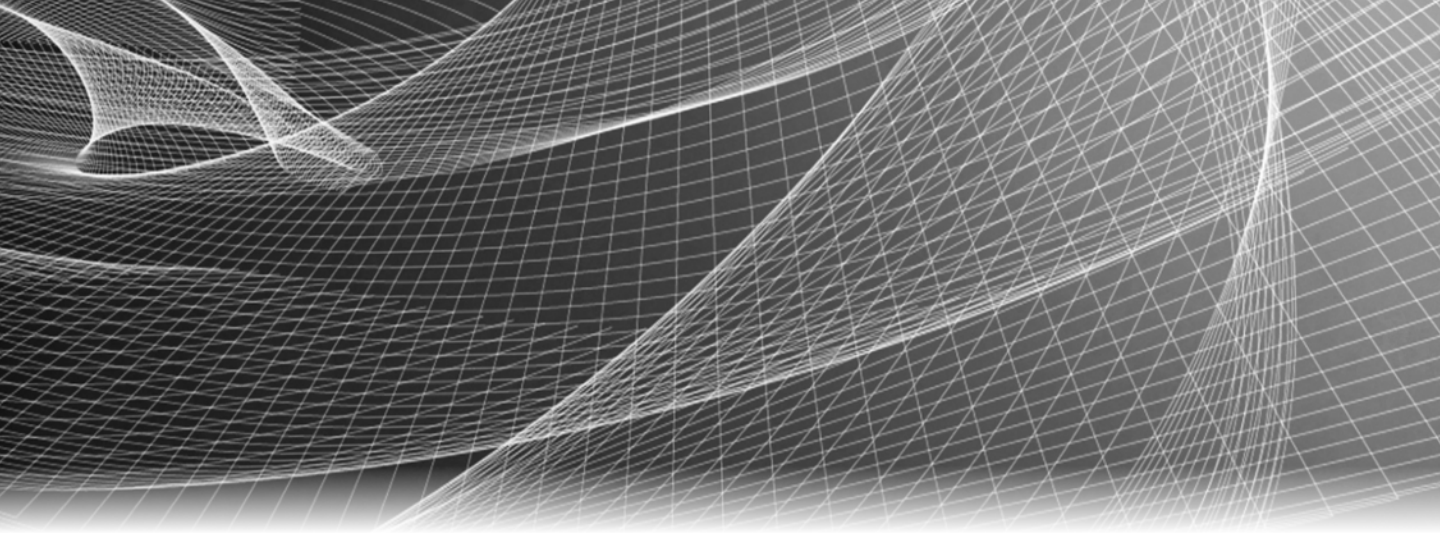

EMC® ScaleIO®

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CLI Reference Guide

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Preface

As part of an effort to improve its product lines, EMC periodically releases revisions of its software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

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Note: This document was accurate at publication time. Go to EMC Online Support (https://support.emc.com) to ensure that you are using the latest version of this document.

Purpose

This document describes the ScaleIO CLI, SCLI.

Audience

This document is intended for IT professionals-system and storage administrators-who will be involved in deploying and managing ScaleIO.

Related documentation

The release notes for your version includes the latest information for your product. The following EMC publication sets provide information about your ScaleIO or ScaleIO Ready Node product:

- ScaleIO software (downloadable as ScaleIO Software ‹version› Documentation set)
- ScaleIO Ready Node with AMS (downloadable as ScaleIO Ready Node with AMS Documentation set)
- ScaleIO Ready Node no AMS (downloadable as ScaleIO Ready Node no AMS Documentation set)
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EMC uses the following conventions for special notices:

NOTICE

NOTICE is used to address practices not related to personal injury.

Note: A note presents information that is important, but not hazard-related.

Typographical conventions

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Bold	Use for names of interface elements, such as names of windows, dialog boxes, buttons, fields, tab names, key names, and menu paths (what the user specifically selects or clicks)
Italic	Use for full titles of publications referenced in text and for variables in body text.
`Monospace`	Use for: • System output, such as an error message or script • System code • Pathnames, file names, prompts, and syntax • Commands and options
`Monospace italic`	Use for variables.
`Monospace bold`	Use for user input.
[ ]	Square brackets enclose optional values
|	Vertical bar indicates alternate selections — the bar means “or”
( )	Parentheses enclose content that the user must specify
...	Ellipses indicate nonessential information omitted from the example

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CHAPTER 1
Overview

This document describes the syntax and usage for the EMC® ScaleIO™ CLI, SCLI. SCLI enables you to provision, maintain, and monitor your ScaleIO system.

SCLI Basics

SCLI is installed as part of the MDM component and can be found in the following path:

- **Linux and VMware**—`scli`
- **Xen**—`siocli`
- **Windows**—`C:\Program Files\emc\scaleio\MDM\bin`

All CLI commands use the following format:

- **Linux, VMware, and Windows**

```
scli [--mdm_ip <IP>] <command>
```

- **Xen**

```
siocli [--mdm_ip <IP>] <command>
```

Description:
Execute a CLI command

Parameter	Description
--mdm_ip ‹IP›	One, or more IP addresses of the servers running the Master MDM and Slave. In a non-clustered environment, use the MDM IP address. If the CLI does not reside on the MDM, the `--mdm_ip` parameter must be added to every CLI command.
--approve_certificate	Preemptive approval of the MDM's certificate
‹command›	Command to be executed

```
scli --mdm_ip 10.10.10.3,10.10.10.4 --query_all
```

The `mdm_ip` indicates the MDM that receives and is to execute the command. If the command is run from the Master MDM, this switch may be omitted.

To avoid using the `--mdm_ip` parameter in every command, or avoid having to install the CLI on other servers, use SSH or RDM to log in to the shell running on the management server.

You cannot execute SCLI commands on the Slave MDM. However, you can send a command from the Slave MDM by adding the IP address of the Master MDM to the command, using the `--mdm_ip` parameter.

Note: The order of the parameters and command is insignificant.
SCLI commands are lowercase and case-sensitive.
All parameters are preceded with `--`

Before using most SCLI commands, you must log in, as described in .

Using SCLI in non-secure mode

If ScaleIO is running in non-secure mode, you must make the following change to enable running commands.

On every MDM server, disable secure communication:

- Windows

  In the SCLI `conf.txt` file, add `cli_use_secure_communication=0`

- Linux

  Run this command: **`echo cli_use_secure_communication=0 >> ~/.scli/conf.txt`**

Syntax

All names of objects in the system will be capitalized, for example, Protection Domain. In the case where the name is in fact initials it will be in uppercase, for example, MDM.

The actual CLI command format uses the following format:

- Message - Required
- ‹› - Argument

- () – Required element
- [] – Optional element
- | - Select from options A|B|C

Each command entry uses the above syntax and looks like the following example:

Usage:
```
scli --cmd_example --r1 (--r2 | --r3 <V1>) [o1 <V2>|o2]
[Options]
```

Description: a description of what **cmd_example** does

Parameter	Description
--r1	r1 description
--r2	r2 description
--r3 ‹V1›	r3 description with possible V1 input values
--o1 ‹V2›	o1 description with possible V2 input values
--o2	o2 description
Options: CHOOSE SEVERAL	
--so1 ‹V3›	so1 description with possible V3 input values
--so2	so2 description

The interpretation is as follows:

- The text `scli --cmd_example r1` is mandatory.
- The `(--r2 | --r3 <V1>)` indicates that you must choose one of the options separated by "|". Selecting an option is REQUIRED, indicated by "()".
- The `[o1 <V2>|o2]` indicates that you may choose one of the options separated by "|". Selecting an option is OPTIONAL, indicated by "[ ]".
- The `[Options]` indicates that you may choose one of the options that will be described in the table under Options. It is OPTIONAL, indicated by "[ ]".

Getting help with the CLI

The CLI supports auto-completion. To complete a command or parameters, press the TAB key while typing CLI commands.

Note: In Windows, ScaleIO does not support auto-completion.

Alternately, you can run the help command.

Command

```
help
```

Syntax

```
scli --help [Options]
```

Description/Notes

Use this command to view CLI help.

Parameters

Parameter	Description
Options: CHOOSE ONE	
mdm	Help on MDM commands
sds	Help on SDS commands
vol	Help on volume-related commands
sdc	Help on SDC commands
general	Help on general commands
all	Help on all commands
user	Help on commands related to user management
‹blank›	List options

Example

```
scli --help --mdm
```

CHAPTER 2
Command Quick Reference

Use the tables in this chapter as a quick-reference for all ScaleIO CLI (SCLI) commands. Each table shows the activities and monitoring options per ScaleIO component, and which management interfaces support the various activities.

Tables include:

- Device activities and monitoring 2
- MDM activities and monitoring 3
- Protection Domain activities and monitoring 5
- SDC activities and monitoring 6
- SDS activities and monitoring 8
- Storage Pool activities and monitoring 10
- User management activities and monitoring 12
- Component authentication activities and monitoring 14
- Volume activities and monitoring 15
- Other activities and monitoring 19

For information on using the ScaleIO CLI, see "CLI basics" on page 22.

Note: Before running SCLI commands, you must be logged-in with a user name that has the right to perform the desired commands.

For more information on the login procedure, default credentials, and user roles, see the EMC ScaleIO user documentation.

Device activities and monitoring

Table 1 Device activities and monitoring (page 1 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Abort device removal		abort_remove_sds_device	Backend › navigate to, and select the SDS › Abort Removal	
Activate a device		activate_sds_device	Backend › navigate to, and select the SDS › Activate device	
Add a device to an SDS		add_sds_device	Backend › navigate to, and select the SDS › Add device	Deployment Wizard + Advanced configuration
Clear one or more device errors		clear_sds_device_error	Backend › navigate to, and select the device or an SDS › Clear Device Errors	Basic configuration
Modify device capacity		modify_sds_device_capacity	Backend › navigate to, and select the device › Set Device Capacity Limit	
Remove a device from an SDS		remove_sds_device	Backend › navigate to, and select the device › Remove	Basic configuration
Rename a device		rename_device	Backend › navigate to, and select the device › Rename	
Update original device path		update_device_original_path		
	Retrieve device latency meters	query_all_device_latency_meters	Backend › navigate to, and select the device › Device Latency table view and Property Sheet	
	Retrieve device network statistics	query_network_latency_meters	Backend › navigate to, and select the device › various IO table views and Property Sheet	

Table 1 Device activities and monitoring (page 2 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
	Retrieve device statistics	query_device_latency_meters	Backend › navigate to, and select the device › Property Sheet	
	Retrieve device test results	query_device_test	Backend › navigate to, and select the device › Property Sheet	

MDM activities and monitoring

Table 2 MDM activities and monitoring (page 1 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Add a standby MDM to a cluster		add_standby_mdm		
Allow SDC access to the MDM		add_sdc		
Create an MDM cluster		create_mdm_cluster		
Enable\Disable restricted SDC mode		set_restricted_sdc_mode		
Modify the IP address of an existing MDM		modify_management_ip		
Prevent SDC access to the MDM		remove_sdc	Frontend › SDCs › right-click SDC › Remove	
Refresh a cluster's capabilities		refresh_mdm_cluster_capabilities		
Refresh the cluster capabilites		refresh_mdm_cluster_capabilities		
Remove a standby MDM from a cluster		remove_standby_mdm		

Table 2 MDM activities and monitoring (page 2 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Rename an MDM		rename_mdm		
Replace a member of a cluster		replace_cluster_mdm		
Restrict remote access to MDM to read-only commands		set_remote_read_only_limit_state		
Set the license		set_license		
Set the management application ID		set_manager_id		
Switch the MDM Master of a cluster		switch_mdm_ownership		
Switch the mode of an MDM cluste		switch_cluster_mode		
	MDM cluster query	query_cluster	Backend › select System› Property Sheet	
	MDM remote access restriction state	query_remote_read_only_limit_state		
	Retrieve approved SDCs in restricted SDC mode	query_all_approved_sdc		
	Retrieve license information	query_license	Preferences menu › About (top right corner)	
	Retrieve restricted SDC mode state	query_restricted_sdc_mode		

Table 2 MDM activities and monitoring (page 3 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Allow sending cluster commands during upgrade for this session		allow_commands_during_upgrade		
Set the virtual IP addresses for an MDM cluster		modify_cluster_virtual_ips		
Set the virtual IP interfaces for a node in the MDM cluster		modify_virtual_ip_interfaces		
Replace the MDM's certificate and key		replace_mdm_security_files		

Protection Domain activities and monitoring

Table 3 Protection Domain activities and monitoring (page 1 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Activate a Protection Domain		activate_protection_domain	Backend › navigate to, and select the Protection Domain › Activate Protection Domain	
Add a Fault Set		add_fault_set	Backend › navigate to, and select the Protection Domain › Add Fault Set (Fault Set will only be visible in the Related Objects section of the Protection Domain's Property Sheet)	Basic configuration
Add a Protection Domain		add_protection_domain	Backend › select System › Add Protection Domain	Deployment Wizard + Basic configuration
Inactivate a Protection Domain		inactivate_protection_domain	Backend › navigate to, and select the Protection Domain › Inactivate Protection Domain	

Table 3 Protection Domain activities and monitoring (page 2 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Remove a Protection Domain		remove_protection_domain	Backend › navigate to, and select the Protection Domain › Remove	Basic configuration
Remove all SDSs from a Fault Set		clear_fault_set		
Remove a Fault Set		remove_fault_set		Deployment Wizard + Basic configuration
Rename a Fault Set		rename_fault_set		
Rename a Protection Domain		rename_protection_domain	Backend › navigate to, and select the Protection Domain › Rename	
	Single Fault Set query	query_fault_set		
	Fault Sets query	query_all_fault_sets		
	Protection Domain query	query_protection_domain	• Dashboard › Cluster › Protection Domains pane • Backend › navigate to, and select the Protection Domain › Property Sheet	Used for viewing

SDC activities and monitoring

Table 4 SDC activities and monitoring (page 1 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Remove SDC		remove_sdc	Frontend › SDCs › right-click and select Remove	
Rename an SDC		rename_sdc	Frontend › SDCs › right-click and select Rename	

Table 4 SDC activities and monitoring (page 2 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Add an MDM definition to an SDC (usually to add the SDC to an additional SIO system)		drv_cfg --add_mdm[1]		
Load an MDM configuration file to an SDC		drv_cfg --load_cfg_file[1]		
Modify an existing MDM IP's address configured on an SDC		drv_cfg --mod_mdm_ip[1]		
Modify MDM IP addresses or GUID configured on an ESX-based SDC		esxcli system module parameters list -m scini[2]		
Abort SDC removal		abort_remove_sdc		
	SDC query	query_sdc	Frontend › SDCs › select the SDC and display the Property Sheet	
	All SDCs query	query_all_sdc		Used for viewing
	Query all active tgt objects	drv_cfg --query_tgts[1]		
	Query GUIDs	drv_cfg --query_guid[1]		
	Query to determine to which MDM an SDC is connected	drv_cfg --query_mdms[1]		

Table 4 SDC activities and monitoring (page 3 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
	Query GUID and MDM IP addresses on an ESX-based SDC	esxcli system module parameters list -m scini[2]		
	Query SDC state on an ESX-based SDC	esxcli system module list |grep scini[2]		

1. The drv_cfg command line is a local CLI utility that affects only the client on which the SDC is running (unlike the ScaleIO CLI which may affect the entire system). Refer to the user documentation for the correct usage.
2. The esxcli command line is a local CLI utility used on an ESX server, that affects only the client on which the SDC is running (unlike the ScaleIO CLI which may affect the entire system). Refer to the utility documentation or on-line help for the correct usage.

SDS activities and monitoring

Table 5 SDS activities and monitoring (page 1 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Add an IP address to an SDS		add_sds_ip	Backend › navigate to, and select SDS › Configure IP Addresses	
Add SDS nodes		add_sds	Backend › navigate to, and select a Protection Domain › Add SDS	Deployment Wizard
Change the SDS port used by SIO		modify_sds_port	Backend › navigate to, and select SDS › Configure IP Addresses	
Enter Maintenance Mode		enter_maintenance_mode	Backend › navigate to, and select SDS or Fault Set › Enter Maintenance Mode	
Exit Maintenance Mode		exit_maintenance_mode	Backend › navigate to, and select SDS or Fault Set › Exit Maintenance Mode	

Table 5 SDS activities and monitoring (page 2 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Modify an SDS IP role		modify_sds_ip_role	Backend › navigate to, and select SDS › Configure IP Addresses	
Name\Rename an SDS		rename_sds	Backend › navigate to, and select SDS › Rename	
Remove an SDS node		remove_sds	Backend › navigate to, and select SDS › Remove	
Remove an IP address from an SDS		remove_sds_ip	Backend › navigate to, and select SDS › Configure IP Addresses	
Set SDS rebalance and rebuilt limits		set_sds_network_limits	Backend › navigate to, and select Protection Domain › Set Network Throttling (configures all SDSs in the specified Protection Domain)	
Test SDS device		start_device_test		
Test the SDS network		start_sds_network_test		
	All SDSs query	query_all_sds	Dashboard › SDSs tile Backend › Filter by SDSs and toggle between various table views	
	Query volumes	drv_cfg --query_vols[1]	Dashboard › Volumes tile Backend › filter by Volumes › toggle between various table views	
	Retrieve network test results	query_sds_network_test_results		
	Single SDS query	query_sds	Backend › Filter for the SDS › select SDS in table and either open its Property Sheet or toggle between various table views	

Table 5 SDS activities and monitoring (page 3 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
	Query SDS connectivity status	query_sds_connectivity_status	Dashboard › SDSs tile Backend › Filter by SDSs and toggle between various table views	
Abort the removal of an SDS		abort_remove_sds	Backend › navigate to, and right click on the SDS › select Abort Removal	
	Query SDS device	query_sds_device_info	Backend › Navigate to and select device › display Property Sheet	
Set the properties of the dirty-region-logging		set_drl_properties	Backend › navigate to, and right-click SDS › select Set DRL Mode	
Turns the device LED on or off		set_sds_device_led		

1. The drv_cfg command line is a local CLI utility that affects only the client on which the SDC is running (unlike the ScaleIO CLI which may affect the entire system). Refer to the user documentation for the correct usage.

Storage Pool activities and monitoring

Table 6 Storage Pool activities and monitoring (page 1 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Add a Storage Pool		add_storage_pool	Backend › navigate to, and select a Protection Domain › Add Storage Pool	Deployment Wizard + Basic configuration
Modify spare capacity policy		modify_spare_policy	Backend › navigate to, and select the Storage Pool › Configure Spare Percentage Policy	
Modify Storage Pool's zero padding policy		modify_zero_padding_policy	Backend › navigate to, and select the Storage Pool › Modify Zero Padding	

Table 6 Storage Pool activities and monitoring (page 2 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Remove a Storage Pool		remove_storage_pool	Backend › navigate to, and select the Storage Pool › Remove	Basic configuration
Rename a Storage Pool		rename_storage_pool	Backend › navigate to, and select the Storage Pool › Rename	
Set the rebuild policy		set_rebuild_policy	Backend › navigate to, and select the Storage Pool › Set I/O Priority	
Set the rebuild mode		set_rebuild_mode	Backend › navigate to, and select the Storage Pool › Enable/Disable Rebuild/Rebalance	
Set the rebalance policy		set_rebalance_policy	Backend › navigate to, and select the Storage Pool › Set I/O Priority	
Set the rebalance mode		set_rebalance_mode	Backend › navigate to, and select the Storage Pool › Enable/Disable Rebuild/Rebalance	
Set parallelism limit (concurrent rebuild and rebalance activities)		set_rebuild_rebalance_parallelism		
Enable background device scanner		enable_background_device_scanner	Backend › navigate to, and select the Storage Pool › Set Background Device Scanner Mode	
Disable background device scanner		disable_background_device_scanner	Backend › navigate to, and select the Storage Pool › Set Background Device Scanner Mode	
Reset background device scanner error counters		reset_scanner_error_counters	Backend › navigate to, and select the Storage Pool › Reset Background Device Scanner Counters	

Table 6 Storage Pool activities and monitoring (page 3 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Set use of in-flight checksum validation		set_checksum_mode	Backend › navigate to, and select a Storage Pool › Configure Use Checksum	
	Storage Pool query	query_storage_pool	• Dashboard › navigate to Protection Domain node › Storage Pools tile • Backend › Filter for Storage Pool › select the Storage Pool in table and either open its Property Sheet or toggle various table views	

User management activities and monitoring

Table 7 User management activities and monitoring (page 1 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Add a user		add_user		
Add LDAP service		add_ldap_service		
Assign LDAP groups to roles		assign_ldap_groups_to_roles		
Remove LDAP group assignments		remove_ldap_group_from_role_assignment		
Change a user's password		set_password		
Delete a user		delete_user		
Disable the Super User role		disable_admin		
Login		login	Start the application; use the Login window	
Logout		logout	Preferences menu › Logout (top right corner)	

Table 7 User management activities and monitoring (page 2 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Modify user credentials		modify_user		
Remove LDAP service		remove_ldap_service		
Rename LDAP service		rename_ldap_service		
Reset a user's password		reset_password		
Reset an admin user (special conditions required)		reset_admin		
Set user authentication method		set_user_authentication_method		
	Display information about a user	query_user		
	Display information about user authentication	query_user_authentication_properties		
	Display system users and their roles	query_users		

Component authentication activities and monitoring

Table 8 Component authentication activities and monitoring (page 1 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Generating an MDM Certificate		generate_mdm_certificate		
Adding a certificate to the CLI's Trusted Certificate list		add_certificate		
Setting component authentication properties		set_component_authentication_properties		
Generating an SDS certificate		generate_certificate		
Approving all MDM certificates		approve_all_mdm_certificates		
Generating an MDM CSR file		generate_mdm_csr_file		
Setting management client communication		set_management_client_communication		
	Showing an SDS certificate	set_management_client_communication		

Table 8 Component authentication activities and monitoring (page 2 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
	Showing information about the SSL version used by the MDM cluster		System › Property Sheet › MDM Cluster	
	Show pending cluster certificates		Alerts view Backend view › State Summary	
Setting preemptive acceptance of the login banner		set_cli_login_banner_preemptive_acceptance		

Volume activities and monitoring

Table 9 Volume activities and monitoring (page 1 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Create a volume		add_volume	Frontend › Volumes › Add Volume	Advanced configuration
Detect new volumes		drv_cfg --rescan[1]		
Increase volume capacity		modify_volume_capacity	Frontend › Volumes › navigate to the volumes › Increase Volumes' Size	
Map a volume to an SDC		map_volume_to_sdc	Frontend › Volumes › Map Volume	Advanced configuration
Remove a volume		remove_volume	Frontend › Volumes › navigate to the volumes › Remove	Advanced configuration
Remove consistency group snapshots		remove_consistency_group_snapshots	Frontend › Snapshots › navigate to the volume › Remove Descendants only *or* Remove with Descendants *or* Remove Consistency Group	

Table 9 Volume activities and monitoring (page 2 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Rename a volume		rename_volume	Frontend › Volumes › navigate to the volume › Rename	
Set volume bandwidth limits		set_sdc_volume_limits	Frontend › Volumes › navigate to the volumes › Set Volume Limits	
Take a snapshot of a volume		snapshot_volume	Frontend › Volumes › Snapshot Volume	
Unmap a volume		unmap_volume_from_sdc	Frontend › Volumes › Unmap Volume	Advanced configuration
	All volumes query	query_all_volumes	Dashboard › System Overview› Volumes tile	
	Single volume query	query_volume	Frontend › Volumes › select the volume and open the Property Sheet	
	Volume tree query	query_volume_tree		
	Retrieve volume bandwidth limits	query_sdc_volume_limits	Frontend › SDCs › select an SDC and open the Property Sheet › Mapped Volumes	

1. The drv_cfg command line is a local CLI utility that affects only the client on which the SDC is running (unlike the ScaleIO CLI which may affect the entire system). Refer to the user documentation for the correct usage.

Cache activities and monitoring

Table 10 Cache activities and monitoring (page 1 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Set volume RAM Read Cache (Note that RAM Read Cache is disabled for Version 2.0.x and higher)		set_volume_rmcache_usage		
Control the RAM cache usage in a Storage Pool		set_rmcache_usage	Backend › navigate to, and select Storage Pool › Configure RAM Read Cache	
Disable RAM cache of the SDS		disable_sds_rmache	Backend › navigate to, and select SDS › Configure RAM Read Cache	
Enable RAM cache of the SDS		enable_sds_rmcache	Backend › navigate to, and select SDS › Configure RAM Read Cache	
Set the RAM cache size of the SDS		set_sds_rmcache_size	Backend › navigate to, and select SDS › Configure RAM Read Cache	
Set the RAM cache write handling mode of the Storage Pool		set_rmcache_write_handling_mode	Backend › navigate to, and select the Storage Pool › Configure RAM Read Cache	
Control the Flash Read Cache usage in a Storage Pool		set_rfcache_usage	Backend › navigate to, and select the Storage Pool › Set Flash Cache Policy	
Enable Read Flash Cache of an SDS		enable_sds_rfcache	Backend › navigate to, and select SDS › Set Flash Cache Policy	
Disable Read Flash Cache of an SDS		disable_sds_rfcache	Backend › navigate to, and select SDS › Set Flash Cache Policy	

Table 10 Cache activities and monitoring (page 2 of 2)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Configure a Read Flash Cache device		set_rfcache_parameters		
Add a Read Flash Cache device to an SDS		add_sds_rfcache_device	Backend › navigate to, and select SDS › Add Read Flash Cache Device	
Remove a Read Flash Cache device from an SDS		remove_sds_rfcache_device	Backend › navigate to, and select SDS › Remove Read Flash Cache Device	
Clear Read Flash Cache device errors		clear_sds_rfcache_error	Backend › navigate to, and select device › Clear Device Errors	
Restore the path that was originally configured for the Read Flash Cache device		update_sds_rfcache_device_original_path	Backend › navigate to, and select device › Clear Device Errors	
Rename the Read Flash Cache device		rename_sds_rfcache_device	Backend › navigate to, and select device › Rename	

Other activities and monitoring

Table 11 Other activities and monitoring (page 1 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Configure Oscillating Failure counter properties		set_oscillating_failure_counter_parameters	Backend › System | Protection Domain | Storage Pool › Set Oscillating Failure Properties	
Configure the facility field for syslog events		set_syslog_facility		Deployment Wizard
Get help on a CLI command		help		
Rename the system		rename_system	Backend › select System table row › Rename	
Reset Oscillating Failure counters		reset_oscillating_failure_counters	Backend › System | Protection Domain | Storage Pool › Reset Oscillating Failure Counters	
Set capacity threshold alert		set_capacity_alerts_threshold	Backend › select System › Set Capacity Alert Thresholds	
Set use of performance profiles		set_performance_parameters	Backend or Frontend › select object › Set Performance Profile for...	
Show events		showevents.py[1]		
Start sending events to a remote syslog server		start_remote_syslog		
Stop sending events to a remote syslog server		stop_remote_syslog		
Start an upgrade		start_upgrade		
Stop an upgrade		abort_upgrade		

Table 11 Other activities and monitoring (page 2 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
Finalize an upgrade		finalize_upgrade		
	Upgrade query	query_upgrade		
	General query	query_all	Dashboard Backend › Overview or Configuration table views › Property Sheets for more details	
	General property query	query_properties		
	Oscillating Failure counters	query_oscillating_failure_counter_parameters	Network: Backend › System › Download Network Failure Counters SDCs: Frontend › SDCs › Property Sheet › Oscillating Failure Counters SDSs: Backend › SDSs › Property Sheet › Oscillating Failure Counters	
	Performance parameter usage query	query_performance_parameters	Backend › System › Property Sheet › Performance	
	Remote syslog query	query_remote_syslog		
	Various system limits	query_system_limits	Backend › System › Property Sheet	
Sets or remove the login banner		set_login_banner		
Enable or disable preemptive acceptance of login banner		set_cli_login_banner_preemptive_acceptance		

Table 11 Other activities and monitoring (page 3 of 3)

To do this	To view this	Use this CLI command	Use the GUI	Use the plug-in
	The certificate of the given SDSs	show_certificate		

1. Refer to the user documentation for the correct usage.

CLI basics

The ScaleIO CLI, SCLI, enables you to perform all provision, maintain, and monitor activities.

The CLI is installed as part of the MDM component and can be found in the following path:

- **Linux and VMware**—`scli`
- **Xen**—`siocli`
- **Windows**—`C:\Program Files\emc\scaleio\MDM\bin`

All CLI commands use the following format:

- **Linux, VMware, and Windows**

```
scli [--mdm_ip <IP>] <command>
```

- **Xen**

```
siocli [--mdm_ip <IP>] <command>
```

Description:
Execute a CLI command

Parameter	Description
--mdm_ip ‹IP›	One, or more IP addresses of the servers running the Master MDM and Slave. In a non-clustered environment, use the MDM IP address. If the CLI does not reside on the MDM, the `--mdm_ip` parameter must be added to every CLI command.
--approve_certificate	Preemptive approval of the MDM's certificate
‹command›	Command to be executed

```
scli --mdm_ip 10.10.10.3,10.10.10.4 --query_all
```

The `mdm_ip` indicates the MDM that receives and is to execute the command. If the command is run from the Master MDM, this switch may be omitted.

To avoid using the `--mdm_ip` parameter in every command, or avoid having to install the CLI on other servers, use SSH or RDM to log in to the shell running on the management server.

You cannot execute SCLI commands on the Slave MDM. However, you can send a command from the Slave MDM by adding the IP address of the Master MDM to the command, using the `--mdm_ip` parameter.

Note: The order of the parameters and command is insignificant.
SCLI commands are lowercase and case-sensitive.
All parameters are preceded with `--`

Before using most SCLI commands, you must log in, as described in the EMC ScaleIO user documentation.

Using SCLI in non-secure mode

If ScaleIO is running in non-secure mode, you must make the following change to enable running commands.

On every MDM server, disable secure communication:

- Windows

  In the SCLI `conf.txt` file, add `cli_use_secure_communication=0`

- Linux

  Run this command: **`echo cli_use_secure_communication=0 >> ~/.scli/conf.txt`**

Syntax

All names of objects in the system will be capitalized, for example, Protection Domain. In the case where the name is in fact initials it will be in uppercase, for example, MDM.

The actual CLI command format uses the following format:

- Message - Required
- ‹› - Argument
- () – Required element
- [] – Optional element
- | - Select from options A|B|C

Each command entry uses the above syntax and looks like the following example:

Usage:
```
scli --cmd_example --r1 (--r2 | --r3 <V1>) [o1 <V2>|o2]
[Options]
```

Description: a description of what **cmd_example** does

Parameter	Description
--r1	r1 description
--r2	r2 description
--r3 ‹V1›	r3 description with possible V1 input values
--o1 ‹V2›	o1 description with possible V2 input values
--o2	o2 description
Options: CHOOSE SEVERAL	
--so1 ‹V3›	so1 description with possible V3 input values
--so2	so2 description

The interpretation is as follows:

- The text `scli --cmd_example r1` is mandatory.
- The `(--r2 | --r3 <V1>)` indicates that you must choose one of the options separated by "|". Selecting an option is REQUIRED, indicated by "()".
- The `[o1 <V2>|o2]` indicates that you may choose one of the options separated by "|". Selecting an option is OPTIONAL, indicated by "[ ]".
- The `[Options]` indicates that you may choose one of the options that will be described in the table under Options. It is OPTIONAL, indicated by "[ ]".

Getting help with the CLI

The CLI supports auto-completion. To complete a command or parameters, press the TAB key while typing CLI commands.

Note: In Windows, ScaleIO does not support auto-completion.

Alternately, you can run the help command.

Command

```
help
```

Syntax

```
scli --help [Options]
```

Description/Notes

Use this command to view CLI help.

Parameters

Parameter	Description
Options: CHOOSE ONE	
mdm	Help on MDM commands
sds	Help on SDS commands
vol	Help on volume-related commands
sdc	Help on SDC commands
general	Help on general commands
all	Help on all commands
user	Help on commands related to user management
‹blank›	List options

Example

```
scli --help --mdm
```

CHAPTER 3
SCLI Activities

This chapter describes the activities that can be performed with the SCLI commands. The activities are listed in alphabetical order of the SCLI command name.

Aborting the removal of an SDS

Command

```
abort_remove_sds
```

Syntax

```
scli --abort_remove_sds (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
```

Description/Notes

Stops the process of removing of an SDS from a ScaleIO system.

If done at too late a stage in the removal process, this command might fail, and the SDS will be removed.

Parameters

Parameter	Description
--sds_id ‹ID›	ID of the SDS whose removal you want to stop
--sds_name ‹NAME›	Name of the SDS whose removal you want to stop
--sds_ip ‹IP›	IP address of the SDS whose removal you want to stop
--sds_port ‹PORT›	Port associated with the SDS

Example

```
scli --mdm_ip 192.168.1.200 --abort_remove_sds
--sds_ip 192.168.1.4
```

Aborting removal of a device from an SDS

Command

```
abort_remove_sds_device
```

Syntax

```
scli --abort_remove_sds_device (--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>)))
```

Description/Notes

Stops the process of removing an SDS device from an SDS.

If performed at too late a stage in the removal process, this command might fail, and the SDS device will be removed.

Parameters

Parameter	Description
--device_ID ‹ID›	The ID of the storage device that was requested to be removed from the SDS
--sds_id ‹ID›	ID of the SDS from which the device was to be removed
--sds_name ‹NAME›	Name of the SDS from which the device was to be removed
--sds_ip ‹IP›	IP address of the SDS from which the device was to be removed
--sds_port ‹PORT›	Port associated with the SDS
--device_name ‹NAME›	The name of the storage device or file that was requested to be removed from the SDS
--device_path ‹PATH›	The path of the device that was requested to be removed

Example

```
scli --mdm_ip 192.168.1.200 --abort_remove_sds_device
--sds_ip 192.168.1.6 --device_name /dev/sdb
```

Stopping an upgrade

Command

```
abort_upgrade
```

Syntax

```
scli --abort_upgrade
```

Description/Notes

Stops an upgrade that is in process.

Parameters

Parameter	Description
--use_nonsecure_communication	Enables SCLI commands to be executed when secure communication mode is not enabled. This is necessary when the base system does not use secure communication mode, for example ScaleIO v1.32.x.

Example

```
scli --abort_upgrade --use_nonsecure_communication
```

Activating a Protection Domain

Command

```
activate_protection_domain
```

Syntax

```
scli --activate_protection_domain
(--protection_domain_id <ID> |
--protection_domain_name <NAME>) [--force_activate]
[--i_am_sure]
```

Description

Activates a Protection Domain.

Protection Domains are activated, by default. Use this command to activate a Protection Domain that was inactivated.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--force_activate	Activate the Protection Domain, ignoring current system errors
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --activate_protection_domain
--protection_domain_name pd1
```

Activating an SDS device

Command

```
activate_sds_device
```

Syntax

```
scli --activate_sds_device (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
(--device_id <ID> | --device_name <NAME> |
--device_path <PATH> | --activate_all_devices)
```

Description/Notes

Activates SDS devices that have completed their tests.

SDS Devices that were added using the `add_sds` or `add_sds_device` command with the `test_only` parameter, will not be used by the system until activated by this command.

You can activate one, or *all* SDS devices on an SDS with a single command.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--device_id ‹ID›	The ID of the SDS device to activate
--device_name ‹NAME›	SDS storage device name or file
--device_path ‹PATH›	The path of the SDS device to activate
--activate_all_devices	Activate all devices of the specified SDS. If all the devices cannot be activated, this command will fail.

Example

```
scli --mdm_ip 192.168.1.200 --activate_sds_device
--sds_ip 192.168.1.5 --activate_all_devices
```

Adding a certificate to the CLI's Trusted Certificate list

Command

```
add_certificate
```

Syntax

```
scli --add_certificate --certificate_file <FILE>
```

Description/Notes

Adds a Certificate Authority (CA) signed certificate to the CLI's Trusted Certificates list. All applied certificates signed by that CA will be automatically trusted by this CLI.

Parameters

Parameter	Description
--certificate_file ‹FILE›	The file name of the Root or Trusted certificate to trust

Example

```
scli --add_certificate --certificate_file
CAcert-cacert.pem
```

Adding a Fault Set

Command

```
add_fault_set
```

Syntax

```
scli --add_fault_set (--protection_domain_id <ID> |
--protection_domain_name <NAME>) [--fault_set_name
<NAME>]
```

Description/Notes

Adds an empty Fault Set to a Protection Domain.

Fault Sets provide additional safeguards for protecting your data against hardware failure. Fault Sets are subsets of a given Protection Domain. When you define SDSs later on, you can add them to a Fault Set. Added Fault Sets are enabled by default.

Note: When defining Fault Sets, you must follow the guidelines described in the user guide. Failure to do so may prevent creation of volumes.

Define Fault Set names according to the following rules:

1. Must contain less than 32 characters.
2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display default system-defined names, using the Fault Sets' IDs.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	The ID of the Protection Domain to which the Fault Set will be added
--protection_domain_name ‹NAME›	The name of the Protection Domain to which the Fault Set will be added
--fault_set_name	The name of the new Fault Set

Example

```
scli --add_fault_set --protection_domain_name sio-pd1
--fault_set_name sio-fs1
```

Adding an LDAP service to the system

Command

```
add_ldap_service
```

Syntax

```
scli --add_ldap_service --ldap_service_uri <URI>
--ldap_base_dn <LDAP_DN>
[--ldap_service_name <LDAP_NAME>]
[--object_class_attribute <ATTR>]
[--user_id_attribute_name <NAME>]
[--member_of_attribute_name <NAME>]
[--disable_recursive_search]
```

Description/Notes

Adds an LDAP service to the system. The service ID of the added LDAP will be returned.

Parameters

Parameter	Description
--ldap_service_uri	URI of the LDAP service. ‹LDAP_SCHEMA›://‹LDAP_HOSTNAME›:‹PORT_NUMBER› Where ‹LDAP_SCHEMA› defines the connection protocol: LDAPS—Secure LDAP connection (recommended) LDAP —Non-secure LDAP connection ‹PORT_NUMBER› —the LDAP service port (optional, default: 636) This parameter must start with ldap:// or ldaps:// followed by the host name. No extra validation is performed at this stage. Example: LDAPS://my.ldaphost.com:636
--ldap_base_dn	Base Distinguished Name (DN) of users in the domain, and must be a valid DN containing the DC substring. For example, if a user corporate login is johnd@ecme.corp.com, the DC string would be DC=ecme, DC=corp, DC=com. **Tips:** On Active Directory Windows servers, you can use the **dsquery** tool to find LDAP Base DN information. To see available options, in command line, type dsquery /? On Linux, you can use **ldapsearch** from the command line (may need to be installed if it is missing).
--ldap_service_name	LDAP service name
--object_class_attribute	The object class attribute that is used to identify a user; used in the search filter (default: user)
--user_id_attribute_name	The attribute name that defines the user id; used in the search filter (default: sAMAccountName)

--member_of_attribute_name	The attribute name that defines the contained group; used in the search filter (default: memberOf)
--disable_recursive_search	Disable recursive search

Example

```
scli --add_ldap_service --ldap_service_uri
"ldaps://ldaps.ecme.com" --ldap_base_dn
"OU=SIO_OU_1,DC=ldaps,DC=local"
```

where, in this example:

`ldaps://ldaps.ecme.com` is the host name of the authentication server.

`OU=SIO_OU_1` is a specific organizational unit group defined in the Active Directory.

`DC=ldaps, DC=local` are the Domain Component parts of the Base DN.

Adding a Protection Domain

Command

```
add_protection_domain
```

Syntax

```
scli --add_protection_domain [--protection_domain_name
<NAME>]
```

Description/Notes

Adds a Protection Domain.

Define Protection Domain names according to the following rules:

1. Must contain less than 32 characters.
2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display default system-defined names, using the Protection Domains' IDs.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

Parameters

Parameter	Description
--protection_domain_name ‹NAME›	A unique name to be associated with the created Protection Domain

Example

```
scli --mdm_ip 192.168.1.200 --add_protection_domain
--protection_domain_name rack_1.1
```

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name

Example

```
scli --mdm_ip 192.168.1.200 --remove_protection_domain
--protection_domain_name my_protection_domain
```

Enabling an SDC's access to the MDM, while in restricted access mode

Command

```
add_sdc
```

Syntax

```
scli --add_sdc --sdc_ip <ip> | --sdc_guid <guid>
[--sdc_name <name>]
```

Description/Notes

Enables an SDC to access the MDM, while restricted SDC mode is enabled.

Parameters

Parameter	Description
--sdc_ip ‹IP›	The IP address of the SDC
--sdc_guid ‹GUID›	The GUID of the SDC. You can obtain the GUID by querying the SDC using `--query_all_sdc`, by viewing the SDC's properties in the GUI, or using the command `drv_cfg --query_guid` locally.
--sdc_name ‹NAME›	Assigns a name to the SDC

Example

```
scli --add_sdc --sdc_ip 10.125.120.53 --sdc_name sdc53
```

Adding SDS nodes and devices

Command

```
add_sds
```

Syntax

```
scli --add_sds --sds_ip <IP> [--sds_ip_role <ROLE>]
((--protection_domain_id <ID> |
--protection_domain_name <NAME>) |
((((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>) --device_path <PATHS>
[--device_name <NAMES>]))[--sds_name <NAME>]
[--fault_set_id <ID> | --fault_set_name <NAME>]
[--rmcache_size_mb <SIZE>] [--enable_rmcache |
--disable_rmcache] [--num_of_io_buffers <VALUE>]
[--sds_port <PORT>] [--force_clean]
[--test_time <TIME>] [Test Options][--i_am_sure]
```

Description/Notes

Adds an SDS to a Protection Domain.

This command links the SDS components to the MDM. It informs the SDS which devices to use, and learns about each device capacity. It enables you to associate multiple IP addresses to the SDS, by a comma-separated list. By default, the command also performs performance tests to the added devices and saves the results.

You can assign a name to the SDS, as well as to SDS devices. This name can assist in future object identification. This can be particularly helpful for SDS devices, as the name will remain constant, even if the path changes.

Define SDS names according to the following rules:

1. Must contain less than 32 characters.
2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display default system-defined names, the SDS' first IP address.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

You can configure up to eight IP addresses per SDS, each being defined as one of the following roles:

- **SDC only**
  Communication is enabled only between this SDS and SDCs. NOTE: The MDM will not be aware of this IP, and therefore, internal error-checking will not be performed. If an incorrect IP address is supplied, throughput may be affected.
- **SDS only**
  Communication is enabled only between this SDS and other SDS and MDM components
- **All (default)**
  Communication is enabled with all components

You can define a role for every IP address, or use the default for all. Each SDS must have either of the following:

- at least one IP address with the role *all*
- two IP addresses with the roles *sdc_only* and *sds_only*

A situation where all IP addresses are either sdc_only or sds_only is not valid.

IP roles can be configured when adding an SDS, by adding a new IP address to an SDS, or by editing a current IP role.

NOTICE

This command reformats the devices used by the SDS component and erases all existing data!

By default, the performance of each added device is tested before it can be used. The SDS will perform two performance tests on the given devices: random writes and random reads. When the tests are complete, the device capacity is automatically added to the Protection Domain storage used by the MDM. To modify this behavior, specify one of the Test-Option parameters.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--sds_ip ‹IP›	A comma-separated list (no space after the commas) of IP addresses associated with the SDS over which the data will be transferred
--sds_ip_role ‹IP›	A comma-separated list of IP roles associated with the SDS IP addresses. Each role is either sdc_only, sds_only, or all.
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set name
--storage_pool_name ‹NAME›	A comma-separated list (no space after the commas) of Storage Pool names to be associated with the storage devices, respectively. If one Storage Pool is specified in the list, all devices are associated with it. Otherwise, each device is associated with the Storage Pool situated in the same position in the list.

--storage_pool_id ‹ID›	A comma-separated list (no space after the commas) of Storage Pool IDs to be associated with the storage devices, respectively. If one Storage Pool is specified in the list, all devices are associated with it. Otherwise, each device is associated with the Storage Pool situated in the same position in the list.
--device_path ‹PATHS›	The full path to the devices to be added, comma-separated. A device can be a disk, an unmounted partition, or a file that represents free space on a mounted device. To force device take-over, use `--add sds device` with a flag (`--force device_takeover`), and use with caution. The maximum amount of devices per SDS is described in .
--device_name ‹NAMES›	A comma-separated list (no space after the commas) of device names. When using this flag to assign names to the SDS devices, the names will be appropriated to the devices in the device_path list, respectively. The amount of names must equal the amount of devices. Comma-separated, no spaces.
--sds_name ‹NAME›	A name assigned to the SDS
--rmcache_size_mb ‹SIZE›	Size of the SDS RAM cache in MB (default: 128 MB to 300GB)
--enable_rmcache	Enables RAM cache on the SDS
--disable_rmcache	Disables RAM cache on the SDS
--num_of_io_buffers ‹VALUE›	Number of I/O buffers on the SDS
--sds_port ‹PORT›	Port associated with the SDS (default: 7072)
--force_clean	Clean a previous SDS configuration
--test_time ‹TIME›	The maximum test run-time in seconds (default: 10). The test will stop when it reaches the first of this limit, or the time it takes for 128 MB of data reads and writes.
Test_options: CHOOSE ONE	

--test_only	Devices will be tested, but not used. To start using their capacity, run the `activate_sds_device` command.
--no_test	The device capacity will be used without any device testing
‹blank›	Read and write test will be run on devices before their capacity is used
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --mdm_ip 192.168.1.200 --add_sds --sds_ip
192.168.1.9,192.168.1.29 -sds_ip_role
sds_only,sdc_only --protection_domain_name rack_1.1
--device_path /dev/cciss/c0d1p3,/dev/cciss/c0d1p4
--device_name sds01,sds02 --sds_name sds_1
```

Adding a device to an SDS

Command

```
add_sds_device
```

Syntax

```
scli --add_sds_device (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
--device_path <PATH> [--device_name <NAME>]
(--storage_pool_name <NAME>) | --storage_pool_id <ID>)
[--force_device_takeover] [--test_time] [Test Options]
```

Description/Notes

Adds a device to the devices managed by the given SDS.

NOTICE

This command destroys all existing data on the device.

Note: To use the replication feature via RecoverPoint, ensure that zero padding is enabled on the Storage Pool to be replicated, *before* you add any devices to the Storage Pool. For more information, see the user guide.
Replication support is version-specific. For more information, see the ESSM.

You can assign a name to SDS devices. This name can assist in future object identification. This can be particularly helpful for SDS devices, as the name will remain constant, even if the path changes.

Define SDS device names according to the following rules:

1. Must contain less than 32 characters.
2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display a default system-defined name, using the SDS's first IP address.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

By default, the command also performs performance tests on the added device, and saves the results.

Until the test is complete, the device capacity cannot be used. The SDS will perform two performance tests on the given devices: random writes and random reads. When the tests are complete, the device capacity is automatically added to the Storage Pool storage used by the MDM. To modify this behavior, specify one of the option parameters.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS

--device_path ‹PATH›	The full path to the device to be added. A device can be a disk, an unmounted partition, or a file that represents free space on a mounted device.
--device_name ‹NAME›	Assigns a name to the device
--storage_pool_id ‹ID›	Storage Pool ID
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--force_device_takeover	Add the device, ignoring other SDSs in the device. Use with caution, as other device SDSs may write to it, as well
--test_time ‹TIME›	The maximum test run-time in seconds (default: 10). The test will stop when it reaches the first of this limit, or the time it takes for 128 MB of data reads and writes. When `no_test` is selected, this switch is ignored.
Test_options: CHOOSE ONE	
--test_only	Devices will be tested, but not used. To start using their capacity, run the `activate_sds_device` command.
--no_test	Device capacity will be used without any device testing
‹blank›	Read and write test will be run on devices before their capacity will be used

Example

```
scli --mdm_ip 192.168.1.200 --add_sds_device
--sds_ip 192.168.1.6 --device_path /dev/sdb
--device_name sd02
```

Adding an IP address to an SDS

Command

```
add_sds_ip
```

Syntax

```
scli --add_sds_ip (--sds_id <ID> | --sds_name <NAME> |
--sds_ip <IP> [--sds_port <PORT>]) --new_sds_ip <IP>
[--sds_ip_role <ROLE>]
```

Description/Notes

Adds an IP address to an existing SDS.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--new_sds_ip ‹IP›	New IP address to be associated with the SDS
--sds_ip_role ‹ROLE›	The IP role assigned to each SDS IP address. Each role can be sdc_only, sds_only, or all (default). When adding multiple IP addresses, use a comma-separated list for IP roles.

Example

```
scli --mdm_ip 192.168.1.200 --add_sds_ip
 --sds_ip 192.168.1.4 --new_sds_ip 192.168.1.24
```

Adding RFcache devices to SDS

Command

```
add_sds_rfcache_device
```

Syntax

```
scli --add_sds_rfcache_device (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
--rfcache_device_path <PATH> [--rfcache_device_name
<NAME>]
```

Description/Notes

Adds RFcache devices to an SDS.

Ensure that RFcache is enabled on the Storage Pool and that the RFcache driver is installed (normally during deployment) on the SDS before adding cache devices.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--rfcache_device_path	A comma-separated list of Cache device paths
--rfcache_device_name	A comma-separated list of Cache device names
--force_device_takeover	Forces the add device operation, ignoring other SDSs holding the device.

Example

```
scli --add_sds_rfcache_device --sds_name sds1
--rfcache_device_path /dev/rssda --rfcache_device_name
rssda
```

Adding a standby MDM to a cluster

Command

```
add_standby_mdm
```

Syntax

```
scli --add_standby_mdm --mdm_role <ROLE> --new_mdm_ip
<IP> [--new_mdm_port <PORT>] [--new_mdm_management_ip
<IP>] [--new_mdm_virtual_ip_interface <INTF>]
[--new_mdm_name <NAME>] [--allow_asymmetric_ips]
[--force_clean] [--i_am_sure]
```

Description/Notes

Adds a standby MDM to the system.

A standby MDM can be added to the MDM cluster. While adding the standby, you should designate its role, either manager or TieBreaker (default). You can give the standby a unique name.

Parameters

Parameter	Description
--mdm_role ‹ROLE›	One of following: • manager The MDM can become a master of the cluster. • tb The MDM will only serve as a Tie-Breaker in the cluster master election process
--new_mdm_ip ‹IP›	A comma-separated list of up to four IP addresses assigned to the new MDM. Can contain both IPv4 and IPv6.
--new_mdm_port ‹PORT›	Port of the new MDM. The default is 9011
--new_mdm_management_ip ‹IP›	A comma-separated list of up to four IP addresses, used to manage the MDM. Can contain both IPv4 and IPv6.
--new_mdm_virtual_ip_interface ‹INTF›	A comma-separated list of interface names to be used for the MDM virtual IP addresses. The order of interfaces must match the order of virtual IP addresses assigned to the cluster.

--new_mdm_name ‹NAME›	MDM name
--allow_asymmetric_ips	Allow the added node to have a different number of IPs from the primary node
--force_clean	Clean previous configuration of the MDM
--i_am_sure	Preemptive approval

Example

```
scli --add_standby_mdm --mdm_role manager --new_mdm_ip
192.168.1.153 --new_mdm_management_ip 10.103.110.153
--new_mdm_virtual_ip_interface eth4
```

Adding a Storage Pool

Command

```
add_storage_pool
```

Syntax

```
scli --add_storage_pool (--protection_domain_id <ID> |
--protection_domain_name <NAME>) [--storage_pool_name
<NAME>] [--enable_checksum | --disable_checksum]
[--use_rmcache | --dont_use_rmcache]
[--rmcache_write_handling_mode <MODE>]
```

Description/Notes

Adds a Storage Pool to a Protection Domain.

A Storage Pool is a group of devices within a Protection Domain. Each time that you add devices to the system, you must map them to Storage Pools. Create Storage Pools before you start adding SDSs and devices to the system.

Note: To use the replication feature via RecoverPoint, ensure that zero padding is enabled on the Storage Pool to be replicated, *before* you add any devices to the Storage Pool. You can add Storage Pools during installation. In addition, you can modify Storage Pools post-installation with all the management clients (except for OpenStack).
Replication support is version-specific. For more information, see the ESSM.

Define Storage Pool names according to the following rules:

1. Must contain less than 32 characters.

2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display default system-defined names, using the Storage Pools' IDs.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Name to be associated with the created Storage Pool
--enable_checksum	Enable the checksum protection.
--disable_checksum	Disable the checksum protection.
--use_rmcache	Use RAM read cache on all SDSs in the Storage Pool. You can change this setting later on specific SDSs (they can be individually configured not to use RAM read cache). For more information, see the user guide.
--dont_use_rmcache	Do not use RAM read cache on any SDSs in the Storage Pool (default).
--rmcache_write_handling_mode ‹CACHED | PASSTHROUGH›	Determines whether the system stores the data of this Storage Pool's writes in the SDS RAM read cache or not. The default is to store the write data in cache (`cached`). You can change this setting later. For more information, see the user guide.

Example

```
scli --mdm_ip 192.168.1.200 --add_storage_pool
--protection_domain_name rack_1.1
--storage_pool_name sp_1.1_rack_1.1
```

Adding users

Command

```
add_user
```

Syntax

```
scli --add_user --username <NAME> --user_role
<Monitor|Configure|BackEndConfigure|FrontEndConfigure|
Security|Administrator>
```

Description/Notes

Adds a user to the system. A randomly generated password for the created user is returned.

This command is available only to administrator users.

Note: When adding users, you may need to use the “ or ‘ characters to enable the use of Bash syntax characters.

Parameters

Parameter	Description
--username	The user name to add to the system
--user_role	The user role: • Monitor • Configure • BackEndConfigure • FrontEndConfigure • Security • Administrator For more information about the roles, see the user guide.

Example

```
scli --add_user --username siouser2 --user_role
Configure
```

Creating volumes

Command

```
add_volume
```

Syntax

```
scli --add_volume (((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name <NAME>)
| --storage_pool_id <ID>) --size_gb <SIZE> [--volume_name
<NAME>] [Provisioning options] [Use RAM Read Cache Options]
```

Description/Notes

Adds a volume.

You can create a volume when the requested capacity is available and the system capacity is balanced. To start allocating volumes, the system requires that there be at least three SDS nodes. These requirements are described in the *EMC ScaleIO Deployment Guide*.

For the minimum size of an SDS, see the Product Limits table in the user documentation.

The created volume cannot be used until it is mapped to (at least) one SDC.

By default, volume caching is used.

You can use the caching options in this command to override the default setting, per volume. For more information about caching, see the user documentation.

By default, volumes will be thick-provisioned. You can use the provisioning options in this command to override the default setting, per volume.

You can defined volume names. Define volume names according to the following rules:

1. Must contain less than 32 characters.
2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display default system-defined names, using the volume's ID.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

Note: It is highly recommended to give each volume a meaningful name associated with its operational role.

Note: If you use the --storage_pool_id parameter in the command, it is not necessary to also specify the Storage Pool name. Similarly, if you use the --protection_domain_id, it is not necessary to also specify the Protection Domain name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--size_gb ‹SIZE›	Volume size, in GB (basic allocation granularity is 8 GB)
--volume_name ‹NAME›	Name to be associated with the added volume
Provisioning options: CHOOSE ONE (override the default setting)	
--thin_provisioned	The specified volume will be thin provisioned
--thick_provisioned	The specified volume will be thick provisioned (default)
Use RAM Read Cache Options: CHOOSE ONE (override the default setting)	
--use_rmcache	The specified volume will use caching
--dont_use_rmcache	The specified volume will not use caching (default)

Example

```
scli --mdm_ip 192.168.1.200 --add_volume --size_gb 8
--volume_name vol_1 --protection_domain_name pd1
--storage_pool_name sp1
```

Allowing commands during an upgrade

Command

```
allow_commands_during_upgrade
```

Syntax

```
scli --allow_commands_during_upgrade
```

Description/Notes

Allows cluster commands to be sent during a session upgrade.

Parameters

Parameter	Description
--use_nonsecure_communication	Enables SCLI commands to be executed when secure communication mode is not enabled. This is necessary when the base system does not use secure communication mode, for example 1.32.x.

Example

```
scli --allow_commands_during_upgrade
--use_nonsecure_communication
```

Approving all MDM certificates

Command

```
approve_all_mdm_certificates
```

Syntax

```
scli --approve_all_mdm_certificates
```

Description/Notes

This command shows all MDM cluster certificates to be approved, one at a time. If there is a connection problem with a node, or a certificate is not approved, the process will stop.

Example

```
scli --approve_all_mdm_certificates
```

Assigning LDAP Groups to system roles

Command

```
assign_ldap_groups_to_roles
```

Syntax

```
scli --assign_ldap_groups_to_roles (--ldap_service_id
<LDAP_SERVICE_ID> | --ldap_service_name
<LDAP_SERVICE_NAME>) [--administrator_role_dn]
[--security_role_dn] [--backend_config_role_dn]
[--frontend_config_role_dn] [--monitor_role_dn]
[--allow_overwrite]
```

Description/Notes

This command maps LDAP groups to ScaleIO system roles. The LDAP service must be configured in advance. Once you have mapped the roles, you can assign users in the Active Directory to the relevant LDAP groups.

Note: All LDAP groups must be assigned the Monitor role if they want those LDAP users to be able to use the GUI/Plug-in.

Parameters

Parameter	Description
--ldap_service_id	ID of LDAP service
--ldap_service_name	Name of LDAP service
--administrator_role_dn	LDAP group that has users with administration privileges
--security_role_dn	LDAP group that has users with security privileges
--backend_config_role_dn	LDAP group that has users with backend configuration privileges
--frontend_config_role_dn	LDAP group that has users with frontend configuration privileges
--monitor_role_dn	LDAP group that has users with monitoring privileges
--allow_overwrite	Overwrites the role's LDAP group

Example

```
scli --assign_ldap_groups_to_roles --ldap_service_id
0xAABBCCDDEEFF0011 --administrator_role_dn
"CN=SIO_GRP_1,OU=SIO_OU_1,DC=ldaps,DC=ecme,DC=com"
--monitor_role_dn
"CN=SIO_GRP_2,OU=SIO_OU_1,DC=ldaps,DC=ecme,DC=com"
```

Removing SDSs from a Fault Set

Command

```
clear_fault_set
```

Syntax

```
scli --clear_fault_set (--fault_set_id <ID> |
((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --fault_set_name
<NAME>)) [--i_am_sure]
```

Description

This command removes all SDSs from the specified Fault Set.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set name
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --clear_fault_set --protection_domain_name pd18
--fault_set_name sio-fs1
```

Clearing an SDS device error

Command

```
clear_sds_device_error
```

Syntax

```
scli --clear_sds_device_error (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
(--device_id <ID> | --device_name <NAME> |
--device_path <PATH> | --clear_all)
```

Description/Notes

This command clears an SDS device error.

Note: The command does not check if the device error was fixed. If the error persists, the device will return to an error state as soon as it is accessed. You can verify that the device error has been fixed by running an SDS query.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--device_id ‹ID›	The ID of the device
--device_name ‹NAME›	SDS storage device name or file
--device_path ‹PATH›	The path of the device
--clear_all	Clears errors on all the SDS devices

Example (single device)

```
scli --mdm_ip 192.168.1.200 --clear_sds_device_error
--device_name /dev/sdb --sds_ip 192.168.1.7
```

Example (all devices)

```
scli --mdm_ip 192.168.1.200 --clear_sds_device_error
--clear_all --sds_ip 192.168.1.7
```

Clearing SDS RFcache errors

Command

```
clear_sds_rfcache_error
```

Syntax

```
scli --clear_sds_rfcache_error (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
```

Description/Notes

This command clears RFcache errors on the specified SDS.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --clear_sds_rfcache_error --sds_name sds25_10
```

Creating an MDM cluster

Command

```
create_mdm_cluster
```

Syntax

```
scli --create_mdm_cluster --master_mdm_ip <IP>
[--master_mdm_management_ip <IP>]
[--cluster_virtual_ip <IP>]
[--master_mdm_virtual_ip_interface <INTF>]
[--master_mdm_name <NAME>] [--accept_license]
[--disable_client_secure_communication]
[--approve_certificate]
```

Description/Notes

Create an MDM cluster from the selected Master MDM. When this command is executed, the MDM cluster will operate in single mode.

This command does not require the user to be logged in before running it.

Parameters

Parameter	Description
--master_mdm_ip ‹IP›	IP address to be used for the MDM cluster internal control communications. A comma- separated list of IP addresses, assigned to the Master MDM
--master_mdm_management_ip ‹IP›	A comma-separated list of IP addresses, used to manage the MDM
--cluster_virtual_ip ‹IP›	A comma-separated list of IP addresses to be used for the cluster.
--master_mdm_virtual_ip_interface ‹INTF›	A comma-separated list of interface names to be used for the MDM virtual IP addresses. The order of interfaces must match the order of virtual IP addresses assigned to the cluster.
--master_mdm_name ‹NAME›	MDM name. Each MDM name must be unique. Ensure that each server on which the MDM is installed has a unique hostname.
--accept_license	Accept the license agreement
--disable_client_secure_communications	Create the cluster without management client secure communication
--approve_certificate	Preemptive approval of the MDM certificate

Example

```
scli --create_mdm_cluster --master_mdm_ip
192.168.1.152 --cluster_virtual_ip 192.168.100.152
--master_mdm_virtual_ip_interface eth4
```

Deleting users

Command

```
delete_user
```

Syntax

```
scli --delete_user (--user_id <ID> | --username <NAME>)
```

Description/Notes

This command, only available to administrator roles, deletes the specified user from the system.

Parameters

Parameter	Description
--user_ID ‹ID›	ID of the user to be deleted
--username ‹NAME›	User name of the user to be deleted

Example

```
scli --delete_user --username siouser2
```

Disabling the Default Admin User

Command

```
disable_admin
```

Syntax

```
scli --disable_admin [--i_am_sure]
```

Description/Notes

This command disables the default Super User. The Super User is a new role that replaces the default administrator in the earlier versions. This is the default user for setting up the system. It has all the privileges of all the user roles. The Super User is only available in the local domain, and cannot be an LDAP user. One may disable the Super User in order to ensure that all users are associated with specific people. The Super User role should be used in two cases:

- When setting up a new system
- When there is no desire to have separate users and there is no desire to define additional users.

The default credentials are:

Username: `admin`

Password: `admin`

Note: Having a single Super User dictates that the audit log will not track a certain person per se.

If you need to re-enable the Super User, use the `reset_admin` command.

Parameters

Parameter	Description
--i_am_sure	Preemptive approval

Example

```
scli --disable_admin --i_am_sure
```

Disabling the background device scanner

Command

```
disable_background_device_scanner
```

Syntax

```
scli --disable_background_device_scanner
(((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>)
```

Description

This command disables the background device scanner on the specified Storage Pool.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID

--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

Example

```
scli --disable_background_device_scanner
--protection_domain_name pd120 --storage_pool_name
sp180
```

Disabling RFcache on an SDS or Protection Domain

Command

```
disable_sds_rfcache
```

Syntax

```
scli --disable_sds_rfcache ((--protection_domain_id
<ID> | --protection_domain_name <NAME>) | (--sds_id
<ID> | --sds_name <NAME> | --sds_ip <IP> [--sds_port
<PORT>]))
```

Description/Notes

This command disables the RFcache feature on a specific SDS or in an entire Protection Domain.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --disable_sds_rfcache --protection_domain_name
pd02
```

Disabling the RAM read cache of an SDS

Command

```
disable_sds_rmcache
```

Syntax

```
scli --disable_sds_rmcache ((--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (--protection_domain_id <ID> |
--protection_domain_name <NAME>)) [--i_am_sure]
```

Description/Notes

This command disables the RAM read cache of the specified SDS.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_ID ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --disable_sds_rmcache --sds_name sds23
--protection_domain_name pd01
```

Enabling the background device scanner

Command

```
enable_background_device_scanner
```

Syntax

```
scli --enable_background_device_scanner
(((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>) --scanner_mode
<device_only/data_comparison>
[--scanner_bandwidth_limit <LIMIT>]
```

Description

This command enables the background device scanner on the devices in the specified Storage Pool. There are two modes: device only mode, and data comparison mode (see explanation in the Parameters table below). Zero padding must be enabled in order to set the background device scanner to data comparison mode. You can check the error detected by the background device scanner by querying SDSs, using the command `--query_sds`. Information about errors will be provided in event reports.

For more information about viewing events, and this event, in particular, see the user guide.

Note: High bandwidth should be used very carefully,and for extreme cases only (such as an urgent need to check some devices), as it may create negative impact on system performance. Setting the background device scanner bandwidth should take into account maximum bandwidth of the devices.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--scanner_mode ‹device_only/data_comparison›	Scanner mode of operation: • device_only Perform read operations. Fix from peer on errors • data_comparison Perform the device_only test, and compare the data content with peer
--scanner_bandwidth_limit	Bandwidth limit in KB per second per device. The given value should be in the range 10 KB...10 MB (default = 1 MB).

Example

```
scli --enable_background_device_scanner
--protection_domain_name pd120 --storage_pool_name
sp18 --scanner_mode device_only
--scanner_bandwidth_limit 2000
```

Enabling RFcache on an SDS or Protection Domain

Command

```
enable_sds_rfcache
```

Syntax

```
scli --enable_sds_rfcache ((--protection_domain_id
<ID> | --protection_domain_name <NAME>) | (--sds_id
<ID> | --sds_name <NAME> | --sds_ip <IP> [--sds_port
<PORT>]))
```

Description/Notes

This command enables RFcache on a specific SDS or in an entire Protection Domain.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --enable_sds_rfcache --protection_domain_name
pd25 --sds_name sds25_10
```

Enabling the RAM read cache of an SDS

Command

```
enable_sds_rmcache
```

Syntax

```
scli --enable_sds_rmcache ((--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (--protection_domain_id <ID> |
--protection_domain_name <NAME>)) [--i_am_sure]
```

Description/Notes

This command enables the RAM read cache of the devices in the specified SDS. For a read to be stored in a specific SDS cache, you have to make sure that the cache on this SDS is enabled, and the relevant Storage Pool and the relevant volume are both configured to use cache. Caching will only begin after one or more devices are added to the SDS.

Note: You can also enable/disable the RAM read cache for all SDSs in a Protection Domain using one command. To do this, add the relevant Protection Domain name or ID to the `enable_sds_rmcache` or `disable_sds_rmcache` command. For example, `scli --enable_sds_rmcache --sds_ip 10.100.5.25 --protection_domain pd25`

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --enable_sds_rmcache --sds_ip 10.100.5.25
--protection_domain_name pd01
```

Entering maintenance mode

Command

```
enter_maintenance_mode
```

Syntax

```
scli --enter_maintenance_mode ((--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (--fault_set_id <ID> | ((--protection_domain_id <ID>
| --protection_domain_name <NAME>) --fault_set_name
<NAME>))) [--force_insufficient_spare_or_free_space]
[--force_degraded_or_failed_data]
```

Description/Notes

This command places one or more SDSs in maintenance mode.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set Name
--force_insufficient_spare_or_free_space	Allow entry into maintenance mode, even without enough available capacity
--force_degraded_or_failed_data	Allow entry into maintenance mode, even with degraded or failed data

Example

```
scli --enter_maintenance_mode --sds_name sds10
--force_degraded_or_failed_data
```

Exiting maintenance mode

Command

```
exit_maintenance_mode
```

Syntax

```
scli --exit_maintenance_mode ((--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (--fault_set_id <ID> | ((--protection_domain_id <ID>
| --protection_domain_name <NAME>) --fault_set_name
<NAME>))) [--force_failed_device_id <IDs>]
[--force_failed_sds]
```

Description/Notes

This command cancels maintenance mode one or more SDSs.

Note: If you attempt to remove an SDS in Instant Maintenance Mode, the system will display an error message ("The task failed since there is an SDS in the Protection Domain currently in Maintenance Mode"). However, you can force an SDS out of Maintenance Mode by using one of the flags, and then removing the SDS.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set Name
--force_failed_device_id ‹IDs›	Allow exit from maintenance mode, even when the specified devices are in an error state
--force_failed_sds	Allow exit from maintenance mode, even when an SDS is down

Example

```
scli --exit_maintenance_mode --sds_ip 10.76.1.10
--sds_port 7072
```

Finalizing an upgrade

Command

```
finalize_upgrade
```

Syntax

```
scli --finalize_upgrade
```

Description/Notes

Finalize the upgrade process.

Parameters

Parameter	Description
--use_nonsecure_communication	Enables SCLI commands to be executed when secure communication mode is not enabled. This is necessary when the base system does not use secure communication mode, for example 1.32.x.

Example

```
scli --finalize_upgrade --use_nonsecure_communication
```

Generating an SDS certificate

Command

```
generate_certificate
```

Syntax

```
scli --generate_certificate (--sds_id <ID> | --sds_name
<NAME> | --sds_ip<IP>[--sds_port<PORT>])
```

Description/Notes

This command generates a new certificate and private key for the SDS. The certificate and key are signed by the system.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --generate_certificate --sds_id e4c62adc00000001
```

Generating an MDM certificate

Command

```
generate_mdm_certificate
```

Syntax

```
scli --generate_mdm_certificate (--target_mdm_id <ID> |
--target_mdm_ip <IP> [--target_mdm_port <PORT>] |
--target_mdm_name <NAME>)
```

Description/Notes

This command creates a new self-signed certificate and private key for a given MDM. When this command is run on the Master MDM, the MDM will restart, and this may cause the MDM to switch ownership.

Parameters

Parameter	Description
--target_mdm_id ‹ID›	The ID of the MDM for which the certificate and private key are required
--target_mdm_ip ‹IP›	The IP address of the MDM for which the certificate and private key are required
--target_mdm_port ‹PORT›	The port of the MDM for which the certificate and private key are required
--target_mdm_name ‹NAME›	The name of the MDM for which the certificate and private key are required

Example

```
scli --generate_mdm_certificate --target_mdm_ip
198.168.1.2 --target_mdm_port 9011
```

Generating an MDM CSR file

Command

```
generate_mdm_csr_file
```

Syntax

```
scli --generate_mdm_csr_file (--target_mdm_id <ID> |
--target_mdm_ip <IP> [--target_mdm_port <PORT>] |
--target_mdm_name <NAME>)
```

Description/Notes

This command creates a CSR (Certificate Signing Request) file for a given MDM. The generated file is used to obtain security certificates from a Certificate Authority. This file will be saved in the given MDM's directory:

- Linux: `/opt/emc/scaleio/mdm/cfg`
- Windows: `C:\Program Files\emc\scaleio\mdm\cfg`

Parameters

Parameter	Description
--target_mdm_id ‹ID›	The ID of the MDM for which the CSR file is required
--target_mdm_ip ‹IP›	The IP address of the MDM for which the CSR file is required
--target_mdm_port ‹PORT›	The port of the MDM for which the CSR file is required
--target_mdm_name ‹NAME›	The name of the MDM for which the CSR file is required
--common_name ‹NAME›	Common Name to appear in the CSR. The default is the machine's host name.
Options	**Fill at least one to disable default values for all fields:**
--country ‹NAME›	Country to appear in the CSR
--state ‹NAME›	State to appear in the CSR
--location ‹NAME›	Location to appear in the CSR
--organization ‹NAME›	Organization to appear in the CSR
--organizational_unit ‹NAME›	Organizational Unit to appear in the CSR
--email_address ‹EMAIL›	Email address to appear in the CSR

Example

```
scli --generate_mdm_csr_file --target_mdm_ip
192.168.1.2 --target_mdm_port 9011
```

Inactivating a Protection Domain

Command

```
inactivate_protection_domain
```

Syntax

```
scli --inactivate_protection_domain
(--protection_domain_id <ID> |
```

```
--protection_domain_name <NAME>)
[--force_inactivate] [--i_am_sure]
```

Description

This command inactivates the specified Protection Domain. Using this feature is a much more effective way to shut down nodes, and is preferable to shutting them down manually.

When this feature is in effect, the following activities can take place, behind the scenes:

- Determine if there are any current rebuild/rebalance activities taking place. If so, the shutdown will be delayed (unless it is forced) until they are finished.
- Block future rebuild/rebalance activities.
- Quiesce application I/O and disable access to volumes.
- Move the DRL mode of all SDSs to harden, in preparation of rebooting the server.
- Reload of all SDSs before re-enabling data access.

Note: If you inactivate a Protection Domain, the data remains on the SDSs, and therefore, it is preferable to remove a Protection Domain if you no longer need it.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--force_shutdown	Inactivate the Protection Domain, ignoring current system errors
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --inactivate_protection_domain
--protection_domain_name pd1
```

Logging in

Command

```
login
```

Syntax

```
scli --login --username <NAME> [--password <PASSWORD>]
[(--ldap_authentication | --native_authentication)]
[--approve_certificate]
--accept_banner_by_scripts_only
```

Description/Notes

This command logs the specified user into the management system. Every user must log in before performing CLI commands.

When a user is authenticated by the system, all commands performed will be done with their respective role until a logout is performed, or until the session expires, by reaching one of the following timeouts:

- Maximum session length (default: 8 hours)
- Session idle time (default: 10 minutes)

During installation with the installation manager or the VMware plug-in, the password for the *admin* user is reset. You should log in with the new password.

If you installed ScaleIO manually, after logging in the first time (with the default password, *admin*), you will need to change the password and log in again. Once that is accomplished, the *admin* user can create additional users.

When logging in, if a login banner has been configured and enabled in your system, you are prompted to press any key, after which the banner is displayed. To continue, the banner must be approved.

Parameters

Parameter	Description
--username	User name
--password	User password. If you do not type your password, you will be prompted to do so. **Note:** Note: In Linux, to prevent the password from being recorded in the history log, leave out the `--password` flag and enter the password interactively.
--ldap_authentication	Login with LDAP authentication method. LDAP authentication parameters should be configured and LDAP authentication method should be set.
--native_authentication	Login with the native authentication method (default)
--approve_certificate	Preemptive approval of the MDM certificate
--accept_banner_by_scripts_only	Preemptive approval of the login banner.

Example

```
scli --login --username siouser1 --password 1!2@3A
```

Logging out

Command

```
logout
```

Syntax

```
scli --logout
```

Description/Notes

This command logs the current user out of the system.

Example

```
scli --logout
```

Mapping a volume to an SDC

Command

```
map_volume_to_sdc
```

Syntax

```
scli --map_volume_to_sdc (--volume_id <ID> |
--volume_name <NAME>) (--sdc_id <ID> | --sdc_name
<NAME> | --sdc_guid <GUID> | --sdc_ip <IP>)
[--allow_multi_map]
```

Description/Notes

Map a volume to an SDC node.

The command exposes the volume to the specified SDC, effectively creating a block device on the SDC.

For Linux devices, the `scini` device name can change on reboot. It is recommended to mount a mapped volume to the ScaleIO unique ID, a persistent device name, rather than to the `scini` device name.

To identify the unique ID, run the **ls -l /dev/disk/by-id/** command. For more information, see the user guide.

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume name
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC name
--sdc_guid ‹GUID›	SDC GUID
--sdc_ip ‹IP›	SDC IP address
--allow_multi_map	This flag will allow mapping of additional SDCs to a volume that is already mapped. This flag is not relevant to the first volume mapping command, but should be specified in any subsequent mapping command.

Example

```
scli --mdm_ip 192.168.1.200 --map_volume_to_sdc
--volume_name vol_1 --sdc_ip 192.168.1.3
```

Modifying the virtual IP address of an MDM cluster

Command

```
modify_cluster_virtual_ips
```

Syntax

```
scli --modify_cluster_virtual_ips
(--cluster_virtual_ip <IP> | --clear_all)
```

Description/Notes

Sets or modifies the virtual IP address of an MDM cluster.

Note: Changing or adding a virtual IP address requires updating the SDC with the new virtual IP address.

Parameters

Parameter	Description
Options: CHOOSE ONE:	
--cluster_virtual_ip ‹IP›	A comma-separated list of IP addresses to be used for the cluster
--clear_all	Clear all virtual IPs

Example

```
scli --modify_cluster_virtual_ips --cluster_virtual_ip
192.168.100.152,192.168.100.153
```

Modifying an MDM's management IP address

Command

```
modify_management_ip
```

Syntax

```
scli -modify_management_ip (new_mdm_management_ip <IP>
| --clear_all) (-target_mdm_id <ID> | --target_mdm_ip
<IP> [--target_mdm_port <PORT>] | --target_mdm_name
<NAME>) [--allow_duplicate_management_ips]
[--i_am_sure]
```

Description/Notes

Modifies an MDM node's management IP addresses. If you are using this command to add additional management IP addresses, you must enter all the existing IP addresses in the command, and add the new ones at the end. Up to 4 IP addresses are supported.

NOTICE

If you modify MDM IP addresses, ensure that you implement this change in all components and interfaces that are mapped to the MDM.
For example:
GUI: In the Login window, log in using the new IP address, and clear the old IP address from the history, if it is now obsolete.
REST Gateway and OpenStack: Modify the mapping in the REST Gateway to the new management IP address
SDCs: If for any reason, the management IP address does not get updated in the SDC,

use the (non-CLI) command `/opt/emc/scaleio/sdc/bin/drv_cfg --mod_mdm_ip`. If the SDC is mapped to more than one ScaleIO system, use the (non-CLI) command `/opt/emc/scaleio/sdc/bin/drv_cfg --add_mdm`
vSphere: Using the vSphere web plug-in interface, unregister the ScaleIO system, and re-register it with the new IP address.

Parameters

Parameter	Description
--new_mdm_management_ip ‹IP›	A comma-separated list of IP address to be used to manage the MDM
--clear_all	Clear all management IP addresses
--target_mdm_id ‹ID›	MDM ID
--target_mdm_ip ‹IP›	MDM IP address
--target_mdm_port ‹PORT›	MDM port
--target_mdm_name ‹NAME›	MDM name
--allow_duplicate_management_ips	Allow duplicate management IP addresses
--i_am_sure	Preemptive approval of allow duplicate management IP addresses

Example

```
scli --modify_management_ip --target_mdm_id
0x34e8f1df6c84a410 --new_mdm_management_ip
fd00::192:168:1:17,10.103.110.17
```

Modifying the capacity of an SDS device

Command

```
modify_sds_device_capacity
```

Syntax

```
scli --modify_sds_device_capacity
(--device_id <ID> | ((--sds_id <ID> | --sds_name <NAME>
| --sds_ip <IP> [--sds_port <PORT>])
```

```
(--device_name <NAME> | --device_path <PATH>)))
--size_gb <SIZE>
```

Description/Notes

This command modifies the amount of an SDS device's storage capacity that is made available to ScaleIO, which can assist in balancing storage.

Use this command to reduce (or increase) the device capacity that is available to ScaleIO, without affecting the physical disk size. Ensure that the modified capacity is less than the total physical size of the device. If you reduce capacity, data will be moved to other devices, in an asynchronous fashion.

When reducing capacity, the excess device capacity is not accessible to the user.

Parameters

Parameter	Description
--device_ID ‹ID›	The ID of the SDS device
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--device_name ‹NAME›	SDS storage device name or file
--device_path ‹PATH›	The path of the device whose capacity is to be modified
--size_gb ‹SIZE›	Size of device to use (in GB). The size must be within the device size limits (described in Table 3 on page 26), and slightly less than the full device size.

Example

```
scli --mdm_ip 192.168.1.200
--modify_sds_device_capacity
```

```
--sds_ip 192.168.1.6 --device_name /dev/sdb --size_gb
150
```

Modifying the role of an IP on an SDS

Command

```
modify_sds_ip_role
```

Syntax

```
scli --modify_sds_ip_role (--sds_id <ID> | --sds_name
<NAME> | --sds_ip <IP> [--sds_port <PORT>])
[--sds_ip_to_modify <IP>] --new_sds_ip_role <ROLE>
```

Description/Notes

This command modifies the role of an SDS's IP address. The IP address can be used for SDC only, SDS only, or for both.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--sds_ip_to_modify ‹IP›	The IP address of the SDS being modified
--new_sds_ip_role ‹ROLE›	An IP role: SDC only, SDS only, or all

Example

```
scli --modify_sds_ip_role --sds_name sds01
--sds_ip_to_modify 192.168.1.4 --new_sds_ip_role all
```

Modifying an SDS port

Command

```
modify_sds_port
```

Syntax

```
scli --modify_sds_port (--sds_id <ID> | --sds_name
<NAME> | --sds_ip <IP> [--sds_port <PORT>])
--new_sds_port <PORT>
```

Description/Notes

This command modifies the port used by the SDS for communication purposes.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--new_sds_port ‹PORT›	New port to be associated with the SDS

Example

```
scli --mdm_ip 192.168.1.200 --modify_sds_port
--sds_ip 192.168.1.4 --new_sds_port 6801
```

Modifying spare policy

Command

```
modify_spare_policy
```

Syntax

```
scli modify_spare_policy (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
--spare_percentage <PERCENT> [--i_am_sure]
```

Description/Notes

Modify the current spare capacity reservation policy.

To ensure data protection during server failures, ScaleIO reserves 10% of the capacity by default, not allowing it to be used for volume allocation.

To ensure full system protection during the event of a node failure, you must make sure that the spare capacity is at least equal to the amount of capacity in the node containing the maximum capacity or the maximum Fault Set capacity. If all nodes contain equal capacity, it is recommended to set the capacity value to at least 1/N of the total capacity (where N is the number of SDS nodes).

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_id ‹ID›	Storage Pool ID
--storage_pool_name ‹NAME›	Storage Pool name
--spare_percentage ‹PERCENT›	Percentage of the total capacity to be set aside as spare
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --mdm_ip 192.168.1.200 --modify_spare_policy
--protection_domain_name rack_1.1
--storage_pool_name --spare_percentage 10
```

Modifying user credentials

Command

`modify_user`

Syntax

```
scli --modify_user (--user_id <ID> | --username <NAME>)
--user_role
<Monitor|Configure|BackEndConfigure|FrontEndConfigure|
Security|Administrator>
```

Description/Notes

This command, only available to administrator roles, modifies the user role of the specified user in the system.

Parameters

Parameter	Description
--user_id	The ID number of the user to modify. You can obtain the user ID from the **query_users** command, or when adding the user.
--username	The user name of the user to modify
--user_role	The new user role: • Monitor • Configure • BackEndConfigure • FrontEndConfigure • Security • Administrator For more information about the roles, see the user guide.

Example

```
scli --modify_user --username siouser3 --user_role
Monitor
```

Setting the virtual IP addresses of a node

Command

```
modify_virtual_ip_interfaces
```

Syntax

```
scli --modify_virtual_ip_interfaces
(--new_mdm_virtual_ip_interface <INTF> | --clear_all)
(--target_mdm_id <ID> | --target_mdm_ip <IP>
[--target_mdm_port <PORT>] | --target_mdm_name <NAME>)
```

Description/Notes

Sets the virtual IP interfaces of a node in the MDM cluster.

Parameters

Parameter	Description
--new_mdm_virtual_ip_interface ‹INTF›	A comma-separated list of interface names to be used for the MDM virtual IPs. The order of interfaces must match the order of virtual IPs assigned to the cluster.
--clear_all	Clear all virtual IP interfaces.
--target_mdm_id ‹ID›	MDM ID
--target_mdm_ip ‹IP›	MDM IP address
--target_mdm_port ‹PORT›	MDM port
--target_mdm_name ‹NAME›	MDM name

Example

```
scli --modify_virtual_ip_interfaces --target_mdm_ip
192.168.1.152 --new_mdm_virtual_ip_interface eth4,eth5
```

Increasing a volume size

Command

```
modify_volume_capacity
```

Syntax

```
scli --modify_volume_capacity (--volume_id <ID> |
--volume_name <NAME>) --size_gb <SIZE>
```

Description/Notes

This command increases the capacity of a volume. You can increase (but not decrease) a volume capacity at any time, as long as there is enough capacity for the volume size to grow.

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume name
--size_gb ‹SIZE›	New volume size in GB. Basic allocation granularity is 8 GB.

Example

```
scli --mdm_ip 192.168.1.200 --modify_volume_capacity
--volume_name vol_1 --size_gb 150000
```

Modifying Storage Pool zero padding policy

Command

```
modify_zero_padding_policy
```

Syntax

```
scli --modify_zero_padding_policy
(((--protection_domain_id <ID> |
--protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
(--enable_zero_padding | --disable_zero_padding)
```

Description

This command modifies the zero padding policy of the Storage Pool.

If you intend to use the replication feature via RecoverPoint, ensure that zero padding is enabled on the Storage Pool to be replicated. Replication support is version-specific. For more information, see the ESSM.

For more information, see “Storage Pools” on page 34.

Note: The zero padding policy cannot be changed after the addition of the first device to a specific Storage Pool.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--zero_padding_enabled	Enable zero padding in this Storage Pool
--zero_padding_disabled	Disable zero padding in this Storage Pool

Example

```
scli --modify_zero_padding_policy
--protection_domain_name pd10 --storage_pool_name sp1
--zero_padding_disabled
```

Overview query

Command

`query_all`

Syntax

```
scli --query_all
```

Description/Notes

This command provides aggregated information about all objects in all Protection Domains. summarizes sample output of this query.

Parameters

Not applicable.

Example

```
scli --mdm_ip 192.168.1.200 --query_all
```

Example output

```
# scli --query_all
System Info:
        Product:  EMC ScaleIO Version: R2_0.972.0 (Debug)
        ID:      22dee69c4c7ad322
        Manager ID:      0000000000000000

License info:
        Installation ID: 0000000000001234
        SWID:
        Maximum capacity: Unlimited
        Usage time left: Unlimited *** Non-Production License ***
        Enterprise features: Enabled
        The system was activated 14 days ago

System settings:
        Volumes are not obfuscated by default
        Capacity alert thresholds: High: 80, Critical: 90
        Thick volume reservation percent: 0
        MDM restricted SDC mode: disabled
        Management Clients secure communication: enabled
        TLS version: TLSv1.2
        User authentication method: Native
        SDS connection authentication: Enabled

Query all returned 1 Protection Domain:
Protection Domain pd1 (Id: 0fc55e5500000000) has 3 storage pools, 7 Fault Sets, 7 SDS
nodes, 15 volumes and 12.3 TB (12552 GB) available for volume allocation
Operational state is Active
Rfcache enabled, Mode: Write miss, Page Size 64 KB, Max IO size 128 KB

Storage Pool sp2 (Id: 2e1fefd300000000) has 5 volumes and 4.1 TB (4184 GB) available
for volume allocation
        The number of parallel rebuild/rebalance jobs: 2
        Rebuild is enabled and using Limit-Concurrent-IO policy with the following
parameters:
        Number of concurrent IOs per device: 1
       Rebalance is enabled and using Favor-Application-IO policy with the following
parameters:
       Number of concurrent IOs per device: 1, Bandwidth limit per device: 10240 KB
per second
       Background device scanner: Mode: data_comparison, Bandwidth Limit 10240 KBps
per device
        Zero padding is enabled
        Spare policy: 16% out of total
        Checksum mode: disabled
        Doesn't use RAM Read Cache
        Doesn't use Flash Read Cache
        Capacity alert thresholds: High: 80, Critical: 90
```

```
Storage Pool sp1 (Id: 2e1fefd400000001) has 5 volumes and 4.1 TB (4184 GB) available
for volume allocation
        The number of parallel rebuild/rebalance jobs: 2
        Rebuild is enabled and using Limit-Concurrent-IO policy with the following
parameters:
        Number of concurrent IOs per device: 1
       Rebalance is enabled and using Favor-Application-IO policy with the following
parameters:
       Number of concurrent IOs per device: 1, Bandwidth limit per device: 10240 KB
per second
       Background device scanner: Mode: data_comparison, Bandwidth Limit 10240 KBps
per device
        Zero padding is enabled
        Spare policy: 16% out of total
        Checksum mode: enabled
        Uses RAM Read Cache
        RAM Read Cache write handling mode is 'cached'
        Doesn't use Flash Read Cache
        Capacity alert thresholds: High: 80, Critical: 90

Storage Pool sp3 (Id: 2e1fefd500000002) has 5 volumes and 4.1 TB (4184 GB) available
for volume allocation
        The number of parallel rebuild/rebalance jobs: 2
        Rebuild is enabled and using Limit-Concurrent-IO policy with the following
parameters:
        Number of concurrent IOs per device: 1
       Rebalance is enabled and using Favor-Application-IO policy with the following
parameters:
       Number of concurrent IOs per device: 1, Bandwidth limit per device: 10240 KB
per second
       Background device scanner: Mode: data_comparison, Bandwidth Limit 10240 KBps
per device
        Zero padding is enabled
        Spare policy: 16% out of total
        Checksum mode: enabled
        Doesn't use RAM Read Cache
        Doesn't use Flash Read Cache
        Capacity alert thresholds: High: 80, Critical: 90


SDS Summary:
        Total 7 SDS Nodes
        7 SDS nodes have membership state 'Joined'
        7 SDS nodes have connection state 'Connected'
        57.2 TB (58551 GB) total capacity
        24.6 TB (25183 GB) unused capacity
        0 Bytes snapshots capacity
        23.4 TB (24000 GB) in-use capacity
        0 Bytes thin capacity
        23.4 TB (24000 GB) protected capacity
        0 Bytes failed capacity
        0 Bytes degraded-failed capacity
```

```
        0 Bytes degraded-healthy capacity
        0 Bytes unreachable-unused capacity
        0 Bytes active rebalance capacity
        0 Bytes pending rebalance capacity
        0 Bytes active forward-rebuild capacity
        0 Bytes pending forward-rebuild capacity
        0 Bytes active backward-rebuild capacity
        0 Bytes pending backward-rebuild capacity
        0 Bytes rebalance capacity
        0 Bytes forward-rebuild capacity
        0 Bytes backward-rebuild capacity
        0 Bytes active moving capacity
        0 Bytes pending moving capacity
        0 Bytes total moving capacity
        9.1 TB (9368 GB) spare capacity
        23.4 TB (24000 GB) at-rest capacity
        0 Bytes semi-protected capacity
        0 Bytes in-maintenance capacity
        0 Bytes decreased capacity

      Primary-reads                       23095 IOPS 180.4 MB (184760 KB) per-second
      Primary-writes                      41725 IOPS 326.0 MB (333804 KB) per-second
        Secondary-reads                         0 IOPS 0 Bytes per-second
      Secondary-writes                    40227 IOPS 314.3 MB (321817 KB) per-second
        Backward-rebuild-reads                  0 IOPS 0 Bytes per-second
        Backward-rebuild-writes                 0 IOPS 0 Bytes per-second
        Forward-rebuild-reads                   0 IOPS 0 Bytes per-second
        Forward-rebuild-writes                  0 IOPS 0 Bytes per-second
        Rebalance-reads                         0 IOPS 0 Bytes per-second
        Rebalance-writes                        0 IOPS 0 Bytes per-second

Volumes summary:
        15 thick-provisioned volumes. Total size: 11.7 TB (12000 GB)
```

Table 12 query_all command output (page 1 of 7)

Output	Description
System Info	
Product	The ScaleIO software version of the system
ID	The system ID number
Manager ID	The ID of the management application that controls the MDM
License Info	
Installation ID	The Installation ID number, which is required for licensing purposes

Table 12 query_all command output (page 2 of 7)

Output	Description
SWID	The SWID number, which is required for licensing purposes
Maximum capacity	The maximum capacity permitted by the system's license
Usage time left	The amount of time left until the license expires
Enterprise features	Indicates whether enterprise features are enabled
The system was activated *n* days ago	The number of days since the system was activated
System Settings	
Volumes are\are not obfuscated	The obfuscation setting for all volumes in the system (default = not obfuscated)
Capacity alert thresholds	The alert thresholds currently configured for capacity usage, as percentages
Thick volume reservation	The amount of capacity reserved for thick volumes, as a percentage
MDM restricted SDC mode	Indicates whether users on remote clients are restricted to read-only access (enabled=read-only access; disabled=full read-write access)
Protection Domain	The following items are displayed separately for each Protection Domain
Protection Domain summary	Lists the following information for each Protection Domain: • Name • ID • Number of Storage Pools in the Protection Domain • Number of Fault Sets in the Protection Domain • Number of SDS nodes in the Protection Domain • Number of volumes associated with the Protection Domain • Amount of capacity in the Protection Domain that is available for volume allocation
Operational state	Indicates the Protection Domain's current state, such as active, inactive, and so on.

Table 12 query_all command output (page 3 of 7)

Output	Description
Storage Pool	
Storage Pool summary	Lists the following information for each Storage Pool: • Name • ID • Number of volumes associated with the Storage Pool • Amount of capacity in the Storage Pool that is available for volume allocation
The number of parallel Rebuild/Rebalance jobs	The number of parallel rebuild and rebalance jobs currently existing in the system
Rebuild is Enabled/Disabled...	Indicates whether the Rebuild feature is enabled or disabled (in normal production conditions, Rebuild should be enabled). When enabled, the Rebuild policy configured in the system is displayed, along with relevant parameters.
Rebalance is Enabled/Disabled...	Indicates whether the Rebalance feature is enabled or disabled (in normal production conditions, Rebalance should be enabled). When enabled, the Rebalance policy configured in the system is displayed, along with relevant parameters.
Zero padding is Enabled/Disabled	Indicates whether zero padding is enabled or disabled
Spare policy	The percentage of total capacity reserved as Spare
RAM Read Cache is used/not used	Indicates whether or not the RAM Read Cache feature is in use in the Storage Pool
RAM Read Cache write handling mode is...	If RAM Read Cache is used, displays the write handling mode currently in use (passthrough, or cached)

Table 12 query_all command output (page 4 of 7)

Output	Description
SDS Summary	
Total	The total number of SDS nodes
n SDS nodes have membership state 'Joined'	The number of SDS nodes which are connected to the cluster, can receive I/O and hold primary and secondary copies of data **Note:** It takes some time from actual disconnection until the SDS is disconnected from the cluster, and vice versa, and there are also up-pending and down-pending states.
n SDS nodes have connection state 'Connected'	The number of SDS nodes which are currently connected to the MDM
n TB (*n* GB) total capacity	The total amount of available raw storage **Note:** This does not represent the total amount of capacity available for volume allocation.
n TB (*n* GB) unused capacity	The quantity of raw capacity in the system that can be earmarked for specific purposes, such as Spare, or used for new volume creation.
n Bytes snapshots capacity	The quantity of capacity used for storing snapshots
n TB (*n* GB) in-use capacity	The total quantity of healthy, degraded and failed capacity
n Bytes thin capacity	The quantity of capacity currently needed for storage purposes
n TB (*n* GB) protected capacity	The quantity of capacity which is fully protected (primary and secondary copies of the data exist)
n Bytes failed capacity	The quantity of capacity which is not available at all (neither primary, nor secondary copies)
n Bytes degraded-failed capacity	The quantity of degraded-failed capacity. When an SDS fails, all its capacity is defined as degraded-failed, and the secondary copies (which are spread across the Protection Domain) are defined as degraded-healthy.

Table 12 query_all command output (page 5 of 7)

Output	Description
n Bytes degraded-healthy capacity	The quantity of degraded-healthy capacity. When an SDS fails, all its capacity is defined as degraded-failed, and the secondary copies (which are spread across the Protection Domain) are defined as degraded-healthy.
n Bytes unreachable-unused capacity	The quantity of capacity that is not configured for any use type in the system, that is currently unavailable.
n Bytes active rebalance capacity	The quantity of capacity that is currently being migrated to a different location, for load balancing purposes
n Bytes pending rebalance capacity	The quantity of capacity that is waiting in the job queue for migration to a different location, for load balancing purposes
n Bytes active fwd-rebuild capacity	The quantity of capacity for which one copy of data exists, and a second copy is currently being created
n Bytes pending fwd-rebuild capacity	The quantity of capacity for which one copy of data exists, and a job for the creation of a second copy is waiting in the job queue
n Bytes active bck-rebuild capacity	The quantity of capacity for which one copy of data went offline and came back online, and changes are currently being synchronized in that copy
n Bytes pending bck-rebuild capacity	The quantity of capacity for which one copy of data went offline and came back online, and changes are waiting in the job queue to be synchronized in that copy
n Bytes rebalance capacity	The total quantity of capacity which is either currently rebalancing, or pending rebalancing
n Bytes fwd-rebuild capacity	The total quantity of degraded capacity which is either currently in Forward Rebuild state, or is pending Forward Rebuild.
n Bytes bck-rebuild capacity	The total quantity of degraded capacity which is either currently in Backward Rebuild state, or is pending Backward Rebuild
n Bytes active moving capacity	The quantity of capacity that is currently being migrated from one location to another

Table 12 query_all command output (page 6 of 7)

Output	Description
n Bytes pending moving capacity	The quantity of capacity that is waiting in the job queue for migration from one location to another
n Bytes total moving capacity	The total quantity of active and pending moving (migrating) capacity
n TB (*n* GB) spare capacity	The quantity of capacity that is reserved for system use, when recovery from failure is required. This capacity cannot be used for storage purposes.
n TB (*n* GB) at-rest capacity	The quantity of capacity that is fully protected, and not in Rebuild or Rebalance states
n Bytes decreased capacity	The quantity of Decreased capacity that was deducted from devices (using the **Set Device Capacity Limit** GUIcommand, or `modify_sds_device_capacity` CLI command), and cannot be used for any purpose.
Primary-reads *n* IOPS *n* Bytes per-second	Number of primary data copy read IOPS, and read bandwidth
Primary-writes *n* IOPS *n* Bytes per-second	Number of primary data copy write IOPS, and write bandwidth
Secondary-reads *n* IOPS *n* Bytes per-second	Number of secondary data copy (protection) read IOPS, and read bandwidth
Secondary-writes *n* IOPS *n* Bytes per-second	Number of secondary copy (protection) write IOPS, and write bandwidth
Backward-rebuild-reads *n* IOPS *n* Bytes per-second	Number of Backward Rebuild read IOPS, and read bandwidth
Backward-rebuild-writes *n* IOPS *n* Bytes per-second	Number of Backward Rebuild write IOPS, and write bandwidth
Forward-rebuild-reads *n* IOPS *n* Bytes per-second	Number of Forward Rebuild read IOPS, and read bandwidth
Forward-rebuild-writes *n* IOPS *n* Bytes per-second	Number of Forward Rebuild write IOPS, and write bandwidth
Rebalance-reads *n* IOPS *n* Bytes per-second	Number of Rebalance read IOPS, and read bandwidth
Rebalance-writes *n* IOPS *n* Bytes per-second	Number of Rebalance write IOPS, and write bandwidth

Table 12 query_all command output (page 7 of 7)

Output	Description
Volumes Summary	
n thick-provisioned volumes	The number of thick-provisioned volumes, and the total size in TB and GB
n volumes mapped to all SDC nodes	The number of volumes mapped to SDC nodes

All approved SDC query

Command

```
query_all_approved_sdc
```

Syntax

```
scli --query_all_approved_sdc
```

Description/Notes

This command queries the system for all the SDCs that have been approved by the system, when it is operating in restricted SDC mode. This query can be useful if restricted SDC mode is enabled, and you want to determine which SDCs can be used for volume mapping.

Parameters

Not applicable

Example

```
scli --query_all_approved_sdc
```

All device latency meters query

Command

```
query_all_device_latency_meters
```

Syntax

```
scli --query_all_device_latency_meters
[(--protection_domain_id <ID> |
--protection_domain_name <NAME>)]
```

Description/Notes

This command retrieves device latency meters for all the devices in the specified Protection Domain. If you want to query the devices in a specific SDS, use the command `--query_device_latency_meters`, described in .

Note: If the background device scanner is enabled, several device read statistics are dramatically affected.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name

Example

```
scli --query_all_device_latency_meters
--protection_domain_name pd10
```

Query all Fault Sets in a Protection Domain

Command

```
query_all_fault_sets
```

Syntax

```
scli --query_all_fault_sets (--protection_domain_id
<ID> | --protection_domain_name <NAME>)
```

Description/Notes

This command provides information for all the Fault Sets in the specified Protection Domain.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name

Example

```
scli --query_all_fault_sets
--protection_domain_name sio-pd25
```

Query all SDC nodes

Command

```
query_all_sdc
```

Syntax

```
scli --query_all_sdc
```

Description/Notes

This command provides information about all SDCs in the system.

Parameters

Not applicable.

Example

```
scli --mdm_ip 192.168.1.200 --query_all_sdc
```

Query all SDS nodes

Command

```
query_all_sds
```

Syntax

```
scli --query_all_sds
```

Description/Notes

This command provides information about all SDSs in the system.

Parameters

Not applicable.

Example

```
scli --mdm_ip 192.168.1.200 --query_all_sds
```

All volumes query

Command

```
query_all_volumes
```

Syntax

```
scli --query_all_volumes [(((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)]
```

Description/Notes

This command provides information about all volumes in the system. The query result can be filtered by Protection Domain or Storage Pool.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

Example

```
scli --mdm_ip 192.168.1.200 --query_all_volumes
```

MDM cluster query

Command

```
query_cluster
```

Syntax

```
scli --query_cluster
```

Description/Notes

This command retrieves MDM cluster information.

Sample output, from a 5-node cluster:

```
# scli --query_cluster
Cluster:
    Mode: 5_node, State: Normal, Active: 5/5, Replicas: 3/3
Master MDM:
    Name: mdm17, ID: 0x5d07497754427fd0
        IPs: 10.103.110.17, 192.168.1.17, Management IPs: 10.103.110.17, Port: 9011
        Version: 2.0.972
Slave MDMs:
    Name: mdm19, ID: 0x26ee566356362451
        IPs: 10.103.110.19, 192.168.1.19, Management IPs: 10.103.110.19, Port: 9011
        Status: Normal, Version: 2.0.972
    Name: mdm18, ID: 0x5843c4d16d8f1082
        IPs: 10.103.110.18, 192.168.1.18, Management IPs: 10.103.110.18, Port: 9011
        Status: Normal, Version: 2.0.972
```

```
Tie-Breakers:
    Name: mdm179, ID: 0x7380b70e2f73d346
        IPs: 10.103.110.179, 192.168.1.179, Port: 9011
        Status: Normal, Version: 2.0.972
    Name: mdm20, ID: 0x6dfe1c5f4062b5b3
        IPs: 192.168.1.20, 10.103.110.20, Port: 9011
        Status: Normal, Version: 2.0.972
Standby MDMs:
    Name: mdm57, ID: 0x073e4c8b1d20d124, Tie Breaker
        IPs: 10.103.110.57, 192.168.1.57, Port: 9011
```

Table 13 Output of query_cluster command

Field	Description
Mode	The mode of the cluster: • 1_node • 3_node • 5_node
State	The state of the cluster: • Normal • Degraded When one or more cluster members are down or inactive.
Active	The amount of cluster members that are active. If all members are in normal state, this number equals the number of cluster members.
Replicas	The amount of MDM repository holders, that is, the Master MDM and the number of Slave MDMs in normal status.
Slave MDM status	• Normal • Error • Disconnected • Not synchronized
Tiebreaker status	• Normal • Error • Disconnected

Parameters

Not applicable.

Example

```
scli --mdm_ip 192.168.1.200 --query_cluster
```

Retrieving SDS device latency meters

Command

```
query_device_latency_meters
```

Syntax

```
scli --query_device_latency_meters (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
```

Description/Notes

This command queries the latency meters for all the devices of the specified SDS.

The SDS maintains statistics about reads and writes to its devices. This command returns the average I/O size and latency for both reads and writes. If you want to query all the devices in the system, use the command `--query_all_device_latency_meters`, described in “All device latency meters query” on page 135.

Note: If the background device scanner is enabled, several device read statistics are dramatically affected.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --mdm_ip 192.168.1.200
--query_device_latency_meters
--sds_ip 192.168.1.5
```

Retrieving SDS device test results

Command

```
query_device_test
```

Syntax

```
scli --query_device_test ((--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>))) | (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (((--protection_domain_id <ID> |
--protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>))
```

Description/Notes

This command returns the SDS device test results. Every SDS saves results for the last two tests per device.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--device_id ‹ID›	Device ID
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--device_id ‹ID›	Device ID
--device_name ‹NAME›	SDS storage device name or file name
--device_path ‹PATH›	File path to storage device
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

Example

```
scli --mdm_ip 192.168.1.200 --query_device_test
--sds_ip 192.168.1.6 --device_name /dev/sdb
```

Query a specific Fault Set

Command

```
query_fault_set
```

Syntax

```
scli --query_fault_set (--fault_set_id <ID> |
((--protection_domain_id <ID> |
--protection_domain_name <NAME>)
--fault_set_name <NAME>))
```

Description/Notes

This command provides information about the specified Fault Set.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set name

Example

```
scli --query_fault_set --protection_domain_name pd18
--fault_set_name fs-rack25
```

License query

Command

```
query_license
```

Syntax

```
scli --query_license
```

Description/Notes

Queries information about the current license restrictions.

Parameters

Not applicable.

Example

```
scli --mdm_ip 192.168.1.200 --query_license
```

Retrieving SDS device network statistics

Command

```
query_network_latency_meters
```

Syntax

```
scli --query_device_latency_meters (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
```

Description/Notes

The SDS maintains statistics about network messages. This command retrieves the network average I/O size and average latency.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --mdm_ip 192.168.1.200
--query_network_latency_meters
--sds_ip 192.168.1.5
```

Oscillating Failure Counter Parameters query

Command

```
query_oscillating_failure_counter_parameters
```

Syntax

```
scli --query_oscillating_failure_counter_parameters
--failure_counter (<COUNTER FROM GROUP A>
(--protection_domain_id <ID> |
--protection_domain_name <NAME>) | <COUNTER FROM GROUP
B> | <COUNTER FROM GROUP C> (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>))
```

Description/Notes

This command queries oscillating failure counter parameters.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--storage_pool_id ‹ID›	Storage Pool ID
--storage_pool_name ‹NAME›	Storage Pool Name
--failure_counter	The oscillating failure counter to be queried. For your convenience, the counters are grouped as follows: **Counter Group A (MDM/SDS related counters):** mdm_sds_network_disconnections sds_sds_network_disconnections sds_decoupled sds_configuration_failures sds_receive_buffer_allocation_failures **Counter Group B (SDC related counters):** sdc_mdm_network_disconnections sdc_sds_network_disconnections sdc_long_operations sdc_memory_allocation_failures sdc_socket_allocation_failures **Counter Group C (SDS device related counters):** sds_device_long_successful_ios

Example

```
scli --query_oscillating_failure_counter_parameters
--failure_counter sds_device_long_successful_ios
--protection_domain_name pd10 --storage_pool_name sp18
```

Performance parameters query

Command

```
query_performance_parameters
```

Syntax

```
scli --query_performance_parameters [--sds_id <ID> |
```

```
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>] |
--all_sds] [--sdc_id <ID> | --sdc_name <NAME> |
--sdc_guid <GUID> | --sdc_ip <IP> | --all_sdc]
[--print_all]
```

Description/Notes

This command queries performance parameters. The output displays the performance profile that is currently active, the current configurations of performance-related parameters.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS
--all_sds	Query SDS performance parameters from all SDSs
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC Name
--sdc_guid ‹GUID›	SDC Global Unique Identifier
--sdc_ip ‹IP›	SDC IP Address
--all_sdc	Query SDC performance parameters from all SDCs
--print_all	Print all performance parameters including those with active profile default values

Example

```
scli --query_performance_parameters --all_sdc
```

Example

Properties query

Command

```
query_properties
```

Syntax

```
scli --query_properties --object_type <TYPE>
(--object_id <ID> | --all_objects) (--properties
<PROPS> | --preset <PRESET>) [--group_by_property]
```

Description/Notes

This command queries any set of properties, on any set of objects of the specified type. The properties that can be queried depend on the type of the object that is queried. For example, SDS has different attributes to Volume.

A number of preset combinations are available for use with this command. A preset is a predefined set of properties, usually with some logical relationship, which specifies a group of commonly queried properties. The available presets are also dependent on the object type. All object types have at least one preset called `all`, which queries all the properties for that type.

Parameters

Parameter	Description
--object_type ‹TYPE›	The object type to query. Object types include: SYSTEM PROTECTION_DOMAIN STORAGE_POOL FAULT_SET SDS SDC VOLUME DEVICE VTREE SCSI_INITIATOR CONSISTENCY_GROUP RFCACHE_DEVICE

--object_id ‹ID›	A comma-separated list of object IDs; use this option for querying one or more specific objects.
--all_objects	Queries all objects of the specified type
--preset ‹PRESET›	Queries a predefined set of properties. For the presets that can be used per object type, see Table 14, “Object properties and presets.”
--properties ‹PROPERTIES›	Queries a comma-separated list of properties. For a list of properties that can be queried per object type, see Table 14, “Object properties and presets.”
--group_by_property	Group results by property type, rather than by object (default)

Note: Use `scli --query_properties --object_type <TYPE>` with one of the valid types above, to get detailed presets and properties options.

Example

```
scli --query_properties --object_type SDS --all_objects --properties IPS,PORT,PROTECTION_DOMAIN_ID,RMCACHE_ENABLED
SDS 46fec7eb00000000:
                IPS                                             127.0.0.9
                PORT                                            7072
                PROTECTION_DOMAIN_ID                            543664ed00000000
                RMCACHE_ENABLED                                 No

SDS 46fec7ec00000001:
                IPS                                             127.0.0.9,127.0.0.101
                PORT                                            7073
                PROTECTION_DOMAIN_ID                            543664ed00000000
                RMCACHE_ENABLED                                 Yes

SDS 46fec7ed00000002:
                IPS                                             127.0.0.9,127.0.0.101,127.0.0.102
                PORT                                            7074
                PROTECTION_DOMAIN_ID                            543664ed00000000
                RMCACHE_ENABLED                                 Yes
```

Table 14 Object properties and presets (page 1 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
Presets									
All	✔	✔	✔	✔	✔	✔	✔	✔	✔
Capacity	✔	✔	✔	✔	✔			✔	

Table 14 Object properties and presets (page 2 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
IO	✔	✔	✔	✔	✔	✔	✔	✔	
RAM_Cache	✔	✔	✔	✔	✔		✔		
Properties									
CAPACITY_LIMIT_IN_KB	✔	✔	✔	✔	✔			✔	
MAX_CAPACITY_IN_KB	✔	✔	✔	✔	✔			✔	
CAPACITY_IN_USE_IN_KB	✔	✔	✔	✔	✔			✔	
THICK_CAPACITY_IN_USE_IN_KB	✔	✔	✔	✔	✔			✔	
THIN_CAPACITY_IN_USE_IN_KB	✔	✔	✔	✔	✔			✔	
SNAP_CAPACITY_IN_USE_IN_KB	✔	✔	✔	✔	✔			✔	
UNREACHABLE_UNUSED_CAPACITY_IN_KB	✔	✔	✔	✔	✔			✔	
UNUSED_CAPACITY_IN_KB	✔	✔	✔	✔	✔			✔	
SNAP_CAPACITY_IN_USE_OCCUPIED_IN_KB	✔	✔	✔	✔	✔			✔	
THIN_CAPACITY_ALLOCATED_IN_KB	✔	✔	✔	✔	✔			✔	
SPARE_CAPACITY_IN_KB	✔	✔	✔						
AVAILABLE_FOR_THICK_ALLOCATION_IN_KB	✔	✔	✔						
PROTECTED_CAPACITY_IN_KB	✔	✔	✔						
DEGRADED_HEALTHY_CAPACITY_IN_KB	✔	✔	✔						
DEGRADED_FAILED_CAPACITY_IN_KB	✔	✔	✔						
FAILED_CAPACITY_IN_KB	✔	✔	✔						
PROTECTED_VAC_IN_KB	✔	✔	✔	✔	✔			✔	
DEGRADED_HEALTHY_VAC_IN_KB	✔	✔	✔	✔	✔			✔	
DEGRADED_FAILED_VAC_IN_KB	✔	✔	✔	✔	✔			✔	
FAILED_VAC_IN_KB	✔	✔	✔	✔	✔			✔	
MOVING_CAPACITY_IN_KB	✔	✔	✔						
ACTIVE_MOVING_CAPACITY_IN_KB	✔	✔	✔						

Table 14 Object properties and presets (page 3 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
PENDING_MOVING_CAPACITY_IN_KB	✔	✔	✔						
FWD_REBUILD_CAPACITY_IN_KB	✔	✔	✔						
ACTIVE_FWD_REBUILD_CAPACITY_IN_KB	✔	✔	✔						
PENDING_FWD_REBUILD_CAPACITY_IN_KB	✔	✔	✔						
BCK_REBUILD_CAPACITY_IN_KB	✔	✔	✔						
ACTIVE_BCK_REBUILD_CAPACITY_IN_KB	✔	✔	✔						
PENDING_BCK_REBUILD_CAPACITY_IN_KB	✔	✔	✔						
REBALANCE_CAPACITY_IN_KB	✔	✔	✔						
ACTIVE_REBALANCE_CAPACITY_IN_KB	✔	✔	✔						
PENDING_REBALANCE_CAPACITY_IN_KB	✔	✔	✔						
AT_REST_CAPACITY_IN_KB	✔	✔	✔						
ACTIVE_MOVING_IN_FWD_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
ACTIVE_MOVING_IN_BCK_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
ACTIVE_MOVING_IN_REBALANCE_JOBS	✔	✔	✔	✔	✔			✔	
ACTIVE_MOVING_OUT_FWD_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
ACTIVE_MOVING_OUT_BCK_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
ACTIVE_MOVING_OUT_REBALANCE_JOBS	✔	✔	✔	✔	✔			✔	
PENDING_MOVING_IN_FWD_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
PENDING_MOVING_IN_BCK_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
PENDING_MOVING_IN_REBALANCE_JOBS	✔	✔	✔	✔	✔			✔	
PENDING_MOVING_OUT_FWD_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
PENDING_MOVING_OUT_BCK_REBUILD_JOBS	✔	✔	✔	✔	✔			✔	
PENDING_MOVING_OUT_REBALANCE_JOBS	✔	✔	✔	✔	✔			✔	
IN_USE_VAC_IN_KB	✔	✔	✔	✔	✔			✔	
PRIMARY_VAC_IN_KB	✔	✔	✔	✔	✔			✔	

Table 14 Object properties and presets (page 4 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
SECONDARY_VAC_IN_KB	✔	✔	✔	✔	✔			✔	
REBUILD_WAIT_SEND_Q_LENGTH	✔	✔		✔	✔				
REBALANCE_WAIT_SEND_Q_LENGTH	✔	✔		✔	✔				
REBUILD_PER_RECEIVE_JOB_NET_THROTTLING_IN_KBPS	✔	✔		✔	✔				
REBALANCE_PER_RECEIVE_JOB_NET_THROTTLING_IN_KBPS	✔	✔		✔	✔				
FIXED_READ_ERROR_COUNT	✔	✔	✔	✔	✔			✔	
PRIMARY_READ_BWC	✔	✔	✔	✔	✔			✔	
PRIMARY_READ_FROM_DEV_BWC	✔	✔	✔	✔	✔			✔	
PRIMARY_WRITE_BWC	✔	✔	✔	✔	✔			✔	
SECONDARY_READ_BWC	✔	✔	✔	✔	✔			✔	
SECONDARY_READ_FROM_DEV_BWC	✔	✔	✔	✔	✔			✔	
SECONDARY_WRITE_BWC	✔	✔	✔	✔	✔			✔	
FWD_REBUILD_READ_BWC	✔	✔	✔	✔	✔			✔	
FWD_REBUILD_WRITE_BWC	✔	✔	✔	✔	✔			✔	
BCK_REBUILD_READ_BWC	✔	✔	✔	✔	✔			✔	
BCK_REBUILD_WRITE_BWC	✔	✔	✔	✔	✔			✔	
REBALANCE_READ_BWC	✔	✔	✔	✔	✔			✔	
REBALANCE_WRITE_BWC	✔	✔	✔	✔	✔			✔	
TOTAL_READ_BWC	✔	✔	✔	✔	✔			✔	
TOTAL_WRITE_BWC	✔	✔	✔	✔	✔			✔	
USER_DATA_READ_BWC	✔	✔	✔			✔	✔		
USER_DATA_WRITE_BWC	✔	✔	✔			✔	✔		
RMCACHE_SIZE_IN_KB	✔	✔		✔	✔				
RMCACHE_SIZE_IN_USE_IN_KB	✔	✔		✔	✔				

Table 14 Object properties and presets (page 5 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
RMCACHE_ENTRY_EVICTION_SIZE_COUNT_IN_KB	✔	✔		✔	✔				
RMCACHE_BIG_BLOCK_EVICTION_SIZE_COUNT_IN_KB	✔	✔		✔	✔				
RMCACHE_NUM_OF_4KB_ENTRIES RMCACHE_NUM_OF_8KB_ENTRIES RMCACHE_NUM_OF_16KB_ENTRIES RMCACHE_NUM_OF_32KB_ENTRIES RMCACHE_NUM_OF_64KB_ENTRIES RMCACHE_NUM_OF_128KB_ENTRIES	✔	✔		✔	✔				
RMCACHE_4KB_ENTRY_COUNT RMCACHE_8KB_ENTRY_COUNT RMCACHE_16KB_ENTRY_COUNT RMCACHE_32KB_ENTRY_COUNT RMCACHE_64KB_ENTRY_COUNT RMCACHE_128KB_ENTRY_COUNT	✔	✔		✔	✔				
RMCACHE_ENTRY_EVICTION_COUNT	✔	✔		✔	✔				
RMCACHE_BIG_BLOCK_EVICTION_COUNT	✔	✔		✔	✔				
RMCACHE_NO_EVICTION_COUNT	✔	✔		✔	✔				
RMCACHE_SKIP_COUNT_LARGE_IO	✔	✔		✔	✔				
RMCACHE_SKIP_COUNT_UNALIGNED_4KB_IO	✔	✔		✔	✔				
RMCACHE_SKIP_COUNT_CACHE_ALL_BUSY	✔	✔		✔	✔				
NUM_OF_UNMAPPED_VOLUMES	✔	✔	✔						
NUM_OF_MAPPED_TO_ALL_VOLUMES	✔	✔	✔						
NUM_OF_THICK_BASE_VOLUMES	✔	✔	✔						
NUM_OF_THIN_BASE_VOLUMES	✔	✔	✔						
NUM_OF_SNAPSHOTS	✔	✔	✔						
NUM_OF_VOLUMES_IN_DELETION	✔	✔	✔						
NUM_OF_DEVICES	✔		✔		✔				
NUM_OF_SDS	✔	✔		✔					

Table 14 Object properties and presets (page 6 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
NUM_OF_STORAGE_POOLS	✔	✔							
NUM_OF_VOLUMES	✔		✔						✔
NUM_OF_VTREES	✔		✔						
PROTECTION_DOMAIN_ID_LIST	✔								
NUM_OF_PROTECTION_DOMAINS	✔								
SDC_ID_LIST	✔								
NUM_OF_SDC	✔								
NUM_OF_FAULT_SETS	✔	✔							
ID	✔	✔	✔	✔	✔	✔	✔	✔	✔
NAME	✔	✔	✔	✔	✔	✔	✔	✔	✔
VERSION_NAME	✔								
DEFAULT_VOL_OBFUSCATION	✔								
CAPACITY_ALERT_HIGH_THRESHOLD	✔								
CAPACITY_ALERT_CRITICAL_THRESHOLD	✔								
INSTALL_ID	✔								
SW_ID	✔								
DAYS_INSTALLED	✔								
MAX_LICENSED_CAPACITY	✔								
CAPACITY_DAYS_LEFT	✔								
OBFUSCATION_DAYS_LEFT	✔								
SNAPSHOTS_DAYS_LEFT	✔								
QOS_DAYS_LEFT	✔								
REPLICATION_DAYS_LEFT	✔								
INITIAL_LICENSE	✔								
THICK_VOLUME_PERCENT	✔								

Table 14 Object properties and presets (page 7 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
MDM_MODE	✔								
MDM_CLUSTER_STATE	✔								
PRIMARY_MDM_ACTOR_IPS	✔								
PRIMARY_MDM_ACTOR_PORT	✔								
SECONDARY_MDM_ACTOR_IPS	✔								
SECONDARY_MDM_ACTOR_PORT	✔								
TIEBREAKER_MDM_ACTOR_IPS	✔								
TIEBREAKER_MDM_ACTOR_PORT	✔								
MDM_MGMT_IPS	✔								
MDM_MGMT_PORT	✔								
RESTRICTED_SDC_MODE_ENABLED	✔								
SDS_ID_LIST		✔		✔					
STORAGE_POOL_ID_LIST		✔							
FAULT_SET_ID_LIST		✔							
STATE		✔		✔	✔			✔	
REBUILD_NETWORK_THROTTLING_ENABLED		✔							
REBALANCE_NETWORK_THROTTLING_ENABLED		✔							
OVERALL_IO_NETWORK_THROTTLING_ENABLED		✔							
REBUILD_NETWORK_THROTTLING		✔							
REBALANCE_NETWORK_THROTTLING		✔							
OVERALL_IO_NETWORK_THROTTLING		✔							
DEVICE_ID_LIST			✔		✔				
VOLUME_ID_LIST			✔			✔			✔
VTREE_ID_LIST			✔						
SPARE_PERCENT			✔						

Table 14 Object properties and presets (page 8 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
PROTECTION_DOMAIN_ID			✔	✔	✔				
ZERO_PAD_ENABLED			✔						
USE_RMCACHE			✔				✔		
RMCACHE_WRITE_HANDLING_MODE			✔						
REBUILD_ENABLED			✔						
REBUILD_IO_PRIORITY_POLICY			✔						
NUM_REBUILD_IOPS_PER_DEVICE			✔						
REBUILD_BW_LIMIT_PER_DEVICE			✔						
REBUILD_APP_IOPS_PER_DEVICE_THRESHOLD			✔						
REBUILD_APP_BW_PER_DEVICE_THRESHOLD			✔						
REBUILD_QUIET_PERIOD			✔						
REBALANCE_ENABLED			✔						
REBALANCE_IO_PRIORITY_POLICY			✔						
NUM_REBALANCE_IOPS_PER_DEVICE			✔						
REBALANCE_BW_LIMIT_PER_DEVICE			✔						
REBALANCE_APP_IOPS_PER_DEVICE_THRESHOLD			✔						
REBALANCE_APP_BW_PER_DEVICE_THRESHOLD			✔						
REBALANCE_QUIET_PERIOD			✔						
NUM_PARALLEL_JOBS_PER_DEVICE			✔						
IPS					✔				
PORT					✔				
ON_VMWARE					✔				
PROTECTION_DOMAIN_ID					✔				
FAULT_SET_ID					✔				
MEMBERSHIP_STATE					✔				

Table 14 Object properties and presets (page 9 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
MDM_CONNECTION_STATE					✔	✔			
DRL_MODE					✔				
RMCACHE_ENABLED					✔				
RMCACHE_SIZE					✔				
RMCACHE_FROZEN					✔				
RMCACHE_MEMORY_ALLOCATION_STATE					✔				
NUMBER_OF_IO_BUFFERS					✔				
NUM_OF_MAPPED_VOLUMES						✔			
GUID						✔			
IP						✔			
APPROVED						✔			
CHILD_VOLUME_ID_LIST							✔		
NUM_OF_CHILD_VOLUMES							✔		
DESCENDANT_VOLUME_ID_LIST							✔		
NUM_OF_DESCENDANT_VOLUMES							✔		
NUM_OF_MAPPED_SDCS							✔		
SIZE							✔		
OBFUSCATED							✔		
CREATION_TIME							✔		
TYPE							✔		
CONSISTENCY_GROUP_ID							✔		
STORAGE_POOL_ID							✔	✔	✔
VTREE_ID							✔		
ANCESTOR_ID							✔		
SOURCE_DELETED							✔		

Table 14 Object properties and presets (page 10 of 10)

Property/Preset	Sys[1]	PD	SP	FS	SDS	SDC	Vol	Dev	VTree
MAPPING_TO_ALL_SDCS_ENABLED							✔		
AVG_READ_SIZE_IN_BYTES								✔	
AVG_WRITE_SIZE_IN_BYTES								✔	
AVG_READ_LATENCY_IN_MICROSEC								✔	
AVG_WRITE_LATENCY_IN_MICROSEC								✔	
CURRENT_PATH								✔	
ORIGINAL_PATH								✔	
ERR_STATE								✔	
CAPACITY_LIMIT								✔	
MAX_CAPACITY								✔	
SDS_ID								✔	
NET_CAPACITY_IN_USE_IN_KB									✔
BASE_NET_CAPACITY_IN_USE_IN_KB									✔
SNAP_NET_CAPACITY_IN_USE_IN_KB									✔
TRIMMED_CAPACITY_IN_KB									✔
BASE_VOLUME_ID									✔
IQN									

1. Sys=System, PD=Protection Domain, SP=Storage Pool, FS=Fault Set, Vol=Volume, Dev=Device

Protection Domain query

Command

```
query_protection_domain
```

Syntax

```
scli --query_protection_domain (--protection_domain_id
<ID> | --protection_domain_name <NAME>)
```

Description/Notes

This command provides aggregated information about all objects in a single Protection Domain.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name

Example

```
scli --mdm_ip 192.168.1.200 --query_protection_domain
--protection_domain_name rack_1.1
```

Remote read-only limit state

Command

```
query_remote_read_only_limit_state
```

Syntax

```
scli --query_remote_read_only_limit_state
```

Description/Notes

This command queries the MDM's remote access restriction state. If the state is enabled, remote users may only issue read-only commands to the MDM. If the state is disabled, all command types may be issued to the MDM by remote clients.

Parameters

Not applicable.

Example

```
scli --query_remote_read_only_limit_state
```

Remote syslog query

Command

```
query_remote_syslog
```

Syntax

```
scli --query_remote_syslog
```

Description/Notes

Queries the remote syslog module state and configuration.

Parameters

Not applicable.

Example

```
scli --query_remote_syslog
```

Restricted SDC mode query

Command

```
query_restricted_sdc_mode
```

Syntax

```
scli --query_restricted_sdc_mode
```

Description/Notes

This command queries whether restricted SDC mode is enabled or disabled in the ScaleIO system. If the mode is enabled, each SDC to which you want to map volumes must be registered in the system using the `--add_sdc` command.

Parameters

Not applicable

Example

```
scli --query_restricted_sdc_mode
```

Query a specific SDC node

Command

```
query_sdc
```

Syntax

```
scli --query_sdc --sdc_id <ID> | --sdc_name <NAME> |
--sdc_guid <GUID> | --sdc_ip <IP>
[--show_oscillating_failures]
```

Description/Notes

This command provides information about the specified SDC.

Parameters

Parameter	Description
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC name
--sdc_guid ‹GUID›	SDC GUID
--sdc_ip ‹IP›	SDC IP address
--show_oscillating_failures	Show extended oscillating failure information if there are one or more failures

Example

```
scli --mdm_ip 192.168.1.200 --query_sdc --sdc_ip
192.168.2.25
```

Retrieving volume bandwidth limits

Command

```
query_sdc_volume_limits
```

Syntax

```
scli --query_sdc_volume_limits (--volume_id <ID> |
--volume_name <NAME>) (--sdc_id <ID> | --sdc_name
<NAME> | --sdc_guid <GUID> | --sdc_ip <IP>)
```

Description/Notes

This command queries the IOP and bandwidth limits that one SDC generates for the specified volume.

Parameters

Parameter	Description
-volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	volume name
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC name
--sdc_guid ‹GUID›	SDC GUID
--sdc_ip ‹IP›	SDC IP address

Example

```
scli --mdm_ip 192.168.1.200 --query_sdc_volume_limits
--volume_name vol1 --sdc_ip 192.168.1.3
```

Query a specific SDS node

Command

```
query_sds
```

Syntax

```
scli --query_sds (--sds_id <ID> | --sds_name <NAME> |
--sds_ip <IP>)
```

Description/Notes

This command provides detailed information about a single SDS.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name

--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	SDS IP address
--show_oscillating_failures	Show extended oscillating failure information if there are one or more failures

Example

```
scli --mdm_ip 192.168.1.200 --query_sds --sds_ip
192.168.1.6
```

Query SDS connectivity status

Command

```
query_sds_connectivity_status
```

Syntax

```
scli --query_sds_connectivity_status
(--protection_domain_id <ID> |
--protection_domain_name <NAME>)
```

Description/Notes

This command provides connectivity status for the SDSs in the specified Protection Domain.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name

Example

```
scli --query_sds_connectivity_status
--protection_domain_name pd_18
```

Query a specific SDS device

Command

```
--query_sds_device_info
```

Syntax

```
scli --query_sds_device_info (--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>))) [--all_devices]
```

Description/Notes

Queries metadata for the specified device, or for all devices in the specified SDS.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	The port on the SDS
--device_id ‹ID›	The ID assigned to the storage or RFcache device
--device_name ‹NAME›	The name assigned to the storage or RFcache device
--device_path ‹PATH›	The device path or file path of a storage or RFcache device
--all_devices	Returns metadata for all storage or RFcache devices in the specified SDS

Example

```
scli --query_sds_device_info --sds_name  sds18
--device_name 18-slot5
```

Retrieving SDS network test results

Command

```
query_sds_network_test_results
```

Syntax

```
scli --query_sds_network_test_results (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
```

Description/Notes

This command returns the results of the last network test performed between an SDS and its peers.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS

Example

```
scli --mdm_ip 192.168.1.200
--query_sds_network_test_results
```

```
--sds_ip 192.168.1.4
```

Storage Pool query

Command

```
query_storage_pool
```

Syntax

```
scli --query_storage_pool (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
```

Description/Notes

This command provides aggregated information about all objects in a single Storage Pool.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

Example

```
scli --mdm_ip 192.168.1.200 --query_storage_pool
--protection_domain_name rack_1.1
--storage_pool_name sp_1.1_rack_1.1
```

System limits query

Command

```
--query_system_limits
```

Syntax

```
scli --query_system_limits
```

Description/Notes

This command provides information about the system limits.

Parameters

None

Example

```
scli --query_system_limits
```

Querying an upgrade

Command

```
query_upgrade
```

Syntax

```
scli --query_upgrade
```

Description/Notes

Query and retrieve information about the upgrade process.

Parameters

Parameter	Description
--use_nonsecure_communication	Enables SCLI commands to be executed when secure communication mode is not enabled. This is necessary when the base system does not use secure communication mode, for example 1.32.x.

None

Example

```
scli --query_upgrade --use_nonsecure_communication
```

Displaying information about a specific user

Command

```
query_user
```

Syntax

```
scli --query_user (--user_id <ID> | --username <NAME>)
```

Description/Notes

This command, only available to administrator roles, displays information about the specified user.

Parameters

Parameter	Description
--user_id	The user ID of the user. You can obtain the user ID via the **query_users** command, or when adding the user.
--username	The name of the user

Example

```
scli --query_user --username sio_user
```

Querying user authentication properties

Command

```
query_user_authentication_properties
```

Syntax

```
scli --query_user_authentication_properties
```

Description/Notes

This command returns information about LDAP services configured in the system.

Parameters

None.

Example

```
scli --query_user_authentication_properties
```

Displaying system users and their roles

Command

```
query_users
```

Syntax

```
scli --query_users
```

Description/Notes

This command, only available to administrator roles, displays all the users defined in the system, their roles, and user ID.

Parameters

None.

Example

```
scli --query_users
```

Volume query

Command

```
query_volume
```

Syntax

```
scli --query_volume (--volume_id <ID> | --volume_name
<NAME>)
```

Description/Notes

This command provides information about the specified volume.

Parameters

Parameter	Description
--volume_id ‹ID›	The ID of the volume to query
--volume_name ‹NAME›	The volume name

Example

```
scli --query_volume --volume_name vol_18
```

Volume tree query

Command

```
query_volume_tree
```

Syntax

```
--query_volume_tree (--vtree_id <ID> | --volume_id <ID>
| --volume_name <NAME>)
```

Description/Notes

This command provides information about the entire snapshot tree for the specified volume.

Parameters

Parameter	Description
--vtree_id ‹ID›	VTree ID
--volume_id ‹ID›	The ID of the volume to query
--volume_name ‹NAME›	The volume name

Example

```
scli --query_volume_tree --volume_name vol_18
```

Refreshing MDM Cluster Capabilities

Command

```
refresh_mdm_cluster_capabilities
```

Syntax

```
scli --refresh_mdm_cluster_capabilities
```

Description/Notes

Refresh the exposed cluster node capabilities. This command is usually used to instruct the cluster nodes to check if LDAP and SSL libraries are installed.

Parameters

None

Example

```
scli --refresh_mdm_cluster_capabilities
```

Removing consistency group snapshots

Command

```
remove_consistency_group_snapshots
```

Syntax

```
scli --remove_consistency_group_snapshots
--consistency_group_id <ID> [--i_am_sure]
```

Description/Notes

This command removes all snapshots that belong to a specific consistency group.

The consistency group ID is displayed when it is created, and you can display it by using the **query_all_volumes** command.

Note: This command can take a long time, depending on the size of the consistency group.

Parameters

Parameter	Description
--consistency_group_id ‹ID›	Consistency group ID
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --mdm_ip 192.168.1.200
--remove_consistency_group_snapshots
--consistency_group_id 783c7f00000000
```

Removing a Fault Set

Command

```
remove_fault_set
```

Syntax

```
scli --remove_fault_set (--fault_set_id <ID> |
((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --fault_set_name
<NAME>))
```

Description

This command removes the specified Fault Set. The Fault Set must be empty. You can remove SDSs from the Fault Set using the `clear_fault_set` command. For more information, see “Removing SDSs from a Fault Set” on page 231.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set name

Example

```
scli --remove_fault_set --protection_domain_name pd18
--fault_set_name sio-fs1
```

Removing LDAP groups from system role assignments

Command

```
remove_ldap_group_from_role_assignment
```

Syntax

```
scli --remove_ldap_group_from_role_assignment
(--ldap_service_id <LDAP_SERVICE_ID> |
--ldap_service_name <LDAP_SERVICE_NAME>)
[--administrator_role] [--security_role]
[--backend_config_role] [--frontend_config_role]
[--monitor_role]
```

Description/Notes

This command removes LDAP groups from system roles assignments.

Parameters

Parameter	Description
--ldap_service_id	ID of LDAP service
--ldap_service_name	Name of LDAP service
--administrator_role	LDAP group that has users with administration privileges
--security_role	LDAP group that has users with security privileges

--backend_config_role	LDAP group that has users with backend configuration privileges
--frontend_config_role	LDAP group that has users with frontend configuration privileges
--monitor_role	LDAP group that has users with monitoring privileges

Example

```
scli --remove_ldap_group_from_role_assignment
--ldap_service_id 0xAABBCCDDEEFF0011
--administrator_role
"CN=SIO_GRP_1,OU=SIO_OU_1,DC=ldaps,DC=ecme,DC=com"
```

Removing LDAP Service from the system

Command

```
remove_ldap_service
```

Syntax

```
scli --remove_ldap_service (--ldap_service_id
<LDAP_SERVICE_ID> | --ldap_service_name
<LDAP_SERVICE_NAME> | --remove_all )
```

Description/Notes

Removes an LDAP service from the system.

Parameters

Parameter	Description
--ldap_service_id	ID of LDAP service to be removed
--ldap_service_name	Name of LDAP service to be removed
--remove_all	Remove all LDAP services

Example

```
scli --remove_ldap_service --ldap_service_name ldap1
```

Removing a Protection Domain

Command

```
remove_protection_domain
```

Syntax

```
scli --remove_protection_domain
(--protection_domain_id <ID> |
--protection_domain_name <NAME>)
```

Description/Notes

You can remove a Protection Domain.

A Protection Domain can only be removed if there is no SDS associated with it.

Canceling an SDC's restricted access and removing an SDC

Command

```
remove_sdc
```

Syntax

```
scli --remove_sdc (--sdc_id <ID> | --sdc_name <NAME> |
--sdc_guid <GUID> | --sdc_ip <IP>
```

Description/Notes

This command removes an SDC from the system. If your system is using Restricted SDC mode, this command also prevents an SDC's access to the MDM (its "approved" status is removed). As a result, volumes cannot be mapped to the SDC. For more information on Restricted SDC mode, see "Restricting an SDC's access to the MDM" on page 258.

If the SDC is currently connected to the MDM, the command will not be successful, and the connection will be maintained. The command will also fail if the SDC has volume mapping.

Parameters

Parameter	Description
--sdc_id ‹ID›	The ID of the SDC—you can obtain the ID by querying the SDC using `--query_all_sdc`, or by viewing the SDC's properties in the GUI.
--sdc_name ‹NAME›	The name assigned to the SDC, if one was assigned to it
--sdc_guid ‹GUID›	The GUID of the SDC—you can obtain the GUID by querying the SDC using `--query_all_sdc`, by viewing the SDC's properties in the GUI, or using the command `drv_cfg --query_guid` locally.
--sdc_ip ‹IP›	The IP address of the SDC

Example

```
scli --remove_sdc --sdc_ip 10.125.120.53
```

Removing an SDS

Command

```
remove_sds
```

Syntax

```
scli --remove_sds_ip (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
--sds_ip_to_remove <IP>
```

Description/Notes

This command initiates the removal of an SDS. The command removes an SDS object and disconnects the SDS from the MDM. This is an asynchronous operation and will run in the background. You can run `query_all_sds` periodically to track progress.

You can remove an SDS at any time, and no downtime is required. During execution of this command, the associated data is replicated to different nodes. Therefore, the removal process is asynchronous and might take a long time. You can abort the removal using the `abort_remove_sds` command.

Note: If the capacity of this SDS is still used by volumes, and it cannot be replaced due to lack of available free space, the command will fail.

Parameters

Parameter	Description
--sds_id ‹ID›	The ID of the SDS to remove
--sds_name ‹NAME›	Name of the SDS to remove
--sds_ip ‹IP›	IP address of the SDS to remove
--sds_port ‹PORT›	Port associated with the SDS

Example

```
scli --mdm_ip 192.168.1.200 --remove_sds --sds_ip
192.168.1.4
```

Removing a device from an SDS

Command

```
remove_sds_device
```

Syntax

```
scli --remove_sds_device (--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>)))
```

Description/Notes

Initiates removal of a storage device from an SDS. Note that this process is asynchronous, and will run in the background.

An SDS device can be removed at any time, and no downtime is required. During execution of this command, the associated data is replicated to different nodes. Therefore, the removal process is asynchronous, and it might take a long time. You can abort the removal with the `abort_remove_sds_device` command.

Removing an SDS device on a VMware server should be done from the vSphere plug-in. If you use the `remove_sds_device` command, you must perform an additional procedure in order to complete the device removal. For more information, see “Removing an SDS device in VMware when not performed using the vSphere plug-in” on page 441.

Note: If the capacity of this SDS is still used by volumes, and cannot be replaced, the command will fail.

Parameters

Parameter	Description
--device_id ‹ID›	The ID of the device to be removed
--sds_id ‹ID›	The ID of the SDS from which the device should be removed
--sds_name ‹NAME›	Name of the SDS from which the device should be removed
--sds_ip ‹IP›	IP address of the SDS from which the device should be removed
--sds_port ‹PORT›	Port associated with the SDS
--device_name ‹NAME›	The name of the storage device or file to be removed from the SDS
--device_path ‹PATH›	The path of the storage device to be removed from the SDS

Example

```
scli --mdm_ip 192.168.1.200 --remove_sds_device
--sds_ip 192.168.1.6 --device_name /dev/sdb
```

Removing an IP address from an SDS

Command

```
remove_sds_ip
```

Syntax

```
scli --remove_sds_ip (--sds_id <ID> | --sds_name <NAME>
| --sds_ip <IP> [--sds_port <PORT>]) --sds_ip_to_remove
<IP>
```

Description/Notes

This command removes an IP address from an SDS. Scenarios where this command could be used include:

- In a setup with an SDS that contains more than one NIC (network interface card), one might want to divert the usage of one of the NICs to a different purpose.

- Changing an IP range—for example, an SDS may be using an IP address in a certain range. Due to organizational expansion, the IT department asks the Data department to change its IP address range to a different one, in order to free the previously used addresses.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--sds_ip_to_remove ‹IP›	IP address to remove from the SDS

Example

```
scli --mdm_ip 192.168.1.200 --remove_sds_ip
 --sds_ip 192.168.1.4 --sds_ip_to_remove 192.168.1.24
```

Removing RFcache devices from an SDS

Command

```
remove_sds_rfcache_device
```

Syntax

```
scli --remove_sds_rfcache_device (--rfcache_device_id
<ID> | ((--sds_id <ID> | --sds_name <NAME> | --sds_ip
<IP> [--sds_port <PORT>]) (--rfcache_device_name <NAME>
| --rfcache_device_path <PATH>)))
```

Description/Notes

This command removes a RFcache device from an SDS. Ensure that the RFcache feature is disabled before removing the device.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS
--rfcache_device_id ‹ID›	RFcache device ID
--rfcache_device_name ‹NAME›	RFcache device name
--rfcache_device_path ‹PATH›	--rfcache_device_path ‹PATH›SDS storage device path or file path

Example

```
scli --remove_sds_rfcache_device --sds_name sds_25
--rfcache_device_path /dev/sdb
```

Removing a Standby MDM

Command

```
remove_standby_mdm
```

Syntax

```
scli --remove_standby_mdm (--remove_mdm_id <ID> |
--remove_mdm_ip <IP> [--remove_mdm_port <PORT>] |
--remove_mdm_name <NAME>)
```

Description/Notes

Remove a standby MDM, which is not part of the cluster, from the system.

Parameters

Parameter	Description
--remove_mdm_id ‹ID›	MDM ID to remove
--remove_mdm_ip ‹IP›	MDM IP to remove
--remove_mdm_port ‹PORT›	MDM port to remove
--remove_mdm_name ‹NAME›	MDM name to remove

Example

```
scli --remove_standby_mdm --remove_mdm_name mdm153
```

Removing a Storage Pool

Command

```
remove_storage_pool
```

Syntax

```
scli --remove_storage_pool (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
```

Description/Notes

This command removes a Storage Pool from a Protection Domain. Each Protection Domain must contain at least one Storage Pool (either the default one, or a user-defined one). You cannot remove all the Storage Pools from a Protection Domain.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

Example

```
scli --mdm_ip 192.168.1.200 --remove_storage_pool
--protection_domain_name rack_1.1
--storage_pool_name sp_1.1_rack_1.1
```

Removing a volume

Command

```
remove_volume
```

Syntax

```
scli --remove_volume (--volume_id <ID> | --volume_name
<NAME>) [Options] [--i_am_sure]
```

Description/Notes

This command removes a ScaleIO volume. Before removing a volume, you must ensure that it is not mapped to any SDCs. If it is, use the `unmap_volume_from_sdc` command or the GUIVMware plug-in to unmap it before removing it.

When removing a volume, you can remove the VTree as well (all related snapshots), the volume and its snapshots, or just the snapshots. Before removing a VTree, you must unmap all volumes in the VTree before removing them.

For more information about snapshots, refer to “Snapshot operations” on page 63.

Note: Removal of a volume erases all the data on the corresponding volume.

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume Name
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)
Options	
--remove_entire_snapshot_tree	Removes an entire snapshot tree assigned to the specified volume, including parents and siblings
--remove_with_descendant_snapshots	Removes the specified volume, and all volumes that were created as snapshots of the specified volume or one of its descendants
--remove_descendant_snapshots_only	Removes snapshots created from the specified volume, but does not remove the specified volume

Example

```
scli --mdm_ip 192.168.1.200 --remove_volume
--volume_name vol_1
```

Renaming an SDS device

Command

```
rename_device
```

Syntax

```
scli --rename_device (--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>))) --new_name <NAME>
```

Description

This command assigns a name to an SDS device, or renames an SDS device.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	IP address associated with the SDS
--sds_port ‹PORT›	Port assigned to the SDS
--device_id ‹ID›	Device ID
--device_path ‹PATH›	The path of the SDS device
--device_name ‹NAME›	SDS storage device name or file
--new_name ‹NAME›	New name to be assigned to the SDS device

Example

```
scli --rename_device --sds_ip 8.8.8.100 --device_name
flash_18 --new_name flash_10018
```

Renaming an existing Fault Set

Command

```
rename_fault_set
```

Syntax

```
scli --rename_fault_set (--fault_set_id <ID> |
((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --fault_set_name
<NAME>)) --new_name <NAME>
```

Description

This command renames the specified Fault Set.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set name
--new_name ‹NAME›	The new name that will be assigned to the Fault Set

Example

```
scli --rename_fault_set --protection_domain_name pd18
--fault_set_name sio-fs-test --new_name sio-fs1
```

Renaming an LDAP Service

Command

```
rename_ldap_service
```

Syntax

```
scli --rename_ldap_service (--ldap_service_id
<LDAP_SERVICE_ID> | --ldap_service_name
<LDAP_SERVICE_NAME>) --new_name <NAME>
```

Description/Notes

This command assigns a name to an LDAP service, or renames an existing one.

Parameters

Parameter	Description
--ldap_service_id	ID of LDAP service
--ldap_service_name	Name of LDAP service
--new_name ‹NAME›	New name to be assigned to the LDAP service

Example

```
scli --rename_ldap_service --ldap_service_name
prevLSName --new_name newLSName
```

Renaming an MDM Cluster Node

Command

```
rename_mdm
```

Syntax

```
scli --rename_mdm [--new_mdm_name <NAME> | --i_am_sure]
(--target_mdm_id <ID> | --target_mdm_ip <IP>
[--target_mdm_port <PORT>] | --target_mdm_name <NAME>)
```

Description/Notes

Rename an MDM Cluster node. Give MDMs unique names.

Parameters

Parameter	Description
--new_mdm_name ‹NAME›	The new MDM name (If a new name is not provided, the old name will be deleted.)
--target_mdm_id ‹ID›	MDM ID
--target_mdm_ip ‹IP›	MDM IP address
--target_mdm_port ‹PORT›	MDM port
--target_mdm_name ‹NAME›	MDM name
--i_am_sure	Preemptive approval

Example

```
scli --rename_mdm --new_mdm_name mdm3 --target_mdm_name
mdm2
```

Renaming a Protection Domain

Command

```
rename_protection_domain
```

Syntax

```
scli --rename_protection_domain
(--protection_domain_id <ID> |
--protection_domain_name <NAME>) --new_name <NAME>
```

Description/Notes

This command names (or renames) a Protection Domain. For information about naming rules, see the user guide.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--new_name ‹NAME›	A new, unique name to be associated with the Protection Domain

Example

```
scli --mdm_ip 192.168.1.200 --rename_protection_domain
--protection_domain_name pd1 --new_name
protection_domain_1.
```

Naming or renaming an SDC

Command

```
rename_sdc
```

Syntax

```
scli --rename_sdc (--sdc_id <ID> | --sdc_name <NAME> |
--sdc_guid <GUID> | --sdc_ip <IP>) --new_name <NAME>
```

Description/Notes

This command assigns a new name to the specified SDC.

Parameters

Parameter	Description
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC name
--sdc_guid ‹GUID›	The GUID of the SDC
--sdc_ip ‹IP›	The IP address of the SDC
--new_name	The new name that you want to assign to the specified SDC

Example

```
scli --rename_sdc --sdc_id c8a300bd00000000 --new_name
sdc-flash-21
```

Naming or renaming an SDS

Command

```
rename_sds
```

Syntax

```
scli --rename_sds (--sds_id <ID> | --sds_name <NAME> |
--sds_ip <IP> [--sds_port <PORT>]) --new_name <NAME>
```

Description/Notes

This command renames or names an SDS. Names can be a useful means of identifying an SDS using either the CLI or the GUI. For information about naming rules, see “Adding SDS nodes and devices” on page 90.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	IP address associated with the SDS
--sds_port ‹PORT›	Port assigned to the SDS
--new_name ‹NAME›	New, unique name to be associated with the SDS

Example

```
scli --mdm_ip 192.168.1.200 --rename_sds
--sds_ip 192.168.1.4 --new_name sds_new_name
```

Renaming an SDS RFcache device

Command

```
rename_sds_rfcache_device
```

Syntax

```
scli --rename_sds_rfcache_device (--rfcache_device_id
<ID> | ((--sds_id <ID> | --sds_name <NAME> | --sds_ip
<IP> [--sds_port <PORT>]) (--rfcache_device_name <NAME>
| --rfcache_device_path <PATH>))) --new_name <NAME>
```

Description/Notes

This command modifies the name assigned to a RFcache device.

The generic command for renaming objects cannot be used to rename RFcache devices. Only the `rename_sds_rfcache_device` command may be used.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	IP address associated with the SDS
--sds_port ‹PORT›	Port assigned to the SDS
-rfcache_device_id ‹ID›	RFcache device ID
--rfcache_device_name ‹NAME›	RFcache device name
--rfcache_device_path ‹PATH›	SDS storage device path or file path
--new_name ‹NAME›	New name to be assigned to the RFcache device

Example

```
scli --rename_sds_rfcache_device --sds_name sds25_10
--rfcache_device_name ssd_cache_01 --new_name
flash_cache_01
```

Renaming a Storage Pool

Command

```
rename_storage_pool
```

Syntax

```
scli --rename_storage_pool (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
--new_name <NAME>
```

Description/Notes

This command names (or renames) a Storage Pool. For information about naming rules, see the user guide.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--new_name ‹NAME›	A new, unique name to be associated with the Storage Pool

Example

```
scli --mdm_ip 192.168.1.200 --rename_storage_pool
--protection_domain_name rack_1.1
--storage_pool_name sp_1.1_rack_1.1
--new_name sp_2.2_rack_1.1
```

Naming or renaming the system

Command

```
rename_system
```

Syntax

```
scli --rename_system --new_name <NAME>
```

Description/Notes

This command names or renames the system. You can determine the current system name using the query_cluster and query_all commands.

Parameters

Parameter	Description
--new_name ‹NAME›	New name to be associated with the system

Example

```
scli --rename_system --new_name sio-prod-sys2
```

Renaming a volume

Command

```
rename_volume
```

Syntax

```
scli --rename_volume --volume_id <ID>| --volume_name
<NAME> --new_name <NAME>
```

Description/Notes

This command changes the name of a volume, and can be used at any time.

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume name
--new_name ‹NAME›	New name to be associated with the volume

Example

```
scli --mdm_ip 192.168.1.200 --rename_volume
--volume_name vol1 --new_name vol_new_1
```

Replacing Members of an MDM Cluster

Command

```
switch_mdm_ownership
```

Syntax

```
scli --replace_cluster_mdm ((--add_slave_mdm_id <ID> |
--add_slave_mdm_ip <IP> [--add_slave_mdm_port <PORT>] |
--add_slave_mdm_name <NAME>)| (--remove_slave_mdm_id
<ID> | --remove_slave_mdm_ip <IP>
[--remove_slave_mdm_port <PORT>] |
--remove_slave_mdm_name <NAME>)) ((--add_tb_id <ID> |
--add_tb_ip <IP> [--add_tb_port <PORT>] | --add_tb_name
<NAME>) | (--remove_tb_id <ID> | --remove_tb_ip <IP>
[--remove_tb_port <PORT>] | --remove_tb_name <NAME>))
[--allow_leave_failed] [--i_am_sure]
```

Description/Notes

Replace members of the MDM cluster. Up to half (rounded down) of the cluster members can be replaced at one time.

Parameters

Parameter	Description
--add_slave_mdm_id ‹ID›	Comma-separated list (at most 2) of Slave MDM IDs that will be part of the cluster
--add_slave_mdm_ip ‹IP›	Comma-separated list (at most 2) of Slave MDM IPs that will be part of the cluster
--add_slave_mdm_port ‹PORT›	Comma-separated list (at most 2) of Slave MDM ports that will be part of the cluster (in the same order as the IP list)
--add_slave_mdm_name ‹NAME›	Comma-separated list (at most 2) of Slave MDM names that will be part of the cluster
--remove_slave_mdm_id ‹ID›	Comma-separated list (at most 2) of Slave MDM IDs that will be removed from the cluster
--remove_slave_mdm_ip ‹IP›	Comma-separated list (at most 2) of Slave MDM IPs that will be removed from the cluster
--remove_slave_mdm_port ‹PORT›	Comma-separated list (at most 2) of Slave MDM ports that will be removed from the cluster (in the same order as the IP list)
--remove_slave_mdm_name ‹NAME›	Comma-separated list (at most 2) of Slave MDM names that will be removed from the cluster
--add_tb_id ‹ID›	Comma-separated list (at most 2) of Tie-Breaker IDs that will be part of the cluster
--add_tb_ip ‹IP›	Comma-separated list (at most 2) of Tie-Breaker IPs that will be part of the cluster
--add_tb_port ‹PORT›	Comma-separated list (at most 2) of Tie-Breaker ports that will be part of the cluster (in the same order as the IP list)
--add_tb_name ‹NAME›	Comma-separated list (at most 2) of Tie-Breaker names that will be part of the cluster
--remove_tb_id ‹ID›	Comma-separated list (at most 2) of Tie-Breaker IDs that will be removed from the cluster

--remove_tb_ip ‹IP›	Comma-separated list (at most 2) of Tie-Breaker IPs that will be removed from the cluster
--remove_tb_port ‹PORT›	Comma-separated list (at most 2) of Tie-Breaker ports that will be removed from the cluster (in the same order as the IP list)
--remove_tb_name ‹NAME›	Comma-separated list (at most 2) of Tie-Breaker names that will be removed from the cluster
--allow_leave_failed	Allow leaving currently failed MDMs in the cluster
--i_am_sure	Preemptive approval

Example

```
scli --replace_cluster_mdm --add_slave_mdm_name mdm33
--remove_slave_mdm_name mdm31 --add_tb_name tb44
--remove_tb_name tb41
```

Replacing the MDM's certificate and key

Command

```
replace_mdm_security_files
```

Syntax

```
scli --replace_mdm_security_files (--target_mdm_id
<ID> | --target_mdm_ip <IP> [--target_mdm_port <PORT>]
| --target_mdm_name <NAME>)
```

SDescription/Notes

Replace the MDM's certificate and key with the file generated by running `apply_signed_certificate.py` (located in the MDM's bin folder).

When running the command on the Master MDM, the MDM will restart; it may also cause an MDM switch over.

Parameters

Parameter	Description
--target_mdm_id ‹ID›	MDM ID
--target_mdm_ip ‹IP›	MDM IP address
--target_mdm_port ‹PORT›	MDM port
--target_mdm_name ‹NAME›	MDM name

Example

```
scli --replace_mdm_security_files --target_mdm_name
mdm153
```

Resetting Oscillating Failure Counters

Command

```
reset_oscillating_failure_counters
```

Syntax

```
scli --reset_oscillating_failure_counters
(--failure_counter (<COUNTER FROM GROUP A>
((--protection_domain_id <ID> |
--protection_domain_name <NAME>) | --all_sds) |
<COUNTER FROM GROUP B> --all_sdc | <COUNTER FROM GROUP
C> ((((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>) | --all_devices) |
--all_counters)
```

Description/Notes

This command resets the specified oscillating failure counters to zero. This command can be useful when you have fixed a problem and want to ensure that an alert is no longer active in the system.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--storage_pool_name ‹NAME›	Storage Pool Name
--storage_pool_id ‹ID›	Storage Pool ID
--all_sds	Reset counter parameters in all SDSs
--all_sdc	Reset counter parameters in all SDCs
--all_devices	Apply the counter parameters to all SDS devices
--failure_counter	The oscillating failure counter to be reset to zero. For your convenience, the counters are grouped as follows: **Counter Group A (MDM/SDS related counters):** mdm_sds_network_disconnections sds_sds_network_disconnections sds_decoupled sds_configuration_failures sds_receive_buffer_allocation_failures **Counter Group B (SDC related counters):** sdc_mdm_network_disconnections sdc_sds_network_disconnections sdc_long_operations sdc_memory_allocation_failures sdc_socket_allocation_failures **Counter Group C (SDS device related counters):** sds_device_long_successful_ios
--all_counters	Reset all counters to zero

Example

```
scli --reset_oscillating_failure_counters
--failure_counter mdm_sds_network_disconnections
--all_sds
```

Resetting user passwords

Command

```
reset_password
```

Syntax

```
scli --reset_password (--user_id <ID> | --username
<NAME>)
```

Description/Notes

This command, only available to administrator roles, generates a new password for the specified user. The user will need to change the password again after logging in with this password.

Parameters

Parameter	Description
--user_id	The user ID of the user whose password will be reset. You can obtain the user ID from the **query_users** command, or when adding the user.
--username	The user name of the user whose password will be reset

Example

```
scli --reset_password --username siouser3
```

Resetting background scanner error counters

Command

```
reset_scanner_error_counters
```

Syntax

```
scli --reset_scanner_error_counters
(((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>)
[--reset_data_compare_error_counter]
[--reset_corrected_read_error_counter]
```

Description

This command resets background device scanner error counters for the specified Storage Pool. You can use this command to reset counters for data comparison errors, or corrected read errors, or both counter types.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--reset_data_compare_error_counter	Reset data compare error counter
--reset_corrected_read_error_counter	Reset corrected read error counter

Example

```
scli --reset_scanner_error_counters
--protection_domain_name pd120 --storage_pool_name
sp120 --reset_data_compare_error_counter
```

Setting a capacity alert threshold

Command

```
set_capacity_alerts_threshold
```

Syntax

```
scli --set_capacity_alerts_threshold
--capacity_high_threshold <PERCENT>
--capacity_critical_threshold <PERCENT>
```

Description/Notes

Set the threshold for triggering capacity usage alerts.

The alerts thresholds are calculated from each Storage Pool capacity after deducting the defined amount of spare capacity. Thresholds can be set for a single Storage Pool or for all Storage Pools.

Parameters

Parameter	Description
--capacity_high_threshold ‹PERCENT›	Threshold of the non-spare capacity of the Storage Pool that will trigger a *high-priority* alert, in percentage format
--capacity_critical_threshold ‹PERCENT›	Threshold of the non-spare capacity of the Storage Pool that will trigger a *critical-priority* alert, in percentage format
--all_storage_pools	Thresholds apply to all Storage Pools.
--system_default	Thresholds apply to newly created Storage Pools.
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

Note: All commands and parameters are preceded by --

Example

```
scli --mdm_ip 192.168.1.200
--set_capacity_alerts_threshold
--capacity_high_threshold 80
--capacity_critical_threshold 90
```

Modifying Checksum protection mode

Command

```
set_checksum_mode
```

Syntax

```
scli --set_checksum_mode (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
(--enable_checksum | --disable_checksum)
```

Description/Notes

This command changes the checksum mode used by a Storage Pool. When enabled, in-flight checksum validation is performed on data reads and writes.

Note: Use of this feature may have a minor effect on performance.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--storage_pool_name ‹NAME›	Storage Pool Name
--storage_pool_id ‹ID›	Storage Pool ID
--enable_checksum	Enable checksum protection
--disable_checksum	Disable checksum protection

Example

```
scli --set_checksum_mode --protection_domain_name PD1
--storage_pool_name SP1 --enable_checksum
```

Setting preemptive acceptance of the login banner

Command

```
set_cli_login_banner_preemptive_acceptance
```

Syntax

```
scli --set_cli_login_banner_preemptive_acceptance
(--enable | --disable)
```

Description/Notes

Enable or disable users of the CLI to preemptively accept the login banner.

Parameters

Parameter	Description
--enable	Allow CLI users to preemptively accept the login banner
--disable	Prevent CLI users from preemptively accepting the login banner

Example

```
scli --set_cli_login_banner_preemptive_acceptance
--enable
```

Setting component authentication properties

Command

```
set_component_authentication_properties
```

Syntax

```
scli --set_component_authentication_properties
(--use_authentication | --dont_use_authentication)
```

Description/Notes

This command lets you enable or disable component authentication properties.

Parameters

Parameter	Description
-use_authentication	Use authentication among system components
--dont_use_authentication	Don't use authentication among system components

Example

```
scli --set_component_authentication_properties
--use_authentication
```

Setting the properties of the dirty-region-logging

Command

```
set_drl_properties
```

Syntax

```
scli --set_drl_properties ((--sds_id <ID> | --sds_name
<NAME> | --sds_ip <IP> [--sds_port <PORT>]) |
--set_all) (--memory_only | --hardened)
```

Description/Notes

Sets the properties of the dirty-region-logging used by one or all SDSs (the default is `memory_only`).

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--set_all	Apply the properties to all SDSs. Overrides previous settings
--memory_only	Dirty-region-logging information will be stored in memory only
--hardened	Dirty-region-logging information will be stored both in memory and on disk

Example

```
scli --set_drl_properties --sds_ip 192.168.1.4
--hardened
```

Setting the license

Command

```
set_license
```

Syntax

```
scli --set_license --license_file <LICENSE_FILE>
```

Description/Notes

Setting the license is a precondition for all other configuration commands. To set the system license, you must first obtain a license from EMC.

Parameters

Parameter	Description
--license_file ‹LICENSE_FILE›	Path to a file containing the license key value supplied by EMC

Example

```
scli --mdm_ip 192.168.1.200 --set_license
--license_file /tmp/0239SH4SS89023T6.lic
```

Setting the login banner

Command

```
set_login_banner
```

Syntax

```
scli --set_login_banner (--filename <FILE> |
--remove_banner)
```

Description/Notes

Sets the login banner that is displayed at every login to the system, or removes an existing login banner. The maximum file size for the banner is 16K. Only ASCII text files are supported.

Parameters

Parameter	Description
--filename ‹FILE›	File containing login banner to set.
--remove_banner	Remove the login banner.

Example

```
scli --set_login_banner --filename login_banner.txt
```

Setting management client communication

Command

```
set_management_client_communication
```

Syntax

```
scli --set_management_client_communication
(--enable_client_secure_communication |
--disable_client_secure_communication)
```

Description/Notes

This command lets you enable or disable secure communication between the MDM and the management client.

Note: Secure communication must also be enabled at system level. Secure communication is typically enabled during the installation or upgrade process.

Parameters

Parameter	Description
--enable_client_secure_communication	Enable using security when communicating with management clients
--disable_client_secure_communication	Disable using security when communicating with management clients

Example

```
scli --set_management_client_communication
--enable_client_secure_communication
```

Setting Oscillating Failure Counter parameters

Command

```
set_oscillating_failure_counter_parameters
```

Syntax

```
scli --set_oscillating_failure_counter_parameters
--failure_counter (<COUNTER FROM GROUP A>
((--protection_domain_id <ID> |
--protection_domain_name <NAME>) | --all_sds) |
<COUNTER FROM GROUP B> --all_sdc | <COUNTER FROM GROUP
C> ((((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>) | --all_devices)
--window_type <SHORT | MEDIUM | LONG> --window_interval
<INTERVAL> --failures_threshold <NUM OF FAILURES IN
INTERVAL>
```

Description/Notes

This command modifies oscillating failure counter parameters. You can use this command to configure the time interval associated with each window type, and the number of failures allowed before reporting commences for each window type, per counter. In order to simplify use of the command, the counters are grouped according to:

- MDM/SDS related counters—Group A
- SDC related counters—Group B
- SDS device related counters—Group C

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--storage_pool_name ‹NAME›	Storage Pool Name
--storage_pool_id ‹ID›	Storage Pool ID
--all_sds	Apply the counter parameters to all SDSs
--all_sdc	Apply the counter parameters to all SDCs
--all_devices	Apply the counter parameters to all SDS devices
--failure_counter	The oscillating failure counter to be modified. For your convenience, the counters are grouped as follows: **Counter Group A (MDM/SDS related counters):** mdm_sds_network_disconnections sds_sds_network_disconnections sds_decoupled sds_configuration_failures sds_receive_buffer_allocation_failures **Counter Group B (SDC related counters):** sdc_mdm_network_disconnections sdc_sds_network_disconnections sdc_long_operations sdc_memory_allocation_failures sdc_socket_allocation_failures **Counter Group C (SDS device related counters):** sds_device_long_successful_ios
--window_type	The window type to be modified: short, medium, or long
--window_interval	The new window time interval in seconds. If the interval is set to 0, the window type is disabled. The valid interval range is: 1-86400
--failures_threshold	The maximum number of failures per window type to be ignored before error reporting begins

Example

```
scli --set_oscillating_failure_counter_parameters
--failure_counter mdm_sds_network_disconnections
--window_interval 120 --failures_threshold 10
--window_type short --all_sds
```

Changing user passwords

Command

```
set_password
```

Syntax

```
scli --set_password [--old_password <OLD_PASSWORD>]
[--new_password <NEW_PASSWORD>]
```

Description/Notes

This command, only available to administrator roles, changes the password of the user that is currently logged in to the system.

Parameters

Parameter	Description
--old_password	User's current password. **Note:** In Linux, to prevent the password from being recorded in the history log, leave out the `--old_password` flag and enter the password interactively.
--new_password	User's new password. **Note:** In Linux, to prevent the password from being recorded in the history log, leave out the `--new_password` flag and enter the password interactively. Password rules: • Must be between 6 (default, configurable) and 31 characters • Presence of least 3 groups out of [a-z], [A-Z], [0-9], special characters (!@#$ ...) • The current password is not allowed

Example

```
scli --set_password --old_password 1!2@3A
--new_password P9*7&6
```

Example

Applying performance profiles

Command

```
set_performance_parameters
```

Syntax

```
scli --set_performance_parameters ([--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>] |
--protection_domain_id <ID> | --protection_domain_name
<NAME> | --fault_set_id <ID> | ((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
```

```
--fault_set_name <NAME>) | --all_sds] [--sdc_id <ID> |
--sdc_name <NAME> | --sdc_guid <GUID> | --sdc_ip <IP> |
--all_sdc] [--apply_to_mdm]) --profile <DEFAULT |
HIGH_PERFORMANCE>
```

Description/Notes

This command applies performance profiles to system components. The high performance profile configures a predefined set of parameters for very high performance use cases. When a container is provided in the command (Protection Domain/Fault Set/all SDSs/all SDCs) all the objects currently in the container are configured. Objects which are added later will not be configured.

The profiles can be applied separately for:

- SDSs

  Note: After changing the performance profile of an SDS (on an SVM), you must perform manual memory allocation on the SVM, as described in .

- SDCs
- MDM cluster

Note: For a complete list of parameters controlled by the profiles, refer to the document *Fine-Tuning ScaleIO Performance Technical Notes*.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--fault_set_id ‹ID›	Fault Set ID
--fault_set_name ‹NAME›	Fault Set name
--all_sds	Set SDS related parameters to all SDSs
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC name
--sdc_guid ‹GUID›	SDC Global Unique Identifier
--sdc_ip ‹IP›	SDC IP Address
--all_sdc	Set SDC related parameters to all SDCs
--apply_to_mdm	Apply the performance profile to the MDM (only applicable when setting the profile).
--profile ‹DEFAULT | HIGH_PERFORMANCE›	Set performance profile from the following options (default or high_performance)

Example

```
scli --set_performance_parameters --all_sds --all_sdc
--profile high_performance
```

Setting the rebalance mode

Command

```
set_rebalance_mode
```

Syntax

```
scli --set_rebalance_mode (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
(--enable_rebalance | --disable_rebalance)
[--i_am_sure]
```

Description/Notes

This command enables or disables rebalancing of the specified Storage Pool.

Note: Rebalancing is an essential part of the ScaleIO system, and should only be disabled, temporarily, in special circumstances.

Disabling rebalance may cause the system to become unbalanced even if no capacity is added or removed, for example, during a recovery from an SDS or device failure.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

--enable_rebuild	Enable rebalancing of the specified Storage Pool
--disable_rebuild	Disable rebalancing of the specified Storage Pool
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --set_rebalance_mode --protection_domain_name
pd10 --storage_pool_name sp20 --enable_rebalance
```

Setting the rebalance policy

Command

```
set_rebalance_policy
```

Syntax

```
scli --set_rebalance_policy (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
--policy <POLICY> [Options][--i_am_sure]
```

Description

This command sets the rebalance IO priority policy for a Storage Pool. This feature affects system performance, and should only be modified by advanced users.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

--policy ‹POLICY›	Policy to use for rebalance IO priority. Can be one of the following options. no_limit—Rebalance IOs are not limited limit_concurrent_io—Limit the number of allowed concurrent rebalance IOs favor_application_io—Limit the number and bandwidth of rebalance IOs when application IOs are in-progress (default) dynamic_bandwidth_throttling—Limit the number and bandwidth of rebalance IOs when application IOs are in-progress or have been in a defined quiet period
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)
Options: CHOOSE ONE OR SEVERAL	
--concurrent_io_limit ‹LIMIT›	The maximum number of concurrent rebuild IOs per device (default: 1)
--bandwidth_limit ‹BANDWIDTH›	The maximum bandwidth of rebuild IOs, in KB per second, per device (Valid range: 1024-1048576, default: 10,240). This property will take effect only if the policy is set to `favor_application_io` or `dynamic_bandwidth_throttling`.
--quiet_period ‹PERIOD›	If the application IOs are below the IOPS and bandwidth threshold in this period, given in milliseconds, no throttling will be applied to the rebuild IOs (default: 2000). This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.
--application_iops_threshold ‹THRESHOLD›	The application IOPS threshold above which rebuild IO throttling will be applied (default: 10).This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.
--application_bandwidth_threshold ‹THRESHOLD›	The application IO bandwidth threshold, in KB per second, above which rebuild IO throttling will be applied (default:10,240).This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.

Example

```
scli --set_rebalance_policy --protection_domain_name
pd1 --storage_pool_name sp1 --policy
favor_application_io --bandwidth_limit 5120
```

Setting the rebuild mode

Command

```
set_rebuild_mode
```

Syntax

```
scli --set_rebuild_mode (((--protection_domain_id <ID>
| --protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>) (--enable_rebuild |
--disable_rebuild) [--i_am_sure]
```

Description/Notes

This command enables or disables rebuilds in the specified Storage Pool. Rebuilds are an essential part of the ScaleIO system, without which redundancy will not be restored after failures, and should only be disabled temporarily, in special circumstances.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

--enable_rebuild	Enable rebuilds in the specified Storage Pool
--disable_rebuild	Disable rebuilds in the specified Storage Pool
--i_am-sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --set_rebuild_mode --protection_domain_name pd10
--storage_pool_name sp20 --enable_rebuild
```

Setting the rebuild policy

Command

```
set_rebuild_policy
```

Syntax

```
scli --set_rebuild_policy (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
--policy <POLICY> [Options][--i_am_sure]
```

Description

This command sets the rebuild IO priority policy for a Storage Pool. This feature affects system performance, and should only be modified by advanced users.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID

--policy ‹POLICY›	Policy to use for rebuild IO priority. Can be one of the following options: no_limit—Rebuild IOs are not limited limit_concurrent_io—Limit the number of allowed concurrent rebuild IOs (default) to the "concurrent_io_limit" value favor_application_io—Should always limit the number of allowed concurrent rebuild IOs to defined "concurrent_io_limit" value; if application IOs are in progress, should also limit the bandwidth of rebuild IOs to the limit defined for the "bandwidth_limit" value dynamic_bandwidth_throttling—Should always limit the number of allowed concurrent rebuild IOs to the defined "concurrent_io_limit" value. In addition, rebuild IO bandwidth will be limited to defined "bandwidth_limit" value in case application IOs have exceeded either the application_iops_threshold or application_bandwidth_threshold" during the defined "quiet_period".
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)
Options: CHOOSE ONE OR SEVERAL	
--concurrent_io_limit ‹LIMIT›	The maximum number of concurrent rebuild IOs per device (default: 1)
--bandwidth_limit ‹BANDWIDTH›	The maximum bandwidth of rebuild IOs, in KB per second, per device (Valid range: 1024-1048576, default: 10,240). This property will take effect only if the policy is set to `favor_application_io` or `dynamic_bandwidth_throttling`.

--quiet_period ‹PERIOD›	If the application IOs are below the IOPS and/or bandwidth threshold in this period, given in milliseconds; rebuild IOs will be limited to the number of allowed concurrent rebuild IOs defined by “concurrent_io_limit” value. This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.
--application_iops_threshold ‹THRESHOLD›	The application IOPS threshold above which rebuild IO throttling will be applied (default: 10). This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.
--application_bandwidth_threshold ‹THRESHOLD›	The application IO bandwidth threshold, in KB per second, above which rebuild IO throttling will be applied (default:10,240). This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.

Example

```
scli --set_rebuild_policy --protection_domain_name pd1
--storage_pool_name sp1 --policy favor_application_io
--bandwidth_limit 5120
```

Setting the rebalance policy

Command

```
set_rebalance_policy
```

Syntax

```
scli --set_rebalance_policy (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
--policy <POLICY> [Options][--i_am_sure]
```

Description

This command sets the rebalance IO priority policy for a Storage Pool. This feature affects system performance, and should only be modified by advanced users.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--policy ‹POLICY›	Policy to use for rebalance IO priority. Can be one of the following options. no_limit—Rebalance IOs are not limited limit_concurrent_io—Limit the number of allowed concurrent rebalance IOs favor_application_io—Limit the number and bandwidth of rebalance IOs when application IOs are in-progress (default) dynamic_bandwidth_throttling—Limit the number and bandwidth of rebalance IOs when application IOs are in-progress or have been in a defined quiet period
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)
Options: CHOOSE ONE OR SEVERAL	
--concurrent_io_limit ‹LIMIT›	The maximum number of concurrent rebuild IOs per device (default: 1)
--bandwidth_limit ‹BANDWIDTH›	The maximum bandwidth of rebuild IOs, in KB per second, per device (Valid range: 1024-1048576, default: 10,240). This property will take effect only if the policy is set to `favor_application_io` or `dynamic_bandwidth_throttling`.

--quiet_period ‹PERIOD›	If the application IOs are below the IOPS and bandwidth threshold in this period, given in milliseconds, no throttling will be applied to the rebuild IOs (default: 2000). This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.
--application_iops_threshold ‹THRESHOLD›	The application IOPS threshold above which rebuild IO throttling will be applied (default: 10).This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.
--application_bandwidth_threshold ‹THRESHOLD›	The application IO bandwidth threshold, in KB per second, above which rebuild IO throttling will be applied (default:10,240).This property will take effect only if policy is set to `dynamic_bandwidth_throttling`.

Example

```
scli --set_rebalance_policy --protection_domain_name
pd1 --storage_pool_name sp1 --policy
favor_application_io --bandwidth_limit 5120
```

Setting concurrent rebuild/rebalance per Storage Pool

Command

```
set_rebuild_rebalance_parallelism
```

Syntax

```
scli --set_rebuild_rebalance_parallelism
(((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
<NAME>) | --storage_pool_id <ID>) (--limit <LIMIT>)
```

Description

Set the maximum number of concurrent rebuild and rebalance activities on all SDSs within the specified Storage Pool.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_id ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--limit ‹LIMIT›	The maximum number of concurrent rebuild and rebalance activities (1..10) on SDSs in the Storage Pool

Example

```
scli --set_rebuild_rebalance_parallelism
--protection_domain_name pd_18 --storage_pool_name
flash_18 --limit 5
```

Limiting remote clients to read-only access

Command

```
set_remote_read_only_limit_state
```

Syntax

```
scli --set_remote_read_only_limit_state
--remote_read_only_limit_state <enabled/disabled>
```

Description/Notes

This command configures your ScaleIO system to restrict access from remote clients to read-only operations on the MDM. When this restriction is enabled, remote client users cannot change any configurations on the MDM. However, users on a local host may still make configuration changes while the restriction is enforced.

NOTICE

A “local user” is one that successfully communicates with the MDM using the IP address 127.0.0.1 (which is the default IP address used by SCLI). If you try to issue commands from the local machine using other local IP addresses, you will not be able configure the system.

Parameters

Parameter	Description
--remote_read_only_limit_state (enabled | disabled)	Enables or disables restricted state (default = disabled)

Example

```
scli --set_remote_read_only_limit_state
--remote_read_only_limit_state enabled
```

Enabling/Disabling restricted SDC mode

Command

```
set_restricted_sdc_mode
```

Syntax

```
scli --set_restricted_sdc_mode --restricted_sdc_mode
<enabled/disabled>
```

Description/Notes

This command enables or disables restricted SDC mode.

Parameters

Parameter	Description
--restricted_sdc_mode (enabled | disabled)	Enables or disables restricted SDC mode (default=disabled)

Example

```
scli --set_restricted_sdc_mode --restricted_sdc_mode
enabled
```

Setting RFcache parameters

Command

```
set_rfcache_parameters
```

Syntax

```
scli --set_rfcache_parameters (--protection_domain_id
<ID> | --protection_domain_name <NAME>) [--page_size_kb
<SIZE>] [--max_io_size_kb <SIZE>]
[--rfcache_pass_through_mode <MODE>]
```

Description/Notes

This command sets RFcache parameters per Protection Domain.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain Name
--page_size_kb	Cache page size in KB. Valid range: 4-64
--max_io_size_kb	Cache maximum IO size in KB. Valid range: 32-256
--rfcache_pass_through_mode	Pass-through mode. One of: pass_through_none pass_through_read pass_through_write pass_through_read_and_write pass_through_write_miss

Example

```
scli --set_rfcache_parameters --protection_domain_name
pd25 --page_size_kb 32 --max_io_size_kb 128
--rfcache_pass_through_mode pass_through_write
```

Setting RFcache usage

Command

```
set_rfcache_usage
```

Syntax

```
scli --set_rfcache_usage (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
[--use_rfcache | --dont_use_rfcache]
```

Description/Notes

This command sets Rfcache usage in a Storage Pool.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--use_rfcache	Use RFcache for the Storage Pool
--dont_use_rfcache	Do not use RFcache for the Storage Pool

Example

```
scli --set_rfcache_usage --protection_domain_name pd25
--storage_pool_name sp25_01 --use_rfcache
```

Using the RAM read cache of a Storage Pool

Command

```
set_rmcache_usage
```

Syntax

```
scli --set_rmcache_usage (((--protection_domain_id
<ID> | --protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>)
(--use_rmcache | --dont_use_rmcache) [--i_am_sure]
```

Description/Notes

This command controls the use of RAM read cache in the specified Storage Pool. Caching must also be enabled in each SDS in the Storage Pool, as well, using the command `enable_sds_rmcache`. Caching will only begin once devices have been added to the SDSs. It is possible to configure use of RAM caching for a Storage Pool and then disable caching on one or more SDSs individually. If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--use_rmcache	Use RAM read cache in the Storage Pool
--dont_use_rmcache	Do not use RAM read cache in the Storage Pool (default)
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --set_rmcache_usage --protection_domain_name pd10
--storage_pool_name spflash --use_rmcache
```

Setting the RAM read cache write handling mode

Command

```
set_rmcache_write_handling_mode
```

Syntax

```
scli --set_rmcache_write_handling_mode
(((--protection_domain_id <ID> |
--protection_domain_name <NAME>) --storage_pool_name
```

```
<NAME>) | --storage_pool_id <ID>)
--rmcache_write_handling_mode <passthrough/cached>
[--i_am_sure]
```

Description/Notes

This command sets the RAM read cache write handling mode of the specified Storage Pool. Writes typically skip the cache, but in certain circumstances, you may want to cache writes as well as reads.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--rmcache_write_handling_mode ‹PASSTHROUGH / CACHED›	The write-handling mode used by the RAM read cache: **passthrough**—writes skip the cache and are stored in storage only **cached**—writes are stored in both cache and storage (default)
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --set_rmcache_write_handling_mode
--protection_domain_name pd1 --storage_pool_name
spflash --rmcache_write_handling_mode cached
```

Setting volume bandwidth limits

Command

```
set_sdc_volume_limits
```

Syntax

```
scli --set_sdc_volume_limits (--volume_id <ID> |
--volume_name <NAME>) (--sdc_id <ID> |
--sdc_name <NAME> | --sdc_guid <GUID> | --sdc_ip <IP>)
(Options) [--i_am_sure]
```

Description/Notes

This command sets limits to the IOPs and bandwidth that one SDC generates for the specified volume. This enables you to control the quality of service (QoS).

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume name
--sdc_id ‹ID›	SDC ID
--sdc_guid ‹GUID›	SDC GUID
--sdc_name ‹NAME›	SDC name
--sdc_ip ‹IP›	SDC IP address
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)
Options: CHOOSE AT LEAST ONE	
--limit_iops ‹NUMBER›	Limits the volume IOPs. The number of IOPS must be larger than 10. 0 is unlimited.
--limit_bandwidth ‹NUMBER›	Limits the volume network bandwidth. The bandwidth is in MB/sec. 0 is unlimited

Example

```
scli --mdm_ip 192.168.1.200 --set_sdc_volume_limit
--volume_name vol1 --sdc_ip 192.168.1.3 --limit_iops
100
```

Turning on or off the LED on a storage or cache device

Command

```
set_sds_device_led
```

Syntax

```
scli --set_sds_device_led (--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>))) (--led_on | --led_off)
```

Description/Notes

Turns the LED on a storage or cache device on or off.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	The port on the SDS
--device_id ‹ID›	The ID assigned to the storage or RFcache device
--device_name ‹NAME›	The name assigned to the storage or RFcache device
--device_path ‹PATH›	The device path or file path of a storage or RFcache device
--led_on	Turns the LED on
--led_off	Turns the LED off

Example

```
scli --set_sds_device_led --sds_ip  192.168.1.5
--sds_port 7072 --device_name slot5 --led_on
```

SDS network limits

Command

```
set_sds_network_limits
```

Syntax

```
scli --set_sds_network_limits (--protection_domain_id
<ID> | --protection_domain_name <NAME>)
[--rebuild_limit <LIMIT>] [--rebalance_limit <LIMIT>]
[--overall_limit <LIMIT>] [--i_am_sure]
```

Description/Notes

This command limits the network bandwidth used by all the SDSs in the specified Protection Domain, for various traffic types, including IO.

The SDS nodes transfer data between themselves. This data consists of user-data being replicated as part of the RAID protection, and data copied for internal rebalancing and recovery from failures. You can modify the balance between these types of data loads by limiting the data copy bandwidth. This change affects all SDSs in the specified Protection Domain.

Note: Contact EMC Support before you modify this configuration.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--rebuild_limit ‹LIMIT›	Limits the network bandwidth for rebuild in MB/Sec. 0 is unlimited
--rebalance_limit ‹LIMIT›	Limits the network bandwidth for rebalance in MB/Sec. 0 is unlimited
--overall_limit ‹LIMIT›	Limit the overall network bandwidth in MB per second. This includes the rebuild, rebalance and application IO bandwidth. 0 is unlimited
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --mdm_ip 192.68.1.200 --set_sds_network_limits
--protection_domain_name pd1 --rebuild_limit 100
```

SDS network limits

Command

```
set_sds_network_limits
```

Syntax

```
scli --set_sds_network_limits (--protection_domain_id
<ID> | --protection_domain_name <NAME>)
[--rebuild_limit <LIMIT>] [--rebalance_limit <LIMIT>]
[--overall_limit <LIMIT>] [--i_am_sure]
```

Description/Notes

This command limits the network bandwidth used by all the SDSs in the specified Protection Domain, for various traffic types, including IO.

The SDS nodes transfer data between themselves. This data consists of user-data being replicated as part of the RAID protection, and data copied for internal rebalancing and recovery from failures. You can modify the balance between these types of data loads by limiting the data copy bandwidth. This change affects all SDSs in the specified Protection Domain.

Note: Contact EMC Support before you modify this configuration.

Parameters

Parameter	Description
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--rebuild_limit ‹LIMIT›	Limits the network bandwidth for rebuild in MB/Sec. 0 is unlimited
--rebalance_limit ‹LIMIT›	Limits the network bandwidth for rebalance in MB/Sec. 0 is unlimited
--overall_limit ‹LIMIT›	Limit the overall network bandwidth in MB per second. This includes the rebuild, rebalance and application IO bandwidth. 0 is unlimited
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --mdm_ip 192.68.1.200 --set_sds_network_limits
--protection_domain_name pd1 --rebuild_limit 100
```

Setting RAM read cache size of an SDS

Command

```
set_sds_rmcache_size
```

Syntax

```
scli --set_sds_rmcache_size ((--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (--protection_domain_id <ID> |
--protection_domain_name <NAME>)) --rmcache_size_mb
<SIZE> [--i_am_sure]
```

Description/Note

This command sets the RAM read cache size of the specified SDS. By default, RAM read cache size is set to 128 MB in all SDSs. The amount of RAM you can allocate for cache is limited by the amount of RAM on the SDS server:

- If the RAM is less than 32 GB, 50% of memory can be used for cache
- If the RAM is more than 32 GB, 75% of memory can be used for cache

The maximum amount of RAM cache is 128 GB.

Note: In case of NUMA (Non-Uniform Memory Access), the total RAM refers to the first node only.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_id ‹ID›	Protection Domain ID

--protection_domain_name ‹NAME›	Protection Domain name
--rmcache_size_mb ‹SIZE›	New size of RAM read cache in MB ((Range: 128 MB-300GB). **Note:** Maximum limit is described in the Product Limits table in the user guide.
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --set_sds_rmcache_size --protection_domain_name
pd01 --sds_name sds10 --rmcache_size_mb 256
```

Setting the facility field of the syslog events

Command

```
set_syslog_facility
```

Syntax

```
scli --set_syslog_facility --remote_syslog_server_ip
<IP> --syslog_facility <FACILITY>
```

Description/Notes

Sets the facility field of the syslog events. Legal values are from 0 to 23.

Parameters

Parameter	Description
--remote_syslog_server_ip ‹IP›	A comma-separated list of IP addresses or hostnames of syslog servers
--syslog_facility ‹FACILITY›	Control the facility field of the event. Default is 16.

Example

```
scli --set_syslog_facility --remote_syslog_server_ip
192.168.1.201 --syslog_facility 16
```

Setting the User Authentication Method

Command

```
set_user_authentication_method
```

Syntax

```
scli --set_user_authentication_method
(--ldap_authentication | --native_authentication |
--native_and_ldap_authentication) [--i_am_sure]
```

Description/Notes

This command sets user authentication method for the system.

Note: Use this command with caution, because it is complex to roll-back this operation.

Parameters

Parameter	Description
--ldap_authentication	LDAP based authentication method, where users are managed in LDAP compliant server. In order to switch to this authentication method, LDAP service parameters should be configured.
--native_authentication	Native authentication method, where users are managed locally in the system
--native_and_ldap_authentication	A hybrid authentication method. Both LDAP and Native users may log into the system after it is set.
--i_am_sure	Preemptive approval

Example

```
scli --set_user_authentication_method
--native_and_ldap_authentication --i_am_sure
```

Configuring RAM read cache usage of a volume

Command

```
set_volume_rmcache_usage
```

Syntax

```
scli --set_volume_rmcache_usage (--volume_id <ID>|
--volume_name <NAME>)(--use_cache | --dont_use_cache)
[--i_am_sure]
```

Description/Notes

This command controls the use of RAM read cache in the specified volume. Only one volume can be configured at a time. If you want to ensure that all I/Os for this volume are cached, the relevant Storage Pool should be configured to use cache, and the relevant SDSs should all have caching enabled.

Note: There are two ways of enabling cache at the volume level: during initial creation of the volume, using the `--add_volume` command (for more information, see), or later, using the `--set_volume_rmcache_usage` command described in this topic.

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume name
--use_cache	Use RAM read cache on the volume
--dont_use_cache	Do not use RAM read cache on the volume. This is the default setting.
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example

```
scli --set_volume_rmcache_usage --volume_name vol_10
--use_cache
```

Showing an SDS certificate

Command

```
show_certificate
```

Syntax

```
scli --show_certificate ( (--sds_id <ID> | --sds_name
<NAME> | --sds_ip <IP> [--sds_port <PORT>]) |
(--protection_domain_id <ID> |
--protection_domain_name <NAME>) | --all_sds)
[--days_until_expiration <DAYS>]
```

Description/Notes

This command shows the properties of one or more SDS certificates.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port assigned to the SDS
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_name ‹NAME›	Protection Domain name
--all_sds	Show certificates for all the SDSs
--days_until_expiration ‹DAYS›	Only show certificates expiring in a given number (or fewer) days

Example

```
scli --show_certificate --all_sds
--days_until_expiration 7
```

Taking a snapshot of a volume

Command

```
snapshot_volume
```

Syntax

```
scli --snapshot_volume (--volume_id <ID> |
--volume_name <NAME> | --volume_id_from_file <FILE> |
--volume_name_from_file <FILE>) [--snapshot_name
<NAME> | --snapshot_name_from_file <FILE>]
```

Description/Notes

This command creates a snapshot of one or more volumes. When specifying more than one volume (a list), a **consistency group** is generated, and the ID associated with it is displayed. The snapshots under the consistency group are taken simultaneously for all listed volumes, thus ensuring their consistency.

Define snapshot names according to the following rules:

1. Must contain less than 32 characters.
2. Must contain only alphanumeric and punctuation characters.
3. Must be unique within the object type.

When a name has not been defined, the system may display default system-defined names, using the volume's ID.

ScaleIO objects are assigned a unique ID that can be used to identify the object in CLI commands. You can retrieve the ID via a query, or via the object's property sheet in the GUI.

Note: The consistency group is for convenience purposes ONLY. There are no protection measures to conserve the consistency group. You can delete members from it.

Parameters

Parameter	Description
--volume_id ‹ID›	A comma-separated list of volume IDs
--volume_name ‹NAME›	A comma-separated list of volume names

--volume_id_from_file ‹FILE›	A file containing new line-separated list of volume IDs
--volume_name_from_file ‹FILE›	A file containing a new-line-separated list of volume names
--snapshot_name ‹NAME›	A comma-separated list of names to be associated with the created snapshots. The names in this list correspond to the names in the volume name or volume ID list.
--snapshot_name_from_file ‹FILE›	A file containing a new-line-separated list of names to be associated with the created snapshots

Example

```
scli --mdm_ip 192.168.1.200 --snapshot_volume
--volume_name vol_1 --snapshot_name snap_1
```

Starting a device test

Command

```
start_device_test
```

Syntax

```
scli --start_device_test ((--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>))) | (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
| (((--protection_domain_id <ID> |
--protection_domain_name <NAME>)
--storage_pool_name <NAME>) | --storage_pool_id <ID>))
[Options] [Control] [--i_am_sure]
```

Description/Notes

This command initiates a device test for one or all SDS devices.

By default, every added SDS device is tested for performance. You can choose to perform another test at any given time. Unlike the default tests, with this command, you can choose the test parameters.

Note: If you use the `--storage_pool_id` parameter in the command, it is not necessary to also specify the Protection Domain ID\name and the Storage Pool name.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	IP address associated with the SDS
--sds_port ‹PORT›	Port assigned to the SDS
--device_id ‹ID›	Device ID
--device_path ‹PATH›	The path of the SDS device
--device_name ‹NAME	SDS storage device name or file
--protection_domain_id ‹ID›	Protection Domain ID
--protection_domain_id ‹NAME›	Protection Domain name
--storage_pool_name ‹NAME›	Storage Pool name
--storage_pool_id ‹ID›	Storage Pool ID
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)
Options: CHOOSE SEVERAL	
--io_type ‹read/write›	The I/O type, either read (default) or write. If the storage device is in use, only read testing can be performed.
--io_pattern ‹random/sequential›	The I/O pattern, either random (default) or sequential
--io_size_kb ‹SIZE›	The read or write I/O size in KB, from 4KB to 512 KB (default: 8)

Control: CHOOSE SEVERAL	
--test_time ‹TIME›	Maximum test run time in seconds (default: 10 seconds)
--io_total_size_mb ‹SIZE›	The total size of the test reads or writes in MB, between 1 and 32768 (default 128 MB), specifying the total I/O size in MB.
‹blank›	Use defaults

Example

```
scli --mdm_ip 192.168.1.200 --start_device_test
--sds_ip 192.168.1.6 --device_path /dev/sdb --io_type
write --io_size 8
```

Start posting events to a remote syslog server

Command

```
start_remote_syslog
```

Syntax

```
scli --start_remote_syslog --remote_syslog_server_ip
<IP> [--remote_syslog_server_port <PORT>]
[--syslog_facility <FACILITY>] [--attach_event_code]
```

Description/Notes

Start posting events to a remote syslog server.

Parameters

Parameter	Description
--remote_syslog_server_ip ‹IP›	A comma-separated list of IP addresses or hostnames of syslog servers
--remote_syslog_server_port ‹PORT›	The syslog server port. Default is 1468.
--syslog_facility ‹FACILITY›	Control the facility field of the event. Default is 16.
--attach_event_code	Add the posted event code to the event message. Disabled by default.

Starting an SDS network test

Command

```
start_sds_network_test
```

Syntax

```
scli --start_sds_network_test (--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
[--parallel_messages <NUMBER>]
[--network_test_size_gb <SIZE>]
[--network_test_length_secs <SECONDS>]
```

Description/Notes

This command initiates a network test between an SDS and all of its peers.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	SDS IP address
--sds_port ‹PORT›	Port associated with the SDS

--parallel_messages ‹NUMBER›	The number of parallel messages sent during the test, between 1 and 16 (default: 4)
--network_test_size_gb ‹SIZE›	The amount of data sent between the tested SDS and every other SDS (default size: 1GB).
--network_test_length_secs ‹SECONDS›	The maximum amount of time spent testing the SDS, regardless of the number of SDSs in the system. The default value is 0 (unlimited).

Example

```
scli --mdm_ip 192.168.1.200 --start_sds_network_test
--sds_ip 192.168.1.4 --parallel_messages 8
--network_test_size_gb 2 --network_test_length_secs
120
```

Starting an upgrade

Command

```
start_upgrade
```

Syntax

```
scli --start_upgrade
```

Description/Notes

Start the upgrade process.

Parameters

Parameter	Description
--use_nonsecure_communication	Enables SCLI commands to be executed when secure communication mode is not enabled. This is necessary when the base system does not use secure communication mode, for example 1.32.x.

Example

```
scli --start_upgrade --use_nonsecure_communication
```

Stop posting events to a remote syslog server

Command

stop_remote_syslog

Syntax

```
scli --stop_remote_syslog --remote_syslog_server_ip
<IP>
```

Description/Notes

Stop posting events to a remote syslog server.

Parameters

Parameter	Description
--remote_syslog_server_ip ‹IP›	A comma-separated list of IP addresses or hostnames of syslog servers

Switching the mode of an MDM cluster

Command

```
switch_cluster_mode
```

Syntax

```
scli --switch_cluster_mode --cluster_mode <MODE>
((--add_slave_mdm_id <ID> | --add_slave_mdm_ip <IP>
[--add_slave_mdm_port <PORT>] | --add_slave_mdm_name
<NAME>)| (--remove_slave_mdm_id <ID> |
--remove_slave_mdm_ip <IP> [--remove_slave_mdm_port
<PORT>] | --remove_slave_mdm_name <NAME>))
((--add_tb_id <ID> | --add_tb_ip <IP> [--add_tb_port
<PORT>] | --add_tb_name <NAME>) | (--remove_tb_id <ID>
| --remove_tb_ip <IP> [--remove_tb_port <PORT>] |
--remove_tb_name <NAME>)) [--allow_leave_failed]
[--i_am_sure]
```

Description/Notes

Switch the MDM cluster from one operating mode/configuration to another.

Parameters

Parameter	Description
--remove_mdm_id ‹ID›	MDM ID to remove
-cluster_mode ‹MODE›	**The cluster operation mode. Can be one of the following:** • 1_node The MDM cluster will operate in single-node mode • 3_node The MDM cluster will operate in 3-node mode • 5_node The MDM cluster will operate in 5-node mode
--add_slave_mdm_id ‹ID›	Comma-separated list (at most 2) of Slave MDM IDs that will be part of the cluster
--add_slave_mdm_ip ‹IP›	Comma-separated list (at most 2) of Slave MDM IPs that will be part of the cluster
--add_slave_mdm_port ‹PORT›	Comma-separated list (at most 2) of Slave MDM ports that will be part of the cluster (in the same order as the IP list)
--add_slave_mdm_name ‹NAME›	Comma-separated list (at most 2) of Slave MDM names that will be part of the cluster
--remove_slave_mdm_id ‹ID›	Comma-separated list (at most 2) of Slave MDM IDs that will be removed from the cluster
--remove_slave_mdm_ip ‹IP›	Comma-separated list (at most 2) of Slave MDM IPs that will be removed from the cluster
--remove_slave_mdm_port ‹PORT›	Comma-separated list (at most 2) of Slave MDM ports that will be removed from the cluster (in the same order as the IP list)
--remove_slave_mdm_name ‹NAME›	Comma-separated list (at most 2) of Slave MDM names that will be removed from the cluster
--add_tb_id ‹ID›	Comma-separated list (at most 2) of Tie-Breaker IDs that will be part of the cluster

--add_tb_ip ‹IP›	Comma-separated list (at most 2) of Tie-Breaker IPs that will be part of the cluster
--add_tb_port ‹PORT›	Comma-separated list (at most 2) of Tie-Breaker ports that will be part of the cluster (in the same order as the IP list)
--add_tb_name ‹NAME›	Comma-separated list (at most 2) of Tie-Breaker names that will be part of the cluster
--remove_tb_id ‹ID›	Comma-separated list (at most 2) of Tie-Breaker IDs that will be removed from the cluster
--remove_tb_ip ‹IP›	Comma-separated list (at most 2) of Tie-Breaker IPs that will be removed from the cluster
--remove_tb_port ‹PORT›	Comma-separated list (at most 2) of Tie-Breaker ports that will be removed from the cluster (in the same order as the IP list)
--remove_tb_name ‹NAME›	Comma-separated list (at most 2) of Tie-Breaker names that will be removed from the cluster
--allow_leave_failed	Allow leaving currently failed MDMs in the cluster
--i_am_sure	Preemptive approval

Example

```
scli --switch_cluster_mode --cluster_mode 5_node
--add_slave_mdm_ip 192.168.1.164 --add_tb_ip
192.168.1.134
```

Switching MDM Cluster Ownership

Command

```
switch_mdm_ownership
```

Syntax

```
scli --switch_mdm_ownership (--new_master_mdm_id <ID> |
--new_master_mdm_ip <IP> [--new_master_mdm_port
<PORT>] | --new_master_mdm_name <NAME>)
```

Description/Notes

Switch MDM cluster ownership from the current Master MDM to a different MDM.

Parameters

Parameter	Description
--new_master_mdm_id ‹ID›	MDM ID (must be an MDM with 'manager' role)
--new_master_mdm_ip ‹IP›	MDM IP (must be an MDM with 'manager' role)
--new_master_mdm_port ‹IP›	MDM port (must be an MDM with 'manager' role)
--new_master_mdm_name ‹NAME›	MDM name (must be an MDM with 'manager' role)

Example

```
scli --switch_mdm_ownership --new_master_mdm_ip
192.168.1.164
```

Unmapping a volume

Command

```
unmap_volume_from_sdc
```

Syntax

```
scli --unmap_volume_from_sdc (--volume_id <ID> |
--volume_name <NAME>) (--sdc_id <ID> |
```

```
--sdc_name <NAME> | --sdc_guid <GUID> | --sdc_ip <IP> |
--all_sdc) [--i_am_sure]
```

Description/Notes

This command unmaps a volume from one or all SDCs.

Parameters

Parameter	Description
--volume_id ‹ID›	Volume ID
--volume_name ‹NAME›	Volume name
--sdc_id ‹ID›	SDC ID
--sdc_name ‹NAME›	SDC name
--sdc_guid GUID›	SDC GUID
--sdc_ip ‹IP›	SDC IP address
--all_sdc	Unmap the volume from all SDCs
--i_am_sure	Skip the safety questions for command execution (For example: “This could damage the stored data. Are you sure?”)

Example (unmap volume from a single SDC)

```
scli --mdm_ip 192.168.1.200 --unmap_volume_from_sdc
--volume_name vol_1 --sdc_ip 192.168.1.3
```

Example (unmap volume from all SDCs)

```
scli --mdm_ip 192.168.1.200 --unmap_volume_from_sdc
--volume_name vol_1 --all_sdcs
```

Updating an SDS device’s path

Command

Syntax

```
scli --update_device_original_path (--device_id <ID> |
((--sds_id <ID> | --sds_name <NAME> | --sds_ip <IP>
[--sds_port <PORT>]) (--device_name <NAME> |
--device_path <PATH>)))
```

update_device_original_path

Description

Updates the SDS device's original path configuration to the current device path.

The device path on the SDS may have changed after a server restart. If the current device path is different from the original path created during SDS configuration, you may not be able to identify the device. You can still identify the device with its name or ID, or use this command to update the SDS configuration with the current SDS device path.

Note: When you query an SDS, you will receive device information similar to:
`2: Name: N/A Path: /tmp/mos_sim_dev_4_1 Original-path: /tmp/mos_sim_dev_4_1 ID: bb8871ac00040001`

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS name
--sds_ip ‹IP›	IP address associated with the SDS
--sds_port ‹PORT›	Port assigned to the SDS
--device_id ‹ID›	Device ID
--device_path ‹PATH›	The current path of the SDS device
--device_name ‹NAME›	SDS storage device name or file

Example

```
scli--update_device_original_path --device_id
bb8871ac00040001
```

Updating the original path of the SDS RFcache device

Command

```
update_sds_rfcache_device_original_path
```

Syntax

```
scli --update_sds_rfcache_device_original_path
(--rfcache_device_id <ID> | ((--sds_id <ID> |
--sds_name <NAME> | --sds_ip <IP> [--sds_port <PORT>])
(--rfcache_device_name <NAME> | --rfcache_device_path
<PATH>)))
```

Description/Notes

This command restores the original path that was configured for the device. This operation may be required after a node restart, in cases where different paths are assigned to devices when the node comes back online.

Parameters

Parameter	Description
--sds_id ‹ID›	SDS ID
--sds_name ‹NAME›	SDS Name
--sds_ip ‹IP›	SDS IP Address
--sds_port ‹PORT›	Port assigned to the SDS
--rfcache_device_id ‹ID›	RFcache device ID
--rfcache_device_name ‹NAME›	RFcache device name
--rfcache_device_path ‹PATH›	SDS storage device path or file path

Example

```
scli --update_sds_rfcache_device_original_path
--sds_name sds25 --rfcache_device_name ssd_25-01
```