

KumoScale Cluster Manager CLI Command Reference

This section provides a detailed description of commands available in the KumoScale Cluster Manager CLI. It describes the input parameters and the output of each command.

Command List

The table below lists a summary of all the commands supported by the KumoScale Cluster Manager CLI with links to reference documentation. All commands are available in Appliance and Managed modes unless otherwise noted. .Enter **<command name> -h | --help** for further details on a specific command and its parameters.

Command	Description
cluster-authorization-config	Set the configuration of the authorization server
cluster-authorization-reset	Reset the configuration of the authorization server
cluster- authorization-show	Show the configuration of the current authorization server
cluster- masters-config	Add a new master configuration for the cluster (Not available in managed mode.)
cluster-masters-show	Show configuration of the current cluster’s masters
cluster- masters-update	Update the configuration of a cluster’s existing master
cluster-show	Show basic information of the KumoScale cluster
cluster-software-upgrade	Upgrade cluster software
cluster-upgrade-delete	Delete the software upgrade process
cluster-upgrade-resume	Resume the software upgrade process
cluster-upgrade-show	Show the software upgrade processes
cluster-upgrade-stop	Gracefully stop the software upgrade process
exit	Exit from the Cluster Manager CLI and close the session
help	Show a summary of all Cluster Manager CLI commands
history	Show the last entered CLI commands
host-remove	Remove an existing host from a cluster
host-show	Shows a list of all hosts in the cluster with their state
host-targets-show	Show all of the targets of a host
interface-down	Set the status of an existing interface to DOWN
interface-mtu-set	Set the MTU value for an existing interface
interface-show	Show the details for interfaces on a storage node
interface-team-remove	Remove an existing team interface
interface-team-set	Create a new team interface on an existing interface
interface-up	Set the status of an existing interface to UP
interface-vlan-remove	Remove an existing VLAN
interface-vlan-set	Create a new VLAN on an existing interface
inventory-get	Show inventory information or save to a local file
inventory-reset	Reset the inventory
license-add	Add a cluster license file for the first time
license-show	Show the license information
license-update	Update an existing cluster license
nic-show	Show the details for NICs on a storage node
portal-add	Add a new portal to a storage node
portal-remove	Remove an existing portal
portal-show	Show the portals configured on the storage node
snapshot-add	Add a new snapshot to an existing volume
snapshot-remove	Remove an existing snapshot
snapshot-show	Show the snapshots configured on a cluster
snapshot-volume-add	Add new snapshot volume to an existing snapshot

Command	Description
ssd-add	Add an SSD drive to an existing group
ssd-allocation-enable	Set the SSD allocations mode to Enable
ssd-evict	Evict an SSD drive
ssd-evict-abort	Abort the Evict SSD process
ssd-evict-show	Show the Evict SSD process
ssd-firmware-upgrade	Upgrade SSD firmware using a local file
ssd-missing-remove	Remove a missing SSD drive
ssd-remove	Remove an SSD drive from an existing group
ssd-show	Show the drives in the storage node
ssd-upgrade-abort	Abort the Upgrade SSD process
ssd-upgrade-show	Show the Upgrade SSD process
storagenode-add	Add a new storage node to the cluster
storagenode-alert-show	Show an existing alert
storagenode-event-show	Show an existing event
storagenode-mgmt-ip-add	Add new management IPs and parameters to the storage node
storagenode-mgmt-ip-remove	Remove an existing management IP from the storage node
storagenode-remove	Remove an existing storage node from the cluster
storagenode-show	Show an existing storage node
storagenode-update	Update the configuration of an existing storage node
syslog-add	Add a new Syslog configuration
syslog-remove	Remove an existing Syslog configuration
syslog-show	Show existing Syslog configurations
syslog-update	Modify an existing Syslog configuration
telemetry-add	Add a new telemetry configuration
telemetry-remove	Remove an existing telemetry configuration
telemetry-show	Show an existing telemetry configuration
telemetry-update	Update an existing telemetry configuration
tenant-add	Add a new tenant containing volumes, snapshots, and snapshot volumes
tenant-remove	Remove an existing tenant
tenant-show	Show an existing tenant
tenant-update	Update an existing tenant
volume-add	Add a new volume to the cluster
volume-clone	Create a clone of a given source volume
volume-expand	Expand an existing volume on all its replicas
volume-host-connect	Publish and connect a volume to a specific host
volume-host-disconnect	Disconnect and unpublish a volume from a specific host
volume-migrate	Migrate a volume (replica) to another storage node
volume-migrate-abort	Abort the volume migration process
volume-migrate-delete	Delete the volume migration operation
volume-migrate-show	Show the volume migration processes
volume-migrate-update	Update of the migrate volume operation
volume-remove	Remove an existing volume from a cluster
volume-replica-add	Add a new replica to an existing volume.
volume-replica-remove	Mark a replica to be removed from a replicated volume.
volume-show	Show existing volumes
volume-targets-show	Shows all the targets for each volume

System Commands

help

Description- Shows the available system commands with a short description.

Parameters- no parameters

Output

```
CLI>help
```

KumoScale Cluster Manager CLI Help	
cluster-authorization-config	Set the authorization server configuration
cluster-authorization-reset	Reset the authorization server configuration
cluster-authorization-show	Shows the current authorization server configuration
cluster-masters-config	Add a new master configuration of the cluster
cluster-masters-show	Shows the current cluster masters configuration
cluster-masters-update	Update an existing master configuration of the cluster
cluster-show	Shows basic information of KumoScale cluster
cluster-software-upgrade	Upgrade cluster software
cluster-upgrade-delete	Delete the software upgrade process
cluster-upgrade-resume	Resume the software upgrade process
cluster-upgrade-show	Shows software upgrade processes
cluster-upgrade-stop	Gracefully stop the software upgrade process
host-remove	Remove an existing host from cluster
host-show	Shows a list of hosts in the cluster
host-targets-show	Shows all of the targets per host
interface-down	Set DOWN admin status for an existing interfac
interface-mtu-set	Set MTU value for an existing interface
interface-show	Shows all interfaces of the storage node
interface-team-remove	Remove an existing team interface
interface-team-set	Create a new team interface on an existing interfaces
interface-up	Set UP admin status for an existing interface
interface-vlan-remove	Remove corresponding Vlan tag from existing interface
interface-vlan-set	Set a Vlan tag on an existing interface
inventory-get	Save the inventory information to the local file or shows to the screen
inventory-reset	Reset the inventory information
license-add	Add a Cluster license file for the first time
license-show	Shows the license information
license-update	Update an existing Cluster license
nic-show	Shows the network interface cards of the storage node
portal-add	Add a new portal for storage node
portal-remove	Remove an existing portal
portal-show	Shows the portals configured of the storage node
snapshot-add	Create new snapshot
snapshot-remove	Remove an existing snapshot
snapshot-show	Shows the snapshots configured in the cluster
snapshot-volume-add	Create new snapshot volume
ssd-add	Add SSD drive to the existing group of the storage node
ssd-allocation-enable	Set the SSD allocations mode to enable
ssd-evict-abort	Abort of the evict SSD process
ssd-evict-show	Shows of the evict SSD process
ssd-evict	Evict SSD drive
ssd-firmware-upgrade	Upgrade SSD firmware with a firmware URL file
ssd-missing-remove	Remove missing SSD drive from storage node
ssd-remove	Remove SSD drive from existing group of the storage node
ssd-show	Shows the SSD devices of the storage node
ssd-upgrade-abort	Abort of the upgrade SSD process
ssd-upgrade-show	Shows of the upgrade SSD process
storagenode-add	Add a new storage node to the cluster
storagenode-alerts-show	Shows the existing alerts of storage node
storagenode-events-show	Shows the existing events of storage node
storagenode-mgmt-ip-add	Add new management IP and parameters to the storage node
storagenode-mgmt-ip-remove	Remove an existing management IP address of the storage node
storagenode-remove	Remove an existing storage node from the cluster
storagenode-show	Shows existing storage nodes
storagenode-update	Update the configuration of an existing storage node
syslog-add	Add new Syslog configuration
syslog-remove	Remove existing Syslog configuration
syslog-show	Shows existing Syslog configurations
syslog-update	Update an existing Syslog configuration
telemetry-add	Add a new telemetry configuration
telemetry-remove	Remove an existing telemetry configuration
telemetry-show	Shows an existing telemetry configuration
telemetry-update	Update an existing telemetry configuration
tenant-add	Add a new tenant containing volumes, snapshots and snapshot volumes
tenant-remove	Remove an existing tenant
tenant-show	Shows an existing tenants
tenant-update	Update an existing tenant
volume-add	Add a new volume to cluster
volume-clone	Add a clone of a given source volume
volume-expand	Expand exists volume on all its replicas
volume-host-connect	Connect a volume to a specific host
volume-host-disconnect	Disconnect a volume from a specific host
volume-migrate-abort	Abort the volume migration process
volume-migrate-delete	Delete the volume migration operation
volume-migrate-show	Shows volume migrate processes
volume-migrate-update	Update of the migrate volume (replica) operation
volume-migrate	Migrate volume (replica) to other storage node
volume-remove	Remove an existing volume from cluster
volume-replica-add	Add new replica for existing volume
volume-replica-remove	Mark a replica to be removed from a replicated volume
volume-show	Shows an existing volumes
volume-targets-show	Shows all of the targets per volume
help	Summary of the CLI commands
history	Shows the last entered CLI commands
exit	Exit from CLI and close the session
Type '<command name> -h --help' for further details on a specific command and its parameters.	

exit

Description- Exits from the KumoScale Cluster Manager CLI.

Parameters- no parameters

history

Description – Shows the last Cluster Manager CLI commands entered.

Parameters – no parameters

Cluster Management

cluster-show

Description – Shows basic information on the KumoScale cluster

Parameters – no parameters

Output option

- Provisioner Version – the version number of the KumoScale Provisioner
- Control Operator Version – the version number of the KumoScale Control Operator
- Authentication Mode – the current authentication mode (Local or OpenIDC)
- Number of Storage Nodes – the total number of storage nodes in the cluster
- Number of Master Storage Nodes – the total number of master storage nodes in the cluster
- Total Capacity – the total capacity of all available storage nodes
- Total Free Space – the total free space of all available storage nodes
- Provisioner URL- the URL for the KumoScale Provisioner

cluster-masters-show

Description – Shows the configuration of the current cluster’s master configuration

Parameters – no parameters

Output option

- Configured Number of Master Storage Nodes – the number of master nodes configured in the cluster.
- Current Number of Master Storage Nodes – the current number of master nodes in the cluster.
- List of Masters – a list of master nodes including name and status

Possible messages

Master configuration not found

Invalid parameter

Operator error.

cluster-masters-config

Note: Applicable to Application mode only. Not supported in Managed mode.

Description – Add a new master configuration to the cluster

Parameters – --master-nodes-number <number of master nodes>

- **master-nodes-number** – the number of master modes in the cluster

Possible messages

Invalid parameter

Operator error

cluster-masters-update

Description – Updates an existing master configuration

Parameters – --master-nodes-number <number of master nodes>

- **master-nodes-number** – the number of master modes in the cluster

Possible messages

Master configuration not found

Invalid parameter

Operator error

cluster-authorization-show

Description – Shows the configuration of the current authorization server

Parameters – no parameters

Output option

- Token URL – the authorization server URL for generating tokens
- Public key – the public key used to decrypt tokens
- Auth Server JWT Set UR – the URL to retrieve the current keys which are used
- Provisioner Resource ID– the identifier for the KumoScale Provisioner resource
- Provisioner Client ID – the identifier for the KumoScale Provisioner client
- Provisioner Client Secret – the KumoScale Provisioner client secret string
- Provisioner Client Scope - the scope to use while generating a token for the KumoScale Provisioner client – the storage node application scope
- Storage Node Resource ID– the identifier for storage node resource
- Storage Node Client ID – the identifier for the storage node client
- Storage Node Client Secret – the storage node client secret string
- Storage Node Client Scope - the scope to use while generating a token for the storage node client – the KumoScale Provisioner application scope

Possible messages

Cluster authorization configuration not found

Invalid parameter

Operator error.

cluster-authorization-config

Description – Sets the configuration of the authorization server for OpenIDC authentication mode

During execution, you will be prompted for confirmation:

```
You have selected to configure the authorization server.
Authorization configuration will be changed, and you should change CLI configuration setup
Are you sure you want to continue? (yes/no)
```

This message requires confirmation. For confirmation, you must type only<yes> or <no>. Any other answer will display the following message:

```
Response is invalid (valid values are only 'yes' or 'no')
```

Parameters – --token-url <token URL> --public-key <public key> | --auth-server-jwt-set-url <Auth Server JWT Set URL> --prov-resource-id <provisioner resource id> --prov-client-id <provisioner client id> --prov-secret < provisioner secret> [--prov-scope <provisioner client scope>] --storagenodes-resource-id <storage node resource id> --storagenodes-client-id <storage node client id> --storagenodes-secret <storage node secret> [--storagenodes-scope <storage node client scope>]

- **token-url** – the URL for the authorization server for generating tokens
- **public-key** – the public key used to decrypt tokens
- **auth-server-jwt-set-url** – the URL to use to retrieve the current keys
- **prov-resource-id** – the identifier for the KumoScale Provisioner resource
- **prov-client-id** – the identifier for the KumoScale Provisioner client
- **prov-secret** – the KumoScale Provisioner client secret string
- **prov-scope** - the scope to use while generating a token for the KumoScale Provisioner client – the storage node application scope (optional)
- **storagenodes-resource-id** – the identifier for the storage node resource
- **storagenodes-client-id** – the identifier for the storage node client
- **storagenodes-secret** – the storage node client secret string
- **storagenodes-scope** - the scope to use when generating a token for the storage node client – the KumoScale Provisioner application scope (optional)

Possible messages

Invalid parameter

Operator error

cluster-authorization-reset

Description – Resets the configuration of the authorization server back to Local authentication mode.

During execution, you will be prompted for confirmation:

```
You have selected to reset the authorization server configuration.
Authorization configuration will be deleted, and you should change CLI configuration setup
Are you sure you want to continue? (yes/no)
```

This message requires confirmation. For confirmation, you must type only<yes> or <no>. Any other answer will show the following message:

```
Response is invalid (valid values are only 'yes' or 'no')
```

Parameters – --token-url <token URL> --public-key <public key> | --auth-server-jwt-set-url <Auth Server JWT

Possible messages

Cluster authorization configuration not found.

Invalid parameter

Operator error

cluster-software-upgrade

Description – Upgrades the cluster software.

During execution, you will be prompted for confirmation:

```
You have selected to upgrade the Cluster software.
The progress of the operation should be monitored using the "cluster- show -upgrade" command
Are you sure you want to continue?
```

This message requires confirmation. For confirmation, you must type only<yes> or <no>. Any other answer will show the following message:

Response is invalid (valid values are only 'yes' or 'no')

Parameters ---name <name> --url <url> [--username <user name> --password <password>] [--managed-username <user name> --managed-password <password> --package-password <password>] [--wait-period <time in minute>

- **name** – the name of the software upgrade operation (one of show, abort, stop, run) to apply to the upgrade operation in case subsequent management is needed
- **url** – the software file URL.
- **username** – the username to use for access to the URL (optional)
- **password** – the password to use for access to the URL (optional)
- **managed-username** – the name of the user who has permissions to upgrade storage nodes (not applicable to Appliance mode and mandatory for Managed mode)
- **managed-password** – the password of the user who has permissions to upgrade storage nodes (not applicable to Appliance mode and mandatory for Managed mode)
- **package-password** – the password which is required to extract the software package (not applicable to Appliance mode and mandatory for Managed mode)
- **wait-period** – the time to wait between storage nodes upgrade; the value is an integer in minutes, (Minimum is 1 Minute, Maximum is 1440 Minutes – 1 Day, Default is 5 minutes)

Possible messages

Invalid parameter

Operator error

cluster-upgrade-show

Description – Shows the software upgrade processes.

Parameters – [--name <name>] [--detail]

- **name** – the name of the software upgrade operation
- **detail** – show detailed information (optional)

Output option

Short output – without detail parameter

- Name – the name of the software upgrade operation
- Software version – the software version that was upgraded
- Upgrade Start Time – the date and time the upgrade started
- Uploaded Count –the number of successful uploads of storage node software
- Upgraded Count - the number of upgraded storage nodes
- Package Type – the package Type (Hot Fix, Full Upgrade)
- Upgrade State – the state of the upgrade or hotfix (one of Pending, Uploading, Upgrading, Paused, Stopped, Partially Done, Done, Failed)

Detail output – with detail parameter

- Name – the name of the software upgrade operation
- Software version – the software version that was upgraded
- Upgrade Start Time – the date and time of the upgrade
- Currently Upgrading – the name of the storage node currently being upgraded
- Uploaded Count –the number of successful uploads of storage node software
- Failed Upload Count - the number of failed uploads of storage node software
- Uploaded Successfully – a list of successful uploads to storage nodes
- Failed Upload – a list of failed uploads of storage node software
- Upgraded Count - the number of upgraded storage nodes
- Failed Upgrade Count - the number of failed upgrades of storage nodes
- Upgraded Successfully – a list of storage nodes which were upgraded successfully
- Failed Upgrade – a list of storage nodes which failed to upgrade
- Package Type – the package type (one of Hot Fix, Full Upgrade)
- Upgrade State – the state of the upgrade or hotfix (one of Pending, Uploading, Upgrading, Paused, Stopped, Partially Done, Done, Failed)
- Status – the status of the operation (one of Success, Error, Empty).
- Description – a text message
- List of the events (date, reason, message) – description of the upgrade process

Possible messages

Invalid parameter

Operator error

cluster-upgrade-delete

Description – Aborts the software upgrade process.

Parameters – --name <name>

- **name** – the name of the software upgrade operation to abort

Possible messages

Invalid parameter

Operator error

cluster-upgrade-stop

Description – Gracefully stops the software upgrade process.

Parameters – --name <name>

- **name** – the name of the software upgrade operation to stop

Possible messages

Invalid parameter

Operator error

cluster-upgrade-resume

Description – Resumes the software upgrade process.

Parameters – --name <name>

- **name** – the name of the software upgrade operation to resume

Possible messages

Invalid parameter

Operator error

License Management

license-show

Description – Shows the license information.

Parameters – no parameters

Output option

- **Type** – the License type (one of POC or PRODUCTION)
- **Expiration** – the expiration date or None
- **Max Storage Nodes** – the maximum number of storage nodes allowed by this license or Unlimited

Possible messages

Operator error.

license-add

Description – Adds a license file for the first time.

If the number of non-certified storage nodes is more than 0, you will be prompted for confirmation:

Non-certified Storage Node detected
Are you sure you want to continue?

This message requires confirmation. For confirmation, you must type <yes>. Any other answer will cancel the command. The command will be aborted if a valid license is already installed.

Parameters – --path <license full path>

- **path** – the full path for the license file located on the machine hosting the KumoScale Cluster Manager CLI

Output example

License was installed successfully.

Possible messages

Invalid parameter

IO or filesystem errors

Operator error.

Error license file structure

license-update

Description – Updates an existing Cluster license.

If the number of non-certified Storage Nodes more than 0, you will be prompted for confirmation:

Non-certified Storage Node detected
Are you sure you want to continue?

This message requires confirmation. For confirmation, you must type <yes>. Any other answer shall cancel the command. The command will abort if a valid license is already installed

Parameters – --path <license full path>

- **path** – the full path for the license file located on the machine hosting the KumoScale Cluster Manager CLI

Output example

License was updated successfully.

Possible messages

Invalid parameter

IO or filesystem errors

Operator error.

Error license file structure

Syslog Management

syslog-show

Description – Shows the configuration of an existing Syslog

Parameters – no parameters

Output option

Per each Syslog configuration:

- **Name** – the name of the Syslog to show
- **URL** – the URL of the Syslog server
- **State** – the Syslog type (one of Enable or Disable)
- **TLS** –TLS is used for communicating (one of Yes or No)
- **Cert File Name** – the Syslog certificate file name (only applicable if TLS is Yes)

Possible messages

Operator error.

syslog-add

Description – Adds a new Syslog configuration.

Parameters – --name <syslog configuration name> --url <URL value> [--use-tls <yes/no> [--cert-file-path <file path>]]

- **name** – the name for the Syslog configuration
- **url** – the URL of the Syslog server in the format <tcp|udp>://<IP address>:<port>
- **use-tls** – whether to use TLS for communicating (one of Yes or No) (optional)
- **cert-file-path** – the full path for the certificate file to use with TLS (applicable when **use-tls** is Yes) (optional)

Possible messages

Invalid parameter

Operator error.

syslog-remove

Description – Removes an existing Syslog configuration.

Parameters – --name <syslog configuration name>

- **name** – the name of the Syslog configuration to remove

Possible messages

Invalid parameter

Operator error.

syslog-update

Description – Modifies an existing Syslog configuration.

Parameters – --name <syslog configuration name> --url <URL value>

- **name** – the name of the syslog configuration to modify
- **url** – the URL of the Syslog server

Possible messages

Invalid parameter

Operator error.

Host Management

host-show

Description – shows a list all hosts in the cluster and their state.

Parameters – [--uuid <host UUID>| --name <host Name>] [--detail], where

- **uuid** – The host UUID (optional)
- **name** – The host name (optional)
- **detail** – show detail information (optional). In case definition this argument each found object will show on the detail level

Output option

If a filter or detail argument is not specified, only the following are provided:

- UUID – The host UUID
- State – State of the host (Available, Unavailable)
- Name – The host name (or None)

If a filter or detail argument is specified, the following are provided:

- Name – The host name
- NQN – The host NQN
- UUID – The host UUID
- Version – Software version
- Client Type – The client type (Kubernetes, Agent etc.)
- Multipath – multipath support (Yes or No)
- Used Namespaces – Number of namespaces and list of Namespace IDs
- Duration – Probe duration time
- Last Probe Time – Last time hosts was available (for unavailable host)
- State – The host state (Available, Unavailable)

Possible messages

Invalid parameter

REST API error.

host-targets-show

Description – Shows a list of all hosts with their target

Parameters – --host-uuid <host UUID>

- **host-uuid** – the Universally Unique Identifier (UUID) for the host (optional when **name** is specified)

Output option

- Target alias – The target alias
- Host Name – The name of the host related to this target
- Number of namespaces – Number of namespaces
- Storage Nodes – The list of the storage node names

Possible messages

Invalid parameter

REST API error

host-remove

Description – Removes an existing host from cluster

Parameters – [--uuid <host UUID>| --name <host Name>]

- **uuid** –the UUID for the host
- **name** – the name of the host

Possible messages

Invalid parameter

Volume Management

volume-show

Description – Shows the existing volumes

Parameters – [--alias <volume alias> | --volume-uuid <volume UUID>] [--tenant-uuid <tenant UUID>] [--detail]

- **alias** – the alias of the volume (optional)
- **volume-uuid** – the UUID for the volume (optional)
- **tenant-uuid** – the UUID for the tenant (optional)
- **detail** – show detailed information (optional)

Output option

If a filter or detail argument is not specified or via filter founded more than one volume, only the following are provided:

- Volume Alias – the alias of the volume
- Volume UUID – the UUID for the volume

If a filter or detail argument is specified, the following are provided:

- Alias – the alias of the volume
- Capacity – the capacity of the volume (in GiB)
- Volume UUID – the UUID for the volume
- Tenant UUID – the UUID for the tenant
- Block Size – the block size of the volume
- Replicas – the number of replicas
- Replicable – indicates whether the volume is replicable (one of Yes, No)
- Snapshot UUID – the UUID for the source snapshot (applicable only when the volume is a Snapshot Volume) or None
- Snapshot Type – whether the volume is Read Only or Writable (applicable only when the volume is a Snapshot Volume)
- In Use – indicates whether the volume is used or unused
- Provisioning Type – the provisioning volume type (one of Thick, Thin)
- Reserved Space – the amount of allocated reserved space in GiB (applicable when the volume is a Snapshot or a Thin Volume)
- Resource Utilization – the amount of space used by the volume in GiB (out of the reserved space)
- Max BW – the maximum value for bandwidth (in KB/sec per volume)
- Desired BW – the desired value for bandwidth (in KB/sec per volume)
- Max IOPS – the maximum value for IOPS (per volume)
- Desired IOPS – the desired value for IOPS (per volume)
- Max Replica Downtime – the maximum downtime allowed for replication in minutes (0 indicates no maximum/forever)
- Protocol – the protocol type (one of NVMeoF, Local)
- Span Allowed – indicates whether the volume is allowed to span over multiple SSDs
- Storage Class Name – the name of the storage class if one exists
- Share SSD Between Volumes – indicates whether the volume is allowed to be placed on an SSD that already has a volume with the same storage class name (one of Yes, No)
- Location – a list of the volume locations
 - Replica UUID – the UUID for the replica
 - Storage Node Name – the name of the storage node
 - State – the state of the replica
 - Current State Time – the known amount of time that the replica has been in its current state, in milliseconds

Possible messages

Invalid parameter

REST API error.

volume-add

Description – Adds a new volume to a cluster.

Parameters - --alias <volume alias> --capacity <capacity in GB> [--replicas <number of replicas>][--racks <racks list>] [--regions <regions list>] [--zones <zones list>] [--block-size {512/4096}] [--max-down-time <maximum down time>] [--prov-type {thin/thick}] [--reserved-space <reserved space as a percentage>] [--max-iops <maximum IOPS>] [--desired-iops <desired IOPS>] [--max-bw <maximum BW in KB/sec>] [--desired-bw <desired BW in KB/sec>] [--span-allowed {Yes/No}] [--volume-uuid <volume UUID>] [--tenant-uuid <tenant UUID>] [--storage-class-name <storage class name>] [--share-ssd-between-volumes {Yes/No}][--replicable {Yes,No}]

- **alias** – the alias of the volume
- **capacity** – the capacity of the volume in GiB

- **replicas** – the number of replicas (optional, default value is 1.
- **replicable** – indicates whether the volume is replicated (one of Yes, No; default is Yes when **replicas** > 1 , No otherwise)
- **racks** – a list of rack names (optional)
- **regions** – a list of region names (optional)
- **zones** – a list of zone names (optional)
- **block-size** – the block size of the volume (one of 512, 4096, default is 4096) (optional)
- **max-down-time** – the maximum downtime for replication in seconds (optional)
- **prov-type** – the type of provisioning (one of Thin, Thick, default is Thick) (optional)
- **reserved-space** – the percentage of capacity used for initial allocation (optional)
- **max-iops** – the maximum value for IOPS per GiB (optional)
- **desired-iops** – the desired value for IOPS per GiB (optional)
- **max-bw** – the maximum value for bandwidth in KB/sec per GiB (optional)
- **desired-bw** – the desired value for bandwidth in KB/sec per GiB(optional)
- **span-allowed** – indicates whether the volume is allowed to span over multiple SSDs (one of Yes, No; Default is Yes) (optional)
- **volume-uuid** – the UUID for the volume (optional)
- **tenant-uuid** – the UUID for the tenant (optional)
- **storage-class-name** – the name of the storage class (optional)
- **share-ssd-between-volumes** – indicates whether the volume is allowed to be placed on an SSD that already has a volume with the same storage class name (one of Yes, No; default is Yes) (optional)

Possible messages

Invalid parameter

REST API error.

volume-remove

Description – Removes an existing volume from the cluster

Parameters – --alias <volume alias> | --volume-uuid <volume UUID> [--tenant-uuid <tenant UUID>]

- **alias** – the alias of the volume
- **volume-uuid** – the UUID for the volume
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter

REST API error.

volume-expand

Description – Expands an existing volume on all its replicas.

Parameters – --alias <volume alias> | --volume-uud <volume UUID> --capacity <capacity in GB> [--tenant-uuid TENANT_UUID]

- **alias** – the alias of an existing volume
- **volume-uuid** – the UUID for the volume
- **capacity** – the new capacity for the volume in GiB
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter

REST API error.

volume-clone

Description – Creates a clone of a given source volume.

Parameters – --clone-alias <clone alias> --volume-alias <source volume alias> | --volume-uuid <source volume UUID> [--reserved-space <space as a percentage>] [clone-uuid <clone UUID>] [--capacity <clone capacity in GB>] [--tenant-uuid <tenant UUID>]

- **clone-alias** – the alias of the clone volume
- **volume-alias** – the alias of the source volume
- **volume-uuid** – the UUID for the of the source volume
- **reserved-space** – the space reserved for the clone as a percentage (optional)
- **clone-uuid** – the UUID for the clone (optional)
- **capacity** – the capacity of the clone volume in GiB (possible values are the source volume capacity or larger) (optional)
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter
REST API error.

volume-replica-add

Description – Adds new replica for an existing volume.

Parameters – --volume-uuid <volume UUID> [--racks <list of rack ids>] [-zones <list of zone ids>] [--regions <list of region ids>] [rack-allowed <Yes | No>] [--tenant-uuid <tenant UUID>]

- **volume-uuid** – the UUID for the volume
- **racks** – a list of rack identifiers (separated by commas) that the volume(s) should reside on (optional)
- **zones** – a list of zone IDs (separated by commas) that the volume(s) should be accessible from (optional)
- **regions** – a list of region IDs (separated by commas) that the volume(s) should be accessible from (optional)
- **rack-allowed** – can replicated volume be allocated on the same Rack (optional)
- **tenant-uuid** –the UUID for the tenant (optional)

Possible messages

Invalid parameter
REST API error.

volume-replica-remove

Description – Marks a replica to be removed from a replicated volume.

Parameters – --volume-uuid <volume UUID> --replica-uuid <replica UUID> [--tenant-uuid <tenant UUID>]

- **volume-uuid** – the UUID for the volume
- **replica-uuid** – the UUID for the replica
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter
REST API error.

volume-host-connect

Description – Publishes and connects a volume to a specific host

Parameters – -- host-uuid <host UUID> --alias <volume alias> | --volume-uuid <volume UUID> [--tenant-uuid <tenant UUID>]

- **host-uuid** – the UUID for the host
- **alias** – the alias of the volume
- **volume-uuid** – the UUID for the volume
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Volume <UUID> connected to host <UUID> via device <device path>

Invalid parameter
REST API error.

volume-host-disconnect

Description – Disconnects and unpublishes a volume from a specific host

Parameters – -- host-uuid <host UUID> --alias <volume alias> | --volume-uuid <volume UUID> [--tenant-uuid <tenant UUID>]

- **host-uuid** – the UUID for the host
- **alias** – the alias of the volume
- **volume-uuid** – the UUID for the volume
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter
REST API error.

volume-targets-show

Description – Shows all the targets by volume

Parameters – --volume-uuid <volume UUID>, where

- **volume-uuid** – the UUID for the volume

Output option

- **Target alias** – The target alias
- **Host Name** – The host name related to this target
- **Number of namespaces** – Number of namespaces
- **Storage Nodes** – The list of the storage node names

Possible messages

Invalid parameter

REST API error.

volume-migrate

Description – Migrate a volume (replica) to another storage node. This command will create a secret CR with a name corresponding to the migration operation. In case of unsuccessful execution, it displays the events related to the corresponding operation and delete the corresponding operation CR. The current operation state should be monitored using the command **volume-migrate-show**

Parameters – --name <name> --alias <volume alias> [--source-storagenode <storagenode name>] [--destination-storagenode <storagenode name >] [--migrate-type <Backend/Host>], where

- **name** – The name of the migration operation
- **alias** – The alias of the volume
- **source-storagenode** – The name of the source Storage Node. Mandatory only for volume with several replicas. (optional)
- **destination-storagenode** – The name of the destination Storage Node (optional)
- **migrate-type** – The handler of the migration operation (Backend or Host). Default – Host (optional)

Possible messages

Invalid parameter

REST API error.

volume-migrate-show

Description – Shows the process of an existing volume migrate operation.

Parameters – [--name <name>] [--detail], where

- **name** – The migrate operation name (optional)
- **detail** – Show detailed information (optional)

Output option

- **Name** – The migrate operation name
- **Migrate Start Time** – The date and time the migration process started
- **Alias** – The alias of the volume
- **Source Storage Node** – The name of the source Storage Node
- **Target Storage Node** – The name of the target Storage Node
- **State** – The state of the operation (Pending, Running, Failed, Done, Aborted)
- **Status** – The status of the operation (SUCCESS, ERROR)
- **Progress** - The progress of migration (as a percentage)
- **Handler** – The handler of the migrate operation (Backend or Host)
- **Events** – List of the events (only if a detail parameter is defined)

Possible messages

Invalid parameter

Operator error

volume-migrate-update

Description – Update of the migrate volume (replica) operation. This is used if the **volume-migrate** command failed with an error.

Parameters – --name <name> [--alias <volume alias>] [--source-storagenode <storagenode name>] [--target-storagenode < storagenode name >] [--migrate-type <Backend/Host>], where

- **name** – The migrate operation name
- **alias** – The alias of the volume (optional)
- **source-storagenode** – The name of the source Storage Node. Mandatory only for volume with several replicas. (optional)

- **target-storagenode** – The name of the destination Storage Node (optional)
- **migrate-type** – The handler of the migrate operation (Backend or Host). Default – Host (optional)

Possible messages

Invalid parameter

REST API error.

volume-migrate-abort

Description – Abort the volume migration process (only for host migrations)

Parameters – --name <name>, where

- **name** – The alias of the volume

Possible messages

Invalid parameter

Operator error

volume-migrate-delete

Description – Delete the volume migration operation.

Parameters – --name <name>, where

- **name** – The alias of the volume

Possible messages

Invalid parameter

Operator error

Snapshot Management

snapshots-show

Description – Shows the snapshots configured in the cluster.

Parameters – [--snapshot-uuid <snapshot UUID> | --volume-uuid <volume UUID> | --snapshot-alias <snapshot alias>] [--tenant-uuid <tenant UUID>] [--detail]

- **snapshot-uuid** – the UUID for the snapshot (optional)
- **volume-uuid** – the UUID for the source volume (optional)
- **snapshot-alias** – the alias of the snapshot (optional)
- **tenant-uuid** – the UUID for the tenant (optional)
- **detail** – show detailed information (optional)

Output option

If a filter or detail argument is not specified or via filter founded more than one snapshot, only the following are provided:

- Alias – the snapshot alias
- UUID – the UUID for the snapshot

If a filter or detail argument is specified, the following are provided:

- Alias – the snapshot alias
- Snapshot UUID – the UUID for the snapshot
- Volume UUID – the UUID for the source volume
- Tenant UUID – the UUID for the tenant
- Capacity – the snapshot’s capacity (in GiB)
- Timestamp – the timestamp for when the snapshot was taken
- Reserved Space – the amount of reserved space allocated (in GiB)

Possible messages

Invalid parameter

REST API error.

snapshot-add

Description – Adds a new snapshot of an existing volume.

Parameters – --snapshot-alias <snapshot alias> --volume-alias <volume alias> | --volume-uuid VOLUME UUID --reserved-space <space as a percentage> [snapshot-uuid <persistent snapshot UUID>] [--tenant-uuid <tenant UUID>]

- **snapshot-alias** – the alias of the snapshot
- **volume-alias** – the alias of the source volume

- **volume-uuid** – the UUID for the volume
- **reserved-space** –the reserved space as a percentage of the parent volume's capacity
- **snapshot-uuid** – the UUID for the snapshot (optional)
- **tenant-uuid** – the UUID for the tenant optional)

Possible messages

Invalid parameter

REST API error.

snapshot-remove

Description – Removes an existing snapshot.

Parameters – --snapshot-alias <snapshot alias> | --snapshot-uuid <snapshot UUID> [--tenant-uuid <tenant UUID>]

- **snapshot-alias** – the alias of the snapshot
- **snapshot-uuid** – the UUID for the snapshot
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter

REST API error.

snapshot-volume-add

Description – Adds a new snapshot volume of an existing snapshot.

Parameters – --volume-alias <snapshot volume alias> --snapshot-alias <snapshot alias> | --snapshot-uuid <snapshot UUID> --writable <yes/no> [--reserved-space <space as a percentage >] [volume-uuid <snapshot volume UUID>] [--max-iops <max IOPS>] [--max-bw <max BW>] [--span-allowed <yes/no>] [--tenant-uuid <tenant UUID>]

- **volume-alias** – the alias of the snapshot volume
- **snapshot-alias** – the alias of the snapshot
- **snapshot-uuid** – the UUID for the snapshot
- **writable** – indicates the mode of the snapshot volume (Yes – writable mode; No – read only mode)
- **reserved-space** – the amount of space reserved for snapshot volume as a percentage of the parent volume's capacity (only for writable snapshot volume)
- **volume-uuid** – the UUID for the snapshot volume (optional)
- **max-iops** – the maximum value for IOPS of the snapshot volume per GiB (optional)
- **max-bw** – the maximum bandwidth of the snapshot volume in in KB/sec per GiB (optional)
- **span-allowed** – indicates whether the volume is allowed to span over multiple SSDs (one of Yes, No) (optional)
- **tenant-uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter

REST API error.

Tenant Management

tenants-show

Description – Shows an existing tenant.

Parameters – [--name <tenant name> | --uuid <tenant UUID>] [--detail]

- **name** – the name of the tenant (optional when **uuid** is specified l)
- **uuid** – the UUID for the tenant (optional when **name** is specified)
- **detail** – show detailed information (optional)

Output option

If a filter or detail argument is not specified, only the following are provided:

- Name – the name of the tenant
- UUID – the UUID for the tenant

If a filter or detail argument is specified, the following are provided:

- Name – the name of the tenant
- UUID – the UUID for the tenant
- Total Capacity – the total capacity of the tenant in GiB
- Total IOPS – the total IOPS budget of the tenant

- Total BW – the total bandwidth budget of the tenant in KB/sec
- Consumed Capacity – the consumed capacity of the tenant in GiB
- Consumed IOPS –the consumed IOPS of the tenant
- Consumed BW – the consumed bandwidth of the tenant in KB/sec

Possible messages

Invalid parameter

Operator error.

tenant-add

Description – Adds a new tenant containing volumes, snapshots, and snapshot volumes.

Parameters – --name <tenant name> --capacity <capacity in GiB> --total-iops <IOpS budget> --total-bw <BW budget> [--uuid <tenant UUID>]

- **name** – the name of the tenant
- **capacity** – the total capacity of the tenant in GiB
- **total-iops** – the total IOPS budget of the tenant
- **total-bw** – the total bandwidth budget of the tenant in KB/sec
- **uuid** – the UUID for the tenant (optional)

Possible messages

Invalid parameter

Operator error.

tenant-remove

Description – Removes an existing tenant.

Parameters --name <tenant name>

- **name** – the name of the tenant

Possible messages

Invalid parameter

Operator error.

tenant-update

Description – Updates an existing tenant.

Parameters – --name <tenant name> --capacity <capacity in GiB> --total-iops <IOPS budget> --total-bw <BW budget>

- **name** – the name of the tenant
- **capacity** – the capacity of the tenant in GiB
- **total-iops** – the total IOPS budget of the tenant
- **total-bw** – the total bandwidth budget of the tenant in KB/sec

Possible messages

Invalid parameter

Operator error.

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Storage Node Management

storagenode-show

Description – Shows an existing storage node

Parameters – [--storagenode <storage node name>] [--detail]

- **storagenode** – the name of the storage node (optional)
- **detail** – show detailed information (optional)

Output option

If the state of the storage node is Pending

- Name – the name of the storage node
- State – the state of the storage node (Pending)
- Status – the status of the storage

If a filter or detail argument is not specified, only the following are provided:

- Name – the name of the storage node
- State – the state of the storage node (one of Available, Unavailable)
- Role – the role of the storage node (one of MASTER, WORKER)
- Node Name – the host name of the storage node
- Version – the software version of the storage node
- Alerts – the number of alerts on the storage node
- Capacity – the total capacity of the storage node (in GiB)
- Available Capacity – the available capacity of the storage node (in GiB)
- Status – the status of the last operation on the storage node

If a filter or detail argument is specified, the following are provided:

- Name – the name of the storage node
- State – the state of the storage node (one of Available, Unavailable)
- Role – the role of the storage node (one of MASTER, WORKER)
- Node Name – the host name of the storage node
- Node ID – a unique identifier assigned to each node determined by the order in which it was added.
- Authentication Mode – the authentication mode for the Storage Node (one of LOCAL, OPEN_IDC)
- Deployment Mode – the authentication mode of the Storage Node (one of Appliance, Managed)
- Version –the software version of the storage node
- Target Driver Version - the version of the target driver at this storage node
- Persistent ID – the persistent ID for the storage node
- Number of SSDs – the number of SSDs at this storage node
- Number of volumes – the number of volumes at this storage node
- Total Capacity – the current total capacity of the storage node; summary of all SSDs capacity (in GiB)
- Available Capacity – the summary of all available space on the storage node in all groups (in GiB)
- Management IPs – a list of management IPs or DNS names
- Alerts – the number of alerts
- Certified – indicates whether all SSDs of this storage node are certified (one of True, False)
- Initialized – indicates whether the storage node was initialized (one of Yes, No)
- Topology
 - Rack – the name of the rack in the storage node location
 - Region – the name of the accessible region
 - Zone - the name of the accessible zone
- Performance data properties
 - Total BW –the total bandwidth performance of the storage node in all groups, in KB/sec per total storage node capacity.
 - Available BW – the summary of all available bandwidth performance of the storage node in all groups (in KB/sec)
 - Total IOPS – the total IOPS performance of the storage node in all groups
 - Available IOPS – the summary of all available IOPS performance of the storage node in all groups
- Last Probe Time – the last time of a probe, if one exists
- CPU – the storage node processor type
- Installed RAM – Memory – the RAM of the storage node in GB
- Time Settings
 - Mode – the time setting mode (one of Manual, NTP)
 - NTP Server – the name or IP address of the NTP server when the mode is NTP
 - Time – current time settings in YYYY-MM-DDThh:mm:ss
 - Time Zone ID – the time zone id string
- Status – the status of the last operation

Possible messages

Invalid parameter

Operator error.

storagenode-add

Description – Adds a new storage node to the Cluster.

Parameters – --storagenode <storage node name>--init-mgmt-ip <IP > admin-pass <password> --timezone < Time Zone ID> [--rack <rack id>] [--region <region id>] [--zone <zone id>] [--group-name <name>] [--ntp-server <NTP Server>]

- **storagenode** - the name of the storage node
- **init-mgmt-ip** –the initial management IP

- **admin-pass** – the administrator password
- **timezone** – the time zone string identifier
- **rack** –the rack ID for the storage node location (optional)
- **region** – the accessible region ID (optional)
- **zone** – the accessible zone ID (optional)
- **group-name** – the name of the group (default is group1) (optional)
- **ntp-server** – the NTP sserver name or IP address (optional)

Possible messages

Invalid parameter

Operator error.

storagenode-remove

Description – Removes an existing storage node from the Cluster.

Parameters – --storagenode <storage node name>

- **storagenode** - the name of the storage node

Possible messages

Invalid parameter

Operator error.

storagenode-update

Description – Updates the configuration of an existing storage node.

Parameters – --storagenode <storage node name> [[--rack <rack id>] [--region <region id>] [--zone <zone id>]] | [--state DEAD]

- **storagenode** - the name of the storage node
- **rack** – the rack ID of the storage node (optional)
- **region** – the accessible region ID (optional)
- **zone** – the accessible zone ID (optional)
- **state** – specify DEAD state when a worker storage node is unavailable (optional)

Possible messages

Invalid parameter

Operator error.

storagenode-mgmt-ip-add

Description – Adds a new management IP and parameters to the storage node.

Parameters – --storagenode <storage node name> < --mode dhcp --interface-name <interface name> | --mode static --interface-name <interface name> --ip <ip address> --mask <subnet mask> --gateway <default gateway> [--dns <DNS server>]>

- **storagenode** - the name of the storage node
- **mode** – the mode for IP addressing (one of dhcp, static)
- **interface-name** – the name of the interface
- **ip** – the static IP address when **mode** is static
- **mask** – the subnet mask when **mode** is static
- **gateway** – the default network gateway when **mode** is static
- **dns** – the DNS server when **mode** is static

Possible messages

Invalid parameter

Operator error status

storagenode-mgmt-ip-remove

Description –Removes an existing management IP address from the storage node; you will be prompted to confirm removal.

Parameters – --storagenode <storage node name> --ip <ip address>

- **storagenode** - the name of the storage node
- **ip** – the IP address to remove

Possible messages

Invalid parameter

Operator error

storagenode-alerts-show

Description – Shows existing alerts

Parameters – --storagenode <storage node name>

- **storagenode** - the name of the storage node (optional)

Output example

If **storagenode** is not specified

- Name – Storage Node name
- Alerts – Number of alerts

If **storagenode** is specified:

- Description – Alert’s description
- Open Date – Alert open date (formatted)
- Alert ID – Alert identifier

Possible messages

Invalid parameter

Operator error

storagenode-event-show

Description – Shows the existing events on the storage node

Parameters – [--storagenode <storage node name>]

- **storagenode** - the name of the storage node (optional)

Output example

For each alert:

- Last Time Stamp – the last time stamp for the storage node events
- Type – the event type (one of Error/Warning)
- Message – the event message

Possible messages

Invalid parameter

Operator error

NIC Management

nic-show

Description – Shows the network interface cards (NIC) of the storage node

Parameters – [--storagenode <storage node name>] [--alias <NIC alias>] [--detail]

- **storagenode** - the name of the storage node
- **alias** – the NIC alias
- **detail** – show detailed information (optional)

Output option

If the parameter **storagenode** is not defined, then the operation output will contain information about all NICs of the cluster separated by storage node name headers.

- Alias – the alias of the NIC

For each NIC:

- Alias – the alias of the NIC
- State – the state of the NIC (one of AVAILABLE, MISSING, PARTIALLY AVAILABLE)
- Driver – the driver version
- Firmware – the firmware version
- Persistent ID – the persistent identifier
- Vendor – the vendor name
- Product – the product name
- Interfaces – a list of the interface names

Possible messages

Invalid parameter

Operator error

Interface Management

interface-show

Description – Shows details for storage node interfaces

Parameters – [--storagenode <storage node name>] [--name <interface name>] [--detail]

- **storagenode** - the name of the storage node
- **name** – the interface name
- **detail** – show detailed information (optional).

Output option

If the **storagenode** parameter is not defined, then the output will contain information about all interfaces of the cluster separated by storage node name headers.

If parameters or detail argument are not specified, a list of interface names

- Name – the name of the interface

Per each Interface:

- Name – the name of the interface
- Admin State – the state of the interface admin state (one of UP, DOWN)
- Link State – the state of the interface link (one of AVAILABLE, UNAVAILABLE)
- Persistent ID – the persistent interface identifier
- Vendor – the vendor name
- Product – the product name
- Type – the interface type version
- Max Speed –the maximum speed of the interface in Mbits/sec
- Speed – the current speed of the interface in Mbits /sec
- MTU –the MTU configured on the interface (one of 1500, 4200, 9000).
- Vlan – the VLAN identifier (if Vlan ID is not equal to 0)
- Team – the team identifier (if this interface is member of team)
- Team type – the team type (if this interface is team)
- Team members – a list of interface identifiers (if this interface is a member of a team)
- Team tags – the team configuration tags (if this interface is a member of a team)

Possible messages

Invalid parameter

Operator error

interface-up

Description – Sets the admin status for an existing interface to UP

Parameters – --storagenode <storage node name> --name <interface name>

- **storagenode** - the name of the storage node
- **name** –the name of the interface

Possible messages

Invalid parameter

Operator error

interface-down

Description – Sets the admin status for an existing interface to DOWN

Parameters – --storagenode <storage node name> --name <interface name>

- **storagenode** - the name of the storage node
- **name** – the name of the interface

Possible messages

Invalid parameter

Operator error

interface-mtu-set

Description – Sets the MTU value for an existing interface

Parameters – --storagenode <storage node name> --name <interface name> --mtu <1500/4200/9000>

- **storagenode** - the name of the storage node
- **name** – the interface name
- **mtu** – the MTU size, (one of 1500, 4200, 9000)

Possible messages

Invalid parameter

Operator error

interface-vlan-set

Description – Sets a VLAN tag on an existing interface.

Parameters – --storagenode <storage node name> --name <interface name> --vlan <vlan ID>

- **storagename** - the name of the storage node
- **name** – the interface name
- **vlan** – the VLAN identifier (1 – 4094)

Possible messages

Invalid parameter

Operator error

interface-vlan-remove

Description – Removes a VLAN tag from an existing interface.

Parameters – --storagenode <storage node name> --name <interface name> --vlan <vlan ID>

- **storagename** - the name of the storage node
- **name** – the interface name
- **vlan** – the VLAN identifier (1 – 4094)

Possible messages

Invalid parameter

Operator error

interface-team-set

Description – Creates a new team interface on one or more existing interfaces

Parameters – --storagenode <storage node name> --name <team name> --members <interface names list> [--tags name: value, [name: value...]]

- **storagename** - the name of the storage node
- **name** – the name of the team
- **members** – a comma-separated list of interface names (minimum 2 items)
- **tags** – a list of pairs (name-value or name-comma-separated list of values) separated by a semicolon that contains additional team descriptors (see the corresponding REST API document)

Possible messages

Invalid parameter

Operator error

interface-team-remove

Description – Removes an existing team interface.

Parameters – --storagenode <storage node name> --name <team name>

- **storagename** - the name of the storage node
- **name** – the team name

Possible messages

Invalid parameter

Operator error

Portal Management

portal-show

Description – Shows an existing portal configured in the storage node.

Parameters – [--storagenode <storage node name>] [--name <portal name>] [--detail]

- **storagename** - the name of the storage node
- **name** – the name of the portal
- **detail** – show detailed information (optional).

Output option

If the **storagename** parameter is not defined, then the operation output will contain information about all portals of the cluster separated by storage node name headers.

If a name or detail argument is not specified, a list of portal names is displayed

If a name or detail argument is specified, the following properties are displayed for each portal:

- Name – the name of the portal
- Ip – the IP address of the portal
- Mask – the subnet mask of the portal
- Port – the port of the portal
- Transport – the NVMeoF transport protocol (one of TCP, RoCEv2)
- Interface – the name of the interface
- ID – the ID for the interface

Possible messages

Invalid parameter

Operator error.

portal-add

Description – Adds a new portal for a storage node

Parameters – --storagenode <storage node name> --name <portal name> --ip <Ip address> [--mask <subnet mask>] --port <port number> -
-transport <TCP/RoCEv2> [--interface-name <if name>]

- **storagenode** - the name of the storage node
- **name** – the name for the portal
- **ip** – the IP Address for the portal
- **mask** – the subnet mask for the portal (applicable only when using Appliance mode)
- **port** – the port for the portal
- **transport** – the NVMeoF transport protocol (one of TCP, RoCEv2)
- **interface-name** – the name of the interface (applicable only when using Appliance mode)

Possible messages

Invalid parameter

Operator error

portal-remove

Description – Removes an existing portal.

Parameters – --storagenode <storage node name> --name <portal name>

- **storagenode** - the name of the storage node
- **name** – the name of the portal to remove

Possible messages

Invalid parameter

Operator error

SSD Management

ssd-show

Description – Shows the drives in the storage node.

Parameters – [--storagenode <storage node name>] [--ssd <ssd name>] [--detail]

- **storagenode** - the name of the storage node
- **ssd** –the name of the SSD to show
- **detail** – show detailed information (optional)

Output option

If the **storagenode** parameter is not defined, then the operation output will contain information about all SSDs of the cluster separated by storage node name headers.

If the **ssd** parameter or **detail** argument is not specified, a list of SSD names

If the **ssd** parameter or **detail** argument is specified, the following properties for each SSD:

- Name – the name of the SSD
- Persistent Id – the device serial number.
- SSD product info
 - Model –the SSD model
 - Vendor – the SSD vendor name.
 - Capacity – the SSD capacity, in GB.
- SSD location related info
 - PCIe Slot – the SSD’s PCIe slot position.
 - PCIe Shelf – the SSD’s PCIe Shelf position.
- SSD version related info
 - Driver Name –the name of the SSD driver
 - Driver Version – the version of the SSD driver
 - Firmware Version – the version of the SSD firmware
- SSD Allocated Capacity related info
 - Free Space – the SSD free space, in bytes.
- SSD Configuration related Info
 - Group Name – the SSD group name
 - Volumes Count – the number of volumes on this SSD
 - Allocation Enabled – indicates whether locations are allowed on this SSD (one of Yes, No)
- SSD State related Info
 - Life Left – the percentage of SSD life left (%).
 - Temperature – the SSD temperature (in Celsius)
- Severity – the severity value (one of EMERGENCY, ALERT, CRITICAL, ERROR, WARNING, NOTIFY, INFO)
- State – the state of the drive

Possible messages

Invalid parameter
Operator error

ssd-add

Description – Adds an SSD drive to the existing group of a storage node.

Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to add

Possible messages

Invalid parameter
Operator error

ssd-remove

Description – Removes an SSD drive from the existing group of a storage node.

Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to remove

Possible messages

Invalid parameter
Operator error

ssd-missing-remove

Description – Removes a missing SSD drive from a storage node.

Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to remove

Possible messages

Invalid parameter
Operator error

ssd-evict

Description – Evicts an SSD drive. The current operation state should be monitored using the command **ssd-evict-show**.
Parameters – --storagenode <storage node name> --ssd <ssd name> [--force]

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to evict
- **force** – skip the process to validate free space (optional)

Possible messages

Invalid parameter
Operator error

ssd-evict-show

Description – Shows the process when evicting an SSD
Parameters – --storagenode <storage node name> --ssd <ssd name> [--detail]

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to evict
- **detail** – show detailed information (optional)

Output option

- Total SubVolumes to migrate – the number of sub volumes which this evict operation needed to migrate
- Migrated SubVolumes – the number of sub volumes which were migrated so far
- Total bytes to evict – the number of bytes which this evict operation needed to evict
- Bytes evicted – the number of bytes which were evicted so far
- Progress – the percent of the evict operation executed so far
- Status – the status of the operation (either Success or an error code).
- State – the current state of the operation (one of Pending, Running, Failed, Done)
- Events – List of the events (only if the detail parameter is specified)

Possible messages

SSD evict operation not found
Invalid parameter
Operator error

ssd-evict-abort

Description – Aborts the evict SSD process
Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD being evicted

Possible messages

SSD evict operation not found
Invalid parameter
Operator error

ssd-firmware-upgrade

Description – Upgrades the SSD firmware.
During execution you will be prompted for confirmation:

You have selected to upgrade the SSD firmware.

The progress of the operation should be monitored using the "ssd-upgrade-show" command

Are you sure you want to continue?

This message require confirmation. For confirmation, you must type only<yes> or <no>. Any other answer shall show the following message:

Response is invalid (valid values are only 'yes' or 'no')

Parameters – --storagenode <storage node name> --url <url> --ssd <ssd name> [--user <user name> --password <password>]

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to upgrade
- **url** – the URL for the firmware file.
- **user** – the username to use for access to the URL (optional)
- **password** – the password to use for access to the URL (optional)

Possible messages

Invalid parameter

Operator error

ssd-upgrade-show

Description – Shows the process when upgrading an SSD

Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD to upgrade

Output option

- Status – the status of the operation (either Success or error code)
- State – the current state of this operation (one of Pending, Running ,Failed, Done)
- Description – A text message

Possible messages

SSD upgrade-firmware operation not found

Invalid parameter

Operator error

ssd-upgrade-abort

Description – Aborts of the upgrade SSD process.

Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD being upgraded

Possible messages

SSD upgrade-firmware operation not found

Invalid parameter

Operator error

ssd-allocation-enable

Description – Sets the SSD allocations mode to enable.

Parameters – --storagenode <storage node name> --ssd <ssd name>

- **storagenode** - the name of the storage node
- **ssd** – the name of the SSD

Possible messages

Invalid parameter

Operator error

Telemetry Management

telemetry-show

Description – Shows an existing telemetry configuration.

Parameters – [--name <telemetry name>] [--detail]

- **name** – the name of a telemetry configuration (optional)
- **detail** – shows detail information (optional)

Output option

If a filter or detail argument is not specified, only the following are provided:

- Name – the telemetry configuration names

If a filter or detail argument is specified, the following telemetry properties are displayed:

- Data type – the telemetry data type; drive information, volume information (or both)
- Interval – the duration (in seconds) between each push
- Push state – the push state (one of on, off)
- Transport – the transport type (one of TCP_IP, UDP)
- IP Address – the IP address of the telemetry server
- Port Number – the port number of the telemetry server
- Prefix – the prefix of the record string

Possible messages

Invalid parameter

Operator error.

telemetry-add

Description – Adds a new telemetry configuration

Parameters --name <telemetry name> [--data-type <DRIVE|VOLUME|BOTH>] [--interval <duration in sec>] [--push-state <on/off>] --ip <ip addr> --port <port number> [--transport <TCP_IP|UDP>] [--prefix <string prefix>]

- **name** – the name of the telemetry configuration
- **data-type** – the telemetry data type; drive information, volume information; default data type is both
- **interval** – the duration, in seconds, between each push; default is 300 seconds
- **push-state** – the push state (one of on, off; default is off)
- **ip** – the IP address of the telemetry server
- **port** – the port number of the telemetry server
- **transport** – the transport type (one of TCP_IP, UDP)
- **prefix** – the prefix of the record string; default is an empty string

Possible messages

Invalid parameter

Operator error.

telemetry-remove

Description – Removes an existing telemetry configuration

Parameters --name <telemetry name>

- **name** – The name of the telemetry configuration to remove

Possible messages

Invalid parameter

Operator error.

telemetry-update

Description – Updates an existing telemetry configuration

Parameters --name <telemetry name> [--data-type <drive | volume | both>] [--interval <duration in sec>] [--push-state <on/off>] [--ip <ip addr>] [--port <port number>] [--transport <TCP_IP|UDP>] [--prefix <string prefix>]

- **name** – the name of the telemetry configuration
- **data-type** – the telemetry data type; drive information, volume information
- **interval** – the duration, in seconds, between each push
- **push-state** – the push state (one of on, off)
- **ip** – the IP address of the telemetry server
- **port** – the port number of the telemetry server
- **transport** – the transport type (one of TCP_IP, UDP)
- **prefix** – the prefix of the record string

Possible messages

Invalid parameter

Operator error.

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Inventory Management

inventory-get

Description – Saves the inventory information to a local file or displays on the screen.

Parameters – --path <inventory full path> | --show-to-screen

- **path** – the full path of the local file where the inventory information will be saved
- **show-to-screen** – show the inventory information on the screen

Possible messages

The inventory information save to the <path>

- **Path** – full path of the local inventory file

Invalid parameter

Operator error.

inventory-reset

Description – Resets the inventory information

During execution, you will be prompted for confirmation:

You have selected to reset the KumoScale inventory reporting

Are you sure you want to continue?

This message require confirmation. For confirmation, you must type only<yes> or <no>. Any other answer shall show the following message:

Response is invalid (valid values are only 'yes' or 'no')

Parameters – no parameters.

Possible messages

Invalid parameter

Operator error.