specified arrays or all RPAs in your RecoverPoint cluster is limited to 200 MBps. In the case of an RPA cluster, this means that the read-rate of a single RPA is limited to 200 MBps divided by the number of RPAs in the RecoverPoint cluster, per array.
- When set to custom, use the `custom_value` parameter to enter the read-rate.
- If no value is entered, the current value is displayed, per RPA cluster.
- Initial default value is none and then keep current value.

**custom\_value (optional)**

When throttling is set to custom, a custom value can be entered in MBps.

**Notes**

When setting the throttling level, remember that the higher the throttling level, the longer initializations will take. Ensure that a low throttling level is insufficient before setting the throttling level to high.

## config\_long\_term\_statistics

Sets whether or not to collect long term statistics.

**Permission**

Read Only

**Parameters**

```
[enabled=yes | no]
```

**Descriptions****enabled (optional)**

When enabled, RecoverPoint collects system statistics.

Default is yes.



**Notes**

None

## config\_system\_reports

Defines the configuration of system notifications sent to the system report mechanism (SyR).

**Permission**

System Configuration

**Parameters**

```
[enable=reports_and_alerts | reports_only | none]
[compression=yes | no]
[encryption=yes | no]
[transfer_method=ESRS | SMTP | FTPS]
[server_address=<...>]
[sender_email=<...>]
```

**Descriptions****enable (optional)**

Enables or disables reports and/or alerts.

Possible values are reports\_and\_alerts, reports\_only, and none.

Default is reports\_and\_alerts

**compression (optional)**

Whether to compress the output (yes) or not (no).

Default is yes, and then current value

**encryption (optional)**

Whether to encrypt the output of the system report with RSA encryption using a 256-bit key before sending (yes) or not (no).

Default is yes, and then current value

**transfer\_method (optional)**

The means by which to send system reports. Possible options are FTPS (to send reports through RecoverPoint's built in FTPS server), ESRS (to send reports through an ESRS gateway, which requires the specification of an IP address in the `server_address` parameter), or SMTP (to send reports through email, which requires the specification of an SMTP server through [set\\_smtp\\_server on page 91](#)). Default is SMTP, and then current value.

**server\_address (optional)**

Only valid when the `transfer_method` parameter value is ESRS. Enter an IP address in IPv4 format.

Default is disabled, and then current value.

**sender\_email (optional)**

Defines the email address that appears as the sender's email for alerts and reports.

**Notes**

To use an email (SMTP) server to send system notifications, before you begin, run [set\\_smtp\\_server on page 91](#) to define your email server. The `server_address`

parameter is only relevant when `transfer_method` is set to ESRS. The value of `server_address` should be entered in IPv4 format only.

## detect\_bottlenecks

Detects bottlenecks in the system.

### Permission

Read Only

### Parameters

```
[mode=System overview and bottleneck analysis | Detection of
initialization periods | Detection of high load periods | General
detection including initialization and high load periods with peak
writing analysis | Advanced and detailed general detection | Peak
writing analysis] (Default: System overview and bottleneck analysis)
[from=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[to=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[advanced_overview=yes | no]
[detailed_overview=yes | no]
[peak_duration=<num>months | <num>weeks | <num>days | <num>hrs |
<num>mins | <num>secs] (Default: 5mins)
[groups=<group names>]
```

### Descriptions

#### mode (optional)

Type of analysis.

Possible values are System overview and bottleneck analysis, Detection of initialization periods, Detection of high load periods, General detection including initialization and high load periods with peak writing analysis, Advanced and detailed general detection, and Peak writing analysis.

Default is System overview and bottleneck analysis.

#### from (optional)

Start time for analysis is in *hh:mm[:ss[:micros]] [dd/mm/yyyy]* format, where the date, if not specified with the time, is today. Alternatively, it can be expressed in *n wks/days/hrs/mins ago*.

Default is no specified start time; that is, use the earliest statistics available.

Enter times according to local time. Output is according to GMT.

#### to (optional)

End time for analysis is in *hh:mm[:ss[:micros]] [dd/mm/yyyy]* format, where the date, if not specified with the time, is today. Alternatively, it can be expressed in *n wks/days/hrs/mins ago*.

Default is no specified end time; that is, the current time.

Enter times according to local time. Output is according to GMT.

#### advanced\_overview (optional)

Whether the analysis covers a broader set of system performance indicators (yes) or does not (no).

Default is no.

**detailed\_overview (optional)**

Whether the analysis is confined to the specified RPA cluster only (no) or to also includes the analysis of all groups and RPAs (yes).

Default is no.

**peak duration (optional)**

Length of the peak load period, expressed as *n* hrs/mins/secs.

Default is 5 mins.

**groups (optional)**

List of one or more existing consistency groups. Use commas to separate groups. To analyze only global statistics, without statistics on individual groups, enter none.

Default is all.

**Notes**

None

## export\_consolidated\_statistics

Exports system statistics and information on detected bottlenecks to a file, for specified granularities and time frames.

**Permission**

Read Only

**Parameters**

```
[granularity=minute | hour | day | all] (Default: all)
 [interval_start=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
 [interval_end=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
```

**Descriptions****granularity (optional)**

Granularity of the exported statistics. Possible values are *minute*, *hour*, and *day*.

Default is all granularities.

**interval\_start (optional)**

Time from which statistics at the specified granularity should be collected for export. Value should be entered in *hh:mm [:ss[:micros]] [dd/mm/yyyy]* format, where if the date is not specified with the time, the date is today. Alternatively, it can be expressed in *n* wks/days/hrs/mins ago.

Default is earliest time available.

**interval\_end (optional)**

Time until which statistics at the specified granularity should be collected for export. Value should be entered in *hh:mm [:ss[:micros]] [dd/mm/yyyy]* format, where if the date is not specified with the time, the date is today. Alternatively, it can be expressed in *n* wks/days/hrs/mins ago.

Default is latest time available.

**Notes**

You are notified if there are no statistics available for the specified time frame.

The name of the exported file is `long_term_stats.tar.gz`, and is located in the `/home/www/info/long_term_stats` directory. The file is rewritten each time the command is executed.

#### NOTICE

The time filtering parameters (`interval_start` and `interval_end`) should be specified in local time, while the times in the resulted statistics file presented in GMT.

## export\_statistics

Exports raw system statistics to the specified file.

### Permission

Read Only

### Parameters

```
[from=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[to=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[include_global_statistics=yes | no] (Default: yes)
[cluster=<cluster names>]
[rpa=RPA<n>]
[groups=<group names> | none]
[categories=<...>] (Default: overview)
[frequency=<num>months | <num>weeks | <num>days | <num>hrs |
<num>mins | <num>secs]
[file=<file name>]
```

### Descriptions

#### from (optional)

Start time for filtering the statistics is in `hh:mm[:ss[:micros]] [dd/mm/yyyy]` format, where the date, if not specified with the time, is today. Alternatively, it can be expressed in `n wks/days/hrs/mins ago`.

Default is no time filter.

#### to (optional)

End time for filtering the statistics is in `hh:mm[:ss[:micros]] [dd/mm/yyyy]` format, where the date, if not specified with the time, is today. Alternatively, it can be expressed in `n wks/days/hrs/mins ago` format.

Default is no time filter; that is, the current time.

#### include\_global\_statistics (optional)

Statistics that are not specific to particular group or groups.

Default is yes.

#### cluster (optional)

Name of an existing RPA cluster.

Default is all RPA clusters.

#### rpa (optional)

List of one or more RPAs. Use commas to separate RPAs. Possible values are `RPAn`, where `n` is the number of the RPA at the RPA cluster.

**groups (optional)**

List of one or more existing consistency groups. Use commas to separate groups. To export only global statistics, without statistics on an individual group (or groups), enter none.

Default is all groups.

**categories (optional)**

Possible values are compression, highload, init, overview, performance, regulation, and wan.

Default is all categories.

**frequency (optional)**

Frequency (in hrs/mins/secs) at which to sample the statistics for inclusion in the exported statistics.

Minimum frequency is 1 min.

Default is 1 min.

**file (optional)**

Name of file system to which you want to export the statistics. The file, *<file>.csv*, is created in the folder named *<file>*.

**Notes**

None

## get\_groups

Displays a list of all of the groups in the system, and the copies of each group.

**Permission**

Read Only

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

To display the groups defined in the system, and their copies:

```
RPA cluster> get_groups
Groups:
  Group1:
    Copies:
      Local Site: Group1 Prod, Group2 Copy
  Group2:
    Copies:
      Local Site: Production
      Remote Site: Remote Copy
  Group3:
    Copies:
      Local Site: Remote copy
      Remote Site: Production, Local copy
```

## get\_raw\_statistics

Displays unprocessed system statistics, for use in support situations.

### Permission

Read Only

### Parameters

```
[cluster=<cluster name>]
[rpa=RPA<n>]
[group=<group name>]
[categories=<...>]
[accumulators=<accumulator name>]
```

### Descriptions

#### cluster (optional)

Name of an existing RPA cluster.

#### rpa (optional)

The RPA number of the RPA that handles replication for the consistency group. Possible values are RPA $n$ , where  $n$  is the number of the RPA at the RPA cluster.

#### group (optional)

Name of an existing consistency group.

#### categories (optional)

Possible values are global, lag, dataflow, diskManager, acker, pinger, ponger, snapshot, deltaMarker, application, compression, distributor, highload, and ctrl.

#### accumulators (optional)

One or more accumulator names.

### Notes

EMC Customer Support can instruct you about how to use the optional parameters to filter the information returned by the command.

The `categories` and `accumulators` parameters are space-separated lists containing one or more items.

Possible values for `categories` are: global, lag, dataflow, diskManager, acker, pinger, ponger, snapshot, deltaMarker, application, compression, distributor, highLoad, and ctrl.

## get\_security\_settings

Displays local users' security level and RPA communications security level.

### Permission

Security

### Parameters

None

**Notes**

RPA communication security level can be changed in the Installation Manager (boxmgmt menu).

## get\_system\_report

Displays the current system report and sends it to the specified email address.

**Permission**

Read Only

**Parameters**

```
[address=<...>]
```

**Descriptions****address (optional)**

A valid email address in the format *user@company.com*.

**Notes**

If you want to send the current system report to a specified email address, before you begin, run [set\\_smtp\\_server on page 91](#) to define your email server.

To send the current system report to an email address right now, enter a valid email address in the address field, in the format *user@company.com*. If no address is specified, the system report is only displayed on the screen.

The system report is sent to the specified email address in XML format.

## get\_system\_report\_settings

Displays the current system notification settings.

**Permission**

Read Only

**Parameters**

None

**Descriptions**

None

**Notes**

To define the system notification settings, run [config\\_system\\_reports on page 81](#).

**Example**

To display the system report settings:

```
RPA cluster> get_system_report_settings
Enabled: Reports and alerts
Compressed: YES
Encrypted: YES
Transfer method: SMTP
Server address:
Sender email:
```

## get\_system\_settings

Displays the settings of all of the clusters in the RecoverPoint system.

### Permission

Read Only

### Parameters

None

### Descriptions

None

### Notes

None

### Example

To display all of the system settings:

```
RPA cluster> get_system_settings
Clusters:
  London:
    Software serial ID:N/A
    Location ID:N/A
    Cluster management IPv4: 12.34.56.86
    Repository volume:
      Type: VNX
      UID: 60,b6,01,6a,c4,a1,1e,80,05,c1,e6,1d,ba,d7,dc,1c,f6
      Vendor: DGC
      Product: CX
      Model: CX3-40
      Size: 300.00GB
      Name: VOL ID: 0000
      Array Serial: Ser#100
      RPA To volume paths map: None
    vCenter Server settings:
      vCenter Servers: None
    IO throttling:
      Throttling level: none
      Enabled storage awareness: YES
  New York:
    Software serial ID:N/A
    Location ID:N/A
    Cluster management IPv4: 12.34.56.78
    Repository volume:
      Type: VNX
      UID: 60,b6,01,6a,c4,a1,1e,80,05,c1,e6,1d,ba,d7,dc,1c,f6
      Vendor: DGC
      Product: CX
      Model: CX3-40
      Size: 300.00GB
      Name: VOL ID: 0000
      Array Serial: Ser#100
      RPA To volume paths map: None
    vCenter Server settings:
      vCenter Servers: None
    IO throttling:
      Throttling level: none
      Enabled storage awareness: YES
```



## get\_system\_status

Displays the current problems in the system, by category, for the specified RPA cluster.

### Permission

Read Only

### Parameters

```
[category=system | splitters | RPAs | volumes | WANs | groups | all]
[cluster=<cluster name>]
[summary=yes | no] (Default: no)
```

### Descriptions

#### category (optional)

Component of the system for which you are requesting status information. Possible values are RPAs, volumes, splitters, WAN, and system.

Default is all categories.

#### cluster (optional)

Name of the RPA cluster for which you are requesting status information.

Default is all RPA clusters.

#### summary (optional)

Whether the output consists of a tally of the problems for each category at each RPA cluster (yes) or specific information is displayed for each problem (no).

Default is no.

### Notes

A summary of the current issues in the system is displayed automatically upon logging into the CLI.

Use `category` to filter the displayed issues by system, splitters, RPAs, volumes, WANs, or groups.

### Example

```
RPA cluster> get_system_status
Select the category of issues to display: (default is all categories)
1) system
2) splitters
3) RPAs
4) volumes
5) WANs
6) groups
7) all
Select, or press 'ENTER':
Enter the RPA cluster name, or press 'ENTER' for all RPA clusters:
Display summarized output? (Default: no)
1) yes
2) no
Select, or press 'ENTER':
System problems: OK
Clusters problems:
  London:
    RPAs: OK
    Volumes: OK
```

```

Splitters:
  WARNING: Splitter FNM00104100108 doesn't have login
credentials. To minimize user configuration errors, provide splitter
logi
n credentials.
  WARNING: Splitter FNM00104100107 doesn't have login
credentials. To minimize user configuration errors, provide splitter
logi
n credentials.
New York:
  RPAs: OK
  Volumes: OK
  Splitters:
    WARNING: Splitter FNM00104100108 doesn't have login
credentials. To minimize user configuration errors, provide splitter
logi
n credentials.
    WARNING: Splitter FNM00104100107 doesn't have login
credentials. To minimize user configuration errors, provide splitter
logi
n credentials.
WANs problems: OK
Groups problems: OK

```

## get\_versions

Displays the versions of RecoverPoint running on each cluster of the environment.

### Permission

Read Only

### Parameters

None

### Descriptions

None

### Notes

*N/A* will appear when there is no communication with the cluster or when the RPAs in the cluster are running different versions (during upgrade).

### Example

To display the RecoverPoint version:

```

RPA cluster> get_versions
<RPA cluster>: 4.1
<RPA cluster>: 4.0

```

## set\_advanced\_action\_regulation

Overrides the copy regulation setting defined for the system.

### Permission

Group Configuration

### Parameters

```
[enable=yes | no]
```

**Descriptions****enable (optional)**

Whether to regulate all groups at all copies (yes) or not (no).

**Notes**

Do not run this command unless specifically instructed to do so by the Customer Support.

## set\_smtp\_server

Defines the server through which system email notifications, such as email alerts and system reports, are sent.

**Permission**

System Configuration

**Parameters**

```
[server_address=<...>]
```

**Descriptions****server\_address (optional)**

The IP address or DNS name of a dedicated SMTP server.

**Notes**

The `server_address` value must be defined to enable the sending of email notifications. Enter the server address in the form of an IP address or DNS name. Enter an empty value for `server_address` to display the current SMTP server IP address or DNS name.

## unregulate\_all\_copies

Releases all copies from regulation.

**Permission**

Group Configuration

**Parameters**

```
None
```

**Descriptions**

None

**Notes**

Do not run this command unless specifically instructed to do so by the Customer Support.



# CHAPTER 9

## Maintenance

This chapter includes the following topics:

- [finish\\_maintenance\\_mode](#).....94
- [start\\_maintenance\\_mode](#).....94

## finish\_maintenance\_mode

Finish the current mode of upgrade.

### NOTICE

This command is for internal use only and should not be used.

---

#### Permission

Upgrade

#### Parameters

[cluster=<cluster names>]

#### Descriptions

##### cluster (optional)

Name of an existing RPA cluster.

#### Notes

This command is for internal use only and should not be modified.

## start\_maintenance\_mode

Switch to upgrade mode.

### NOTICE

This command is for internal use only and should not be used.

---

#### Permission

Upgrade

#### Parameters

```
mode=major_upgrade | minor_upgrade | rpa_addition | rpa_replacement |
rpse_conversion | system_modification | user_initiated |
connect_cluster | migrate_repository
```

cluster=<cluster name>

#### Descriptions

##### mode

Type of upgrade.

Possible values are major\_upgrade, minor\_upgrade, rpa\_addition, rpa\_replacement, rpse\_conversion, system\_modification, user\_initiated, connect\_cluster, and migrate\_repository.

##### cluster

Name of an existing RPA cluster.

#### Notes

This command is for internal use only and should not be modified.

# CHAPTER 10

## Virtual Machine

This chapter includes the following topics:

- [update\\_vcenter\\_server\\_registration](#)..... 96

## update\_vcenter\_server\_registration

Updates the registration details for the specified vCenter Server at the specified RPA cluster.

### Permission

Splitter Configuration

### Parameters

```
cluster=<cluster name>
name=<vCenter name>
[new_name=<...>]
[new_ip=<...>]
[new_port=<number>]
[new_user_name=<...>]
[password=<...>]
[new_certificate=<...>]
[validate_credentials=yes | no] (Default: yes)
```

### Descriptions

#### cluster

The RPA cluster where the vCenter Server is located.

#### name

The name of the vCenter Server.

#### new\_ip (optional)

If the IP address of the vCenter Server has changed, enter the new IP address.

#### new\_port (optional)

If the TCP port number of the vCenter Server has changed, enter the new port number.

#### new\_user\_name (optional)

If the vCenter Server username has changed, enter the new username.

#### password (optional)

The password of the vCenter Server.

#### new\_certificate (optional)

If the vCenter Server certificate has changed, paste the new vCenter Server certificate at the command line, then press **Enter**, enter one period (.), and press **Enter** again. Paste the entire vCenter Server certificate at the command line, then press **Enter**, enter one period (.), and press **Enter** again.

#### validate\_credentials (optional)

Whether or not to validate vCenter Server credentials.

### Notes

None



# CHAPTER 11

## Events

This chapter includes the following topics:

• <a href="#">add_email_users</a> .....	98
• <a href="#">config_email</a> .....	98
• <a href="#">clear_events_log</a> .....	99
• <a href="#">config_snmp_global</a> .....	99
• <a href="#">config_snmp_trap_dest</a> .....	100
• <a href="#">config_syslogs_global</a> .....	100
• <a href="#">config_syslogs_target_host</a> .....	101
• <a href="#">create_event_filter</a> .....	101
• <a href="#">disable_email</a> .....	102
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• <a href="#">test_syslogs</a> .....	111

## add\_email\_users

Assign filters to emails group.

### Permission

System Configuration

### Parameters

```
emails=<...>
type=immediate | daily
event_filters=<event filter names>
```

### Descriptions

#### emails

Set of email addresses that are to receive event notifications subject to the settings for the `type` and `event_filters` parameters.

#### type

The alert frequency.

Possible values are `immediate` or `daily`.

#### event\_filters

Defines the set of events that are to be sent to this email group.

There is no default value for this parameter.

### Notes

None

## config\_email

Configures the system alert mechanism settings.

### Permission

System Configuration

### Parameters

```
[sender=<...>]
[system_info_support_daily=yes | no]
```

### Descriptions

#### sender (optional)

Email address from which system alerts and reports originate.

#### system\_info\_support\_daily (optional)

Whether to send a daily report of system information to the EMC System Report Database for monitoring and pre-emptive support (yes) or not (no).

Initial default is no.

**Notes**

Before you begin, to enable the sending of emails, run [enable\\_email on page 105](#) to enable the emails mechanism. Then, run and enter your SMTP server IP or DNS name as the `server_address`.

To display a specific email address in the from field of email alerts, enter a valid email address in the format `user@company.com` as the `sender` value. Note that your SMTP server may require additional configuration to forward messages for the specified sender.

Customers that have signed a remote maintenance agreement can configure `system_info_support_daily` to send alert messages regarding RecoverPoint operations to the Customer Service on a daily basis.

To disable the sending of emails, run [disable\\_email on page 102](#).

## clear\_events\_log

Clears the events log.

**Permission**

Security

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

To clear the events log:

```
RPA cluster> clear_events_log
Are you sure you want to clear all of the events from the event log
(y/n)? y
Event log cleared successfully.
```

## config\_snmp\_global

Configures the SNMP event trap global mechanism.

**Permission**

System Configuration

**Parameters**

```
[enabled=yes | no]
[event_filters=<event filter names>]
[enable_secure_transport=yes | no]
```

**Descriptions****enabled (optional)**

Whether RecoverPoint events generate SNMP traps (yes) or do not generate SNMP traps (no).

Default is no.

**event\_filters (optional)**

Defines the set of events that can generate SNMP traps.

There is no default value for this parameter.

**enable\_secure\_transport (optional)**

If enabled, port 10161 is available for Transport Layer Security on TCP. Use of community strings and port 161 are disabled.

If disabled, port 161 is available and community strings are accepted.

**Notes**

When enabled, a trap destination must be specified for at least single cluster. Use [config\\_snmp\\_trap\\_dest on page 100](#) for such configuration.

## config\_snmp\_trap\_dest

Configures the SNMP trap destination for the specified cluster.

**Permission**

System Configuration

**Parameters**

```
cluster=<cluster name>
trap_dest=<...>
```

**Descriptions****cluster**

Name of an existing RPA cluster.

**trap\_dest**

The Internet address (IP address or DNS) of a host at the specified RPA cluster to which to send SNMP traps.

**Notes**

The value of `trap_dest` is the Internet address (IP address or DNS) of a host at that specified cluster, to which to send SNMP traps.

When enabled, a value must be specified for the `cluster` and `trap_dest` parameters.

## config\_syslogs\_global

Configures the global syslog settings.

**Permission**

System Configuration

**Parameters**

```
[facility=auth | authpriv | cron | daemon | ftp | kern | local0 |
local1 | local2 | local3 | local4 | local5 | local6 | local7 | lpr |
mail | news | syslog | user | uucp]
[event_filters=<event filter names>]
```

**Descriptions****facility (optional)**

Specifies the type of program that is logging the message.

Possible values are according to the syslog standard list, including: auth, authpriv, cron, daemon, ftp, kern, local0, local1, local2, local3, local4, local5, local6, local7, lpr, mail, news, syslog, user, and uucp.

Default is local6.

**event\_filters (optional)**

Defines the set of events to be sent to the syslog servers.

There is no default value for this parameter.

**Notes**

None

## config\_syslogs\_target\_host

Configures the syslog settings.

**Permission**

System Configuration

**Parameters**

```
cluster=<cluster name>
target_host=<...>
```

**Descriptions****cluster**

Name of an existing RPA cluster.

**target\_host**

The IP address of the intended receiver of the log at the specified RPA cluster.

**Notes**

`target_host` is the name of the host to which to forward the syslogs in the specified cluster.

## create\_event\_filter

Creates new event filter for use with email/snmp/syslog.

**Permission**

System Configuration

**Parameters**

```
name=<...>
[topic=all | management | cluster | rpa | group | splitter] (Default:
all)
level=info | warning | error
[scope=normal | detailed | advanced] (Default: normal)
[excluded_events=<...>]
[groups=<group names>]
```

**Descriptions****name**

Name of the event filter to be created.

**topic (optional)**

The general area of the problem within the EMC RecoverPoint system.

Possible unique values are management, cluster, RPA, group, and splitter.

Default is all topics.

**level**

The severity of the event.

Possible values, in ascending order of severity, are info, warning, and error.

Recipients receive alerts of all events on the specified level, as well as any events of greater severity.

There is no default value for this parameter.

**scope (optional)**

The required level of detail of the alert output. Possible values, in ascending order of elaboration are normal, detailed or advanced.

Default is normal.

**excluded\_events (optional)**

IDs of events that are not subject to this filter.

There is no default value for this parameter.

**groups (optional)**

The set of groups that are subject to this filter.

There is no default value for this parameter. When `topic` is all or group, it is mandatory to designate one or more groups on which the filter is to be applied. For other topics, this parameter is not relevant.

**Notes**

The group parameter is relevant only when `topic` is all or group.

**Example**

In the following example, a filter is created to send notifications regarding the specified groups of all normal and detailed warning and error events, regardless of topic, except for the events specified.

To create a new event filter:

```
RPA cluster> create_event_filter filter1 level=warning scope=detailed
excluded_events=8240,12222,14222,16222,18222
groups=exchange1,exchange2
Filter created successfully.
```

## disable\_email

Disables the sending of system alerts through email, according to the specified alert rules.

**Permission**

System Configuration

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

To disable the sending of e-mail alerts:

```
RPA cluster> disable_email
Are you sure you want to disable email alert? (y/n)y
Email alerts disabled successfully.
```

## disable\_snmp

Disables the SNMP agent.

**Permission**

System Configuration

**Parameters**

None

**Descriptions**

None

**Notes**

This command can only be run interactively.

**Example**

To disable the SNMP agent:

```
RPA cluster> disable_snmp
Are you sure you want to disable the SNMP agent? (y/n)y
SNMP agent disabled successfully.
```

## disable\_syslogs

Disables the syslog mechanism.

**Permission**

System Configuration

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

To disable the syslog mechanism:

```
RPA cluster> disable_syslogs
Are you sure you want to disable the syslog mechanism? (y/n)y
Syslog mechanism disabled successfully.
```

## edit\_event\_filter

Edits the specified event filter.

**Permission**

System Configuration

**Parameters**

```
event_filter=<event filter name>
[name=<...>]
[topic=all | management | cluster | rpa | group | splitter]
[level=info | warning | error]
[scope=normal | detailed | advanced] (Default: normal)
[excluded_events=<...>]
[groups=<group names>]
```

**Descriptions****event\_filter**

Name of an existing event filter.

**name (optional)**

New name for the event filter.

**topic (optional)**

The general area of the problem within the EMC RecoverPoint system.

Possible unique values are management, cluster, RPA, group, and splitter.

**level (optional)**

The severity of the event.

Possible values, in ascending order of severity, are info, warning, and error.

Recipients receive alerts of all events on the specified level, as well as any events of greater severity.

**scope (optional)**

The required level of detail of the alert output. Possible values, in ascending order of elaboration are normal, detailed or advanced.

**excluded\_events (optional)**

IDs of events that are not subject to this filter.

**groups (optional)**

The set of groups that are subject to this filter.

When `topic` is `all` or `group`, it is mandatory to designate one or more groups on which the filter is to be applied. For other topics, this parameter is not relevant.

**Notes**

None



## enable\_email

Enables the sending of system alerts by email.

**Permission**

System Configuration

**Parameters**

None

**Descriptions**

None

**Notes**

To enable the sending of email alerts through email, before you begin, run [set\\_smtp\\_server on page 91](#) to define your email server.

To disable the sending of email alerts through email, run [disable\\_email on page 102](#).

**Example**

To enable alerts:

```
RPA cluster> enable_email  
Email alerts enabled successfully.
```

## enable\_snmp

Enables the SNMP agent.

**Permission**

System Configuration

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

To enable the SNMP agent:

```
RPA cluster> enable_snmp  
SNMP agent enabled successfully.
```

## enable\_syslogs

Enables the syslog mechanism.

**Permission**

System Configuration

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

To enable the syslog mechanism:

```
RPA cluster> enable_syslogs
Syslog mechanism enabled successfully.
```

## get\_events\_log

Displays the event logs.

**Permission**

Read Only

**Parameters**

```
[from=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[to=HH:MM[:SS[:MICROS]] [DD/MM/YYYY]]
[topic=management | cluster | rpa | group | splitter]
[level=info | warning | error] (Default: info)
[scope=normal | detailed | advanced]
[excluded_events=<...>]
[search_text=<...>]
[terse=yes | no] (Default: no)
[gmt_override=yes | no] (Default: no)
```

**Descriptions****from (optional)**

Start time for filtering the events log in *hh:mm[:ss[:micros]] [dd/mm/yyyy]* format, where the date, if not specified, is today. Alternatively, it can be expressed in *n* hours ago format.

Default is 24 hours ago.

**to (optional)**

End time for filtering the events log either in *hh:mm[:ss[:micros]] [dd/mm/yyyy]* format, where the date, if not specified, is today. Alternatively, it can be expressed in *n* hours ago format.

Default is the present time (0 hours ago).

**topic (optional)**

Possible values are management, cluster, RPA, group, and splitter.

Default is all topics.

**level (optional)**

Possible values, in ascending order of severity, are info, warning, and error. Each value includes all of those logs that have more severe levels.

Default is info.

**scope (optional)**

The required level of detail in the log output. Possible values, in ascending order of elaboration are normal, detailed, and advanced.

Default is normal.

**excluded\_events (optional)**

IDs of events that are not to be displayed.

There is no default value for this parameter.

**search\_text (optional)**

Text strings to match with contents of event summary. The match should be exact, including case. Multiple strings can be entered, separated by commas.

Default is no text.

**terse (optional)**

Whether to display one event per line (yes) or to use multiple lines per event (no).

Default is no.

**gmt\_override (optional)**

Whether to override (yes) or use the system gmt settings (no).

Default is no.

**Notes**

The optional filter parameters can be used to narrow the results.

The `from` and `to` parameters can also take the format `wks/days/hrs/mins ago` (for example, '5 mins ago').

The default value for the `from` parameter is 24hrs ago.

The `topic` parameter can be a list of topics (separated by ','). The default is all topics.

The `search_text` parameter is a string (or a comma separated list of strings) which can be the name of any of the system components, for example, cluster, RPA, volume, host, group, user or a specific string in the event summary.

The `gmt_override` parameter can be used to display event times in GMT, overriding the current configuration.

**Example**

To display all events logged to the events log:

```
RPA cluster> get_events_log
Enter earliest time, or press 'ENTER' for 24hrs ago
(Format: HH:MM [DD/MM/YYYY] OR wks/days/hrs/mins ago)
Enter latest time, or press 'ENTER' for now
(Format: HH:MM [DD/MM/YYYY] OR wks/days/hrs/mins ago)
Topic: (default is all topics)
1) management
2) cluster
3) rpa
4) group
5) splitter
Select (separate with spaces if more than one), or press 'ENTER':
Level: (Default: info)
1) info
2) warning
3) error
```

```

Select, or press 'ENTER':
Scope: (default is normal)
1) normal
2) detailed
3) advanced
Select, or press 'ENTER':
Enter a list of event ids to exclude
Enter search text(s) to match, or press 'ENTER' (separate with commas
if more than one)
Terse display? (Default: no)
1) yes
2) no
Select, or press 'ENTER':
Display event times in GMT, overriding the current time display
configuration? (Default: no)
1) yes
2) no
Select, or press 'ENTER':
System event logs:
Time:                Thu Aug  1 03:26:57 2013
  Topic:              RPA
  Scope:              NORMAL
  Level:              CLEAR
  Event ID:           3000
  Cluster:            London
  Global links:       None
  RPA:                RPA 8
  Summary:            RPA is successfully communicating with its
cluster.
  Service Request info:N/A
Time:                Thu Aug  1 03:26:57 2013
  Topic:              RPA
  Scope:              NORMAL
  Level:              CLEAR
  Event ID:           3000
  Cluster:            London
  Global links:       None
  RPA:                RPA 7
  Summary:            RPA is successfully communicating with its
cluster.
  Service Request info:N/A

```

## get\_monitored\_parameters

Display monitored parameters whose value exceeds the specified minimum severity.

### Permission

Read Only

### Parameters

```
[min_severity=ok | minor | major | critical] (Default: ok)
```

### Descriptions

#### min\_severity (optional)

To display all monitored parameters that have at least the severity specified.

Default is ok.

### Notes

None

## remove\_email\_users

**Permission**  
System Configuration

**Parameters**

```
emails=<...>
```

**Descriptions**

**emails**

Email addresses that are to be removed from receiving email event notifications.

**Notes**

None

## remove\_event\_filter

Remove selected event filter.

**Permission**  
System Configuration

**Parameters**

```
event_filter=<event filter name>
```

**Descriptions**

**event\_filter**

Name of the existing event filter that is to be removed.

**Notes**

None

## set\_snmp\_community

Defines the SNMPv1 community string.

**Permission**  
System Configuration

**Parameters**

```
enabled=yes | no  
[community=<...>]
```

**Descriptions**

**enabled**

Enables the use of an SNMPv1 community string. For optimum security, do not enable.

**community (optional)**

Community string of the specified user.

**Notes**

This command can only be run interactively.

## test\_email

Sends a test email to the specified email address.

**Permission**

System Configuration

**Parameters**

```
address=<...>
```

**Descriptions****address**

Email address to which the test message will be sent.

**Notes**

Enter a valid email address in the format *user@company.com* as the address. To verify that the alert system settings, as configured with the `config_email` command, are defined successfully; a test email message will arrive at the specified address.

## test\_snmp

Tests whether SNMP traps can be sent.

**Permission**

System Configuration

**Parameters**

```
destination=<...>
```

**Descriptions****destination**

Internet address (IP address or DNS) of a host to which to send the SNMP trap.

**Notes**

None

## test\_syr\_connectivity

Tests the connectivity of the system report mechanism (SyR) and opens a Service Request with EMC Support.

**Permission**

System Configuration

**Parameters**

```
[recipient_email=<...>]
```

## Descriptions

### recipient\_email (optional)

The email address to which EMC Customer Support sends an email, verifying that the system reports mechanism (SyR) has been successfully configured. The connectivity test, if successful, opens a service request containing call home event number 30999 and sends an email to the specified email address from EMC Customer Support to verify that the system reports mechanism (SyR) has been successfully configured.

## Notes

Before running this command, define your email server by running [set\\_smtp\\_server on page 91](#), and specify a transfer method by running [config\\_system\\_reports on page 81](#).

To open a Service Request with EMC Customer Support, enter a valid email address in the `recipient_email` field, in the format *user@company.com*.

After testing connectivity:

- EMC Customer Support will contact you to verify that they received the Service Request and SyR has been correctly configured.
- Wait ten minutes. Then, check your event logs to ensure that event 1020 Failed to send system report was not logged.

# test\_syslogs

Tests the syslog mechanism.

## Permission

System Configuration

## Parameters

```
[level=info | warning | error] (Default: info)
```

## Descriptions

### level (optional)

The event level of the syslog notification message.

Possible values are:

- info - tests information, warning, and error logs.
- warning - tests warning and error logs.
- error - tests error logs.

Default is info.

## Notes

None





# CHAPTER 12

## Users

This chapter includes the following topics:

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## add\_role

Defines a new management role in the system, and sets the permissions for that role.

### Permission

Security

### Parameters

```
name=<...>
[permissions=Splitter Configuration | Group Configuration | Data
Transfer | Target Image | Failover | System Configuration | Security
| Upgrade | Storage Management ]
```

### Description

#### name

Name of the new management role.

#### permissions (optional)

Permission level granted to the newly defined role.

Default permission level is Read Only.

### Notes

When prompted, enter the required role name, and permissions.

Management user permissions include:

- Splitter Configuration - User may add or remove splitters, and may attach or detach splitters to volumes.
- Group Configuration - User may create/remove groups, and may modify all group settings except those that are included in the Data Transfer, Target Image, and Failover permissions, may bookmark images, and may resolve settings conflict.
- Data Transfer- User may enable/disable group, start/pause transfer, and clear/set markers.
- Target Image - User may enable/disable access to image, and undo writes to the target-side log.
- Failover - User may modify replication direction.
- System Configuration - User may configure and manage email alerts, SNMP, and syslog utilities.
- Security - User may add/remove users, modify passwords (for all users), modify permissions (for non-preconfigured users), install product activation code, set account ID, set contact info, add/remove SNMP users, set the SNMP community, and set number of streams.
- Upgrade - Used for system maintenance and upgrades. Commands with this permission are for internal use only. Storage Management- Used for array awareness.

Read Only - By default, each role includes this permission. User may view system information. You receive Read Only permission only, by pressing **Enter** without entering any permissions.

## add\_ssh\_key

Adds a public key to the current management user's profile, allowing him to open secure SSH sessions with the CLI, without specifying a password.

### Permission

Read Only

### Parameters

```
name=<...>
key=<...>
```

### Descriptions

#### name

Name of the key to be added.

#### key

Key generated by the ssh-keygen facility.

### Notes

Before running this command, generate a key pair (private and public) using the ssh-keygen facility. This command adds a public key of type RSA to the user's profile in the system. The type of key—RSA1 or RSA2—is determined by the `-t` flag in ssh-keygen. The public key, used in conjunction with the user's private key (held by the machine on which the user is working), enables the user of SSH to carry out a secure dialog with the system. After adding the public key, the user only needs to enter a username to open an SSH session with the CLI; a password is not required.

The ssh-keygen facility writes the public key to one of the following files:

- `$user/.ssh/identity` (for RSA1)
- `$user/.ssh/id_rsa.pub` (for RSA2)

The file contains the key that you must enter (copy and paste) at the `Enter the key` prompt that is displayed when you run the `add_ssh_key` command.

## add\_user

Defines a new management user in the system, and sets the permissions and password for that user.

### Permission

Security

### Parameters

```
type=local user | LDAP user | LDAP group (Default: local user)
[name=<...>]
[password=<...>]
[role=<...>]
[groups=<group names>]
```

### Descriptions

#### type

Type of user to add.

**name (optional)**

Name of the new user or group.

**password (optional)**

Password to assign to the new user or group.

**role (optional)**

Role (permissions) to assign to the new user or group.

**groups (optional)**

Groups to which the new user or group belongs.

**Notes**

This command can only be run interactively. When prompted, enter the required username, password, role, and groups. The required password format depends on the security level that is specified for the new management user. See help for [set\\_security\\_level on page 123](#) for more information.

Management user permissions include:

- Splitter Configuration - User may add or remove splitters, and may attach or detach splitters to volumes.
- Group Configuration - User may create/remove groups, and may modify all group settings except those that are included in the Data Transfer, Target Image, and Failover permissions, may bookmark images, and may resolve settings conflict.
- Data Transfer - User may enable/disable group, start/pause transfer, and clear/set markers.
- Target Image - User may enable/disable access to image, and undo writes to the target-side log.
- Failover - User may modify replication direction.
- System Configuration - User may configure and manage email alerts, SNMP, and syslog utilities.
- Security - User may add/remove users, modify passwords (for all users), modify permissions (for non-preconfigured users), install product activation code, set account ID, set contact info, add/remove SNMP users, set the SNMP community, and set number of streams.
- Upgrade - Used for system maintenance and upgrades. Commands with this permission are for internal use only. Storage Management- Used for array awareness.
- Read Only - By default, each role includes this permission. User may view system information.

You receive Read Only permission only, by pressing **Enter** without entering any permissions.

## clear\_ldap\_configuration

Removes all LDAP configurations

**Permission**

Security

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

```
RPA1> clear_ldap_configuration
Are you sure you want to clear LDAP configuration (y/n)?y
LDAP configuration cleared successfully
```

## config\_ldap

Defines the LDAP configurations.

**Permission**

Security

**Parameters**

```
[enabled=yes | no]
[protocol_type=LDAP | LDAPS]
[primary_LDAP_Server=<...>]
[primary_LDAP_port=<integer>]
[secondary_LDAP_Server=<...>]
[secondary_LDAP_port=<integer>]
[base_dn=<...>]
[search_base_dn=<...>]
[bind_DN=<...>]
[password=<...>]
[certificate=<...>]
[search_time_limit=<integer>]
```

**Descriptions****enabled (optional)**

Activates RecoverPoint authentication and authorization using an LDAP server.

**protocol\_type (optional)**

LDAP - To send LDAP queries over an unsecured port

LDAPS - To send LDAP queries over a secure SSL port

**primary\_LDAP\_Server (optional)**

IP address of primary LDAP server

**primary\_LDAP\_port (optional)**

Default secure port = 636

Default non-secure port = 389

**secondary\_LDAP\_server (optional)**

IP address of secondary LDAP server

**secondary\_LDAP\_port (optional)**

Default secure port = 636

Default non-secure port = 389

**base\_dn (optional)**

Base Distinguished Name: root of the LDAP directory tree.

**search\_base\_dn (optional)**

Search Base Distinguished Name: the root of the LDAP user search tree.

**bind\_DN (optional)**

When using `binding_type = simple`, distinguished name to use for initial binding when querying the LDAP server.

**password (optional)**

When using `binding_type = simple`, password of the bind distinguished name to use for initial binding when querying the LDAP server.

**certificate (optional)**

If `protocol_type = LDAPs`, path to the Active Directory certificate to use for secure communication with the LDAP server. RecoverPoint accepts LDAP certificates only in PEM format.

**search\_time\_limit (optional)**

To set a time limit for the search.

**Notes**

None

## config\_user\_account

Defines the specified company name and contact email in the user account settings.

**Permission**

System Configuration

**Parameters**

```
[company_name=<...>]
[contact_info=<...>]
```

**Descriptions****company\_name (optional)**

The company name to be used by the vendor to provide technical support.

**contact\_info (optional)**

Email address of the primary contact person at your company for all matters related to the EMC RecoverPoint system.

**Notes**

To display the currently configured account settings, run [get\\_account\\_settings on page 119](#).

The specified email address appears in the account information that is displayed by running [get\\_account\\_settings on page 119](#). This information is intended primarily to assist the vendor in providing efficient technical support to the user.

## get\_account\_settings

Displays the user's account settings, for use in technical support situations.

### Permission

Read Only

### Parameters

None

### Descriptions

None

### Notes

Displays the Account ID, company name and RecoverPoint contact email associated with the user's account. To define your company's account settings, run [config\\_user\\_account on page 118](#). The Account ID value is defined by EMC Customer Support.

### Example

To display the current account settings information:

```
RPA cluster> get_account_settings
Account ID: 100707
Company Name: EMC
Contact Info: user@company.com
```

## get\_ldap\_configuration

Displays the LDAP configurations.

### Permission

Read Only

### Parameters

None

### Descriptions

None

### Notes

None

### Example

```
RPA cluster> get_ldap_configuration
Active directory support enabled: YES
Primary server name: KLABD.COM
Primary server port: 389
Secondary server name: KLABD.COM
Secondary server port: 389
Base distinguish name: dc=KLABD,dc=COM
Search base distinguish name: cn=Users,dc=KLABD,dc=COM
Bind type: Simple
Bind distinguished name: cn=Administrator,cn=Users,dc=KLABD,dc=COM
Protocol type: LDAP
LDAP search scope: Sub tree
Search time limit: 30 seconds
Users object class: user
```

```
Username attribute name: sAMAccountName
Group attribute name: memberOf
```

## modify\_role

Modifies an existing management role in the system. Can modify role name and/or permissions.

### Permission

Security

### Parameters

None

### Descriptions

None

### Notes

You cannot remove preconfigured roles like admin or boxmgmt.

When prompted, enter the required role name, new role name and permissions.

Management user permissions include:

- Splitter Configuration - User may add or remove splitters, and may attach or detach splitters to volumes.
- Group Configuration - User may create/remove groups, and may modify all group settings except those that are included in the Data Transfer, Target Image, and Failover permissions, may bookmark images, and may resolve settings conflict.
- Data Transfer - User may enable/disable group, start/pause transfer, and clear/set markers.
- Target Image - User may enable/disable access to image, and undo writes to the target-side log.
- Failover - User may modify replication direction.
- System Configuration - User may configure and manage email alerts, SNMP, and syslog utilities.
- Security - User may add/remove users, modify passwords (for all users), modify permissions (for non-preconfigured users), install product activation code, set account ID, set contact info, add/remove SNMP users, set the SNMP community, and set number of streams.
- Upgrade - Used for system maintenance and upgrades. Commands with this permission are for internal use only. Storage Management- Used for array awareness.
- Read Only - By default, each role includes this permission. User may view system information.

You receive Read Only permission only, by pressing **Enter** without entering any permissions.

### Example

```
RPA1> modify_role
Select role to modify:
1) role test
2) role_mgmt
Select: 1
Enter new role name, or press 'ENTER' for current name: chnged_role
```



```

The current permissions for this role are:
View
Do you want to change these permissions? (y/n)y
Available permissions:
1: Splitter Configuration
2: Group Configuration
3: Data Transfer
4: Target Image
5: Failover
6: System Configuration
7: Security
8: Upgrade
Select (separate with spaces if more than one), or press 'ENTER': 1 8
Role modified successfully.

```

## regenerate\_encryption\_keys

Regenerates the cluster-level key(s) used to encrypt RPA communication, array credentials, LDAP credentials, CHAP credentials. and RPA-level SSH host keys for the specified cluster(s).

### Permission

Security

### Parameters

```
[cluster=<cluster name>]
```

### Descriptions

#### cluster (optional)

Name of the cluster for which the encryption keys are regenerated.

### Notes

If no cluster is specified, all clusters will be considered.

## remove\_role

Removes a management role from the system.

### Permission

Security

### Parameters

None

### Descriptions

None

### Notes

You cannot remove preconfigured roles like admin, or boxmgmt, and you cannot remove roles that are currently in use.

### Example

```

RPA1> remove_role
Select role to remove:
1) chnged_role
2) role_mgmt

```

```
Select: 1
Remove role changed_role? (y/n)y
Role removed successfully.
```

## remove\_ssh\_key

Removes a public key from user's authorized keys.

### Permission

Read Only

### Parameters

```
name=<...>
```

### Descriptions

#### name

Name of the user.

### Notes

None

## remove\_user

Removes a management user from the system.

### Permission

Security

### Parameters

None

### Descriptions

None

### Notes

This command can only be run interactively.

You cannot remove preconfigured users such as admin or boxmgmt.

### Example

```
RPA cluster> remove_user
1) anna
2) frank
3) robert
Select: 1
Remove user anna? (y/n)y
User removed successfully.
```

## set\_password

Resets the password of the currently logged-in user.

### Permission

Read Only

**Parameters**

None

**Descriptions**

None

**Notes**

This command can only be run interactively.

**Example**

To set a new password:

```
RPA cluster> set_password
Enter old password:
Enter password (min. 5 characters):
Confirm:
Password set successfully.
```

**Note**

The passwords you type are not echoed on the screen.

## set\_security\_level

Defines the security level for the currently logged-in management user.

**Permission**

Security

**Parameters**

```
[level=basic | high]
```

**Descriptions****level (optional)**

The system security level.  
Possible values are basic or high.

**Notes**

The command can only be run interactively.

When you run the command, the current user's security level will be displayed.

Select whether to set it to basic or to high:

- basic - user passwords to access RPA must have a minimum of five characters.
- high - user passwords to access the RPA must have a minimum of eight characters; at least two must be lower case, at least two must be upper case, and at least two must be non-alphabetical (either digits or special characters).

All user passwords expire in 90 days. The same password cannot be reused until at least ten other passwords have been used.

## set\_user

Resets the password, changes the role, or limits the CGs of an existing management user.

**Permission**

Security

**Parameters**

None

**Descriptions**

None

**Notes**

This command can only be run interactively.

When prompted, specify the management user whose password or permissions you would like to reset.

You receive Read Only permission only, by pressing **Enter** without entering any permissions.

Then, modify the password and/or each permission for the specified management user.

**Example**

```
Select user to modify:
1) Local-Ziv
2) admin
3) boxmgmt
4) security-admin
5) CN=LDAP_test,CN=Users,DC=KLABD,DC=COM
6) Clar
7) LDAPUSER
8) LDAP_2
9) ZIV-LDAP
10) Ziv
11) user1
Select: 9
The current role for this user is: admin
Do you want to change this role? (y/n)y
Choose role:
1) admin
2) boxmgmt
3) integration
4) security
Select: 4
Enter group name(s), separated by ',' if more than one, or press
'ENTER' for all groups :
User modified successfully.Select (separate with spaces if more than
one), or press
'ENTER': 1 2 3 4 5
User modified successfully.
```

## test\_ldap\_connection

Tests the LDAP configurations

**Permission**

Security

**Parameters**

None

**Descriptions**

None

**Notes**

None

**Example**

```
RPA1> test_ldap_connection  
LDAP settings are valid.
```

## unlock\_user

Unlocks system users that have been locked out of the system after three failed attempts to log in.

**Permission**

Security

**Parameters**

None

**Descriptions**

None

**Notes**

This command can only be run interactively.

The list of all users locked out by the system is displayed.



# CHAPTER 13

## General

This chapter includes the following topics:

- [get\\_current\\_time](#)..... 128

## get\_current\_time

Displays the current system date and time stamp, as used by the RPAs.

**Permission**

Read Only

**Parameters**

None

**Descriptions**

None

**Notes**

This command can only be run interactively.

**Example**

To obtain the current local date and time:

```
RPA cluster> get_current_time  
Wed Nov 02 12:00:02 2008 (America/New_York)
```